ANNOTATED BIBLIOGRAPHY OF GEORGIA GEOLOGY THROUGH 1959
by
Howard Ross Cramer, Arthur Thomas Allen, Jr. and James George Lester
Emory University, Atlanta, Georgia

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LETTER OF TRANSMITTAL

Department of Mines, Mining and Geology

September 1, 1967

His Excellency, Lester G. Maddox
Governor of Georgia and
Commissioner Ex-Officio
State Division of Conservation
Atlanta, Georgia 30334

Dear Governor Maddox:

I have the honor to submit herewith Bulletin No. 79 of the Department of Mines, Mining and Geology entitled, "Annotated Bibliography of Georgia Geology Through 1959," by Drs. Howard R. Cramer, Arthur T. Allen, Jr., and James G. Lester of the Department of Geology, Emory University.

This bibliography contains all significant references to the geology and mineral resources of Georgia from early times through 1959. It is anticipated that it will be in much demand and will be invaluable to all individuals engaged in research upon Georgia problems; for this reason, it will remain in continuous demand. It is a repository for the compilation of mineral resources for all parts of the state. Information derived from this work can be coded directly into a computer for rapid retrieval of available information upon a large number of specific mineral and geological topics, thus, rendering the solution to these problems rapid and automatic.

Very respectfully yours,

A. S. Furcron
Director

ASF:pl
ANNO TATED BIBLIOGRAPHY OF GEORGIA
GEOLOGY THROUGH 1959

by
Howard Ross Cramer, Arthur Thomas Allen, Jr., and James George Lester
Emory University, Atlanta, Georgia

INTRODUCTION

This bibliography is modeled after the Bibliography of North American Geology which is published annually and decennially by the United States Geological Survey. References were read, annotated, and indexed by county, subject, and geological age. In many entries a portion of the state larger than a county is discussed, so that larger subdivisions of the state are considered in the indexing. These larger subdivisions, corresponding roughly to the major physiographic provinces, are outlined in Fig. 1.

Each index entry to a county or one of the larger subdivisions is also referred to one of the major aspects of geology. The heading Areas described is used when an article deals with the entire geological aspect of the area. Economic geology; Engineering geology; Maps; Geobotanical, Geochemical, and Geophysical investigations; Ground water; Mineralogy; Paleontology; and Physiographic geology are all more or less self-explanatory. Historical geology includes stratigraphy. Petrology generally, though not always, means igneous or metamorphic petrology, and Physical geology is intended to cover process, or dynamic geology.

While geographic boundaries are sharp, every geologist knows that subject boundaries cannot be so easily recognized. For instance, publications dealing with surface water, such as stream flow measurements, flood records, etc., are excluded, although springs, because they are in part ground water are included. Articles dealing with soils per se are not included unless they include discussions or descriptions of the geological origin of the soils or the parent rocks from which they were derived. Articles dealing with mining engineering problems, or those dealing exclusively with economic aspects of geological materials, are not included unless they include descriptions of the material.

Abstracts are not included if the full article has appeared, and those abstracts which are included are not annotated. Theses, both M.S. and Ph.D. are included but not annotated, and biographies of Georgia authors are included without annotation.

The junior authors of this bibliography began the compilation which was completed by the senior author. The senior author did the indexing and annotating.

The assistance of Mr. William Heers and his able staff of the United States Geological Survey Library in Washington, D.C., is gratefully acknowledged, as is the help of the reference departments of the Yale University and New York Public Libraries. It is an especial pleasure to acknowledge
that the skill of the members of the Reference Department of the Emory University Library in locating obscure and otherwise inaccessible material was exceeded only by their patience with the authors.

Mrs. Rena Faye Ritchey Smith typed the bibliography manuscript and assisted with the proofreading, and Mrs. Verna Laidecker Fisher and Mrs. Elizabeth Chambers Nunan assisted with the proofreading of the index.

Readers are encouraged to notify the Director of the Georgia Department of Mines, Mining, and Geology of any omissions detected in this bibliography so that they can be included in later supplements.

Fig. 1 Subdivisions of Georgia used in this bibliography
ABBREVIATIONS OF SERIALS CITED IN THIS BIBLIOGRAPHY

Note that foreign-language serials are spelled out completely and not abbreviated.


ACAD. SCIENCE ST. LOUIS TRANS. Transactions of the St. Louis Academy of Science. Published by the Academy from St. Louis, Missouri.

ACADEMIE DES SCIENCES DE PARIS COMPTES RENDUS. Published by the Academy from Paris, France.

AGRICULTURAL ENGINEERING. Agricultural Engineering. Published by the American Society of Agricultural Engineers from Ames, Iowa.

AKADEMIE DER WISSENSCHAFTEN WIEN MATH-NATURWISSENSCHAFT KLASSE SITZUNGSBERICHTE. Published by the Academy from Vienna, Austria.

ALABAMA ACAD. SCIENCE JOUR. Journal of the Alabama Academy of Science. Published by the Academy from Birmingham, Alabama.

ALABAMA GEOL. SURVEY BULL. Bulletin of the Alabama Geological Survey. Published by the Survey from University, Alabama, and elsewhere.

ALABAMA INDUSTRIAL AND SCIENTIFIC SOC. PROC. Proceedings of the Alabama Industrial and Scientific Society. Published by the Society from Tuscaloosa, Alabama.

AMER. ACAD. ARTS AND SCIENCE PROC. Proceedings of the American Academy of Arts and Science. Published by the Academy from Boston, Massachusetts.

AMER. ALPINE JOUR. American Alpine Journal. Published by the American Alpine Club from New York City, New York.


AMER. ANTIQUITY. American Antiquity. Published by the Society for American Archeology from Menasha, Wisconsin.

AMER. ASSOC. ADVANCEMENT SCIENCE PROC. Proceedings of the American Association for the Advancement of Science. Published by the Association from New York City, New York.
AMER. ASSOC. PETROLEUM GEOLOGISTS BULL. Bulletin of the American Association of Petroleum Geologists. Published by the Association from Tulsa, Oklahoma.

AMER. CERAMIC SOC. BULL.; . . . JOUR. Bulletin, and Journal of the American Ceramic Society. Published by the Society from Easton, Pennsylvania.

AMER. FERTILIZER. American Fertilizer. Published commercially from Philadelphia, Pennsylvania.

AMER. FORESTS. American Forests. Published by the American Forestry Association from Washington, D. C.


AMER. GEOLOGIST. American Geologist. Published commercially from Minneapolis, Minnesota.

AMER. GEOPHYSICAL UNION TRANS. Transactions of the American Geophysical Union. Published by the National Research Council for the Union from Washington, D. C.

AMER. INST. CHEMICAL ENGINEERS TRANS. Transactions of the American Institute of Chemical Engineers. Published by the Institute from Philadelphia, Pennsylvania.

AMER. INST. MINING AND METALLURGICAL ENGINEERS TECH. PUB.; . . . TRANS. Technical Publications, and Transactions of the American Institute of Mining and Metallurgical Engineers. Published by the Institute from New York City, New York.

AMER. INST. MINING ENGINEERS BULL.; . . . CONTRIB.; . . . TRANS. Bulletin, Contributions, and Transactions of the American Institute of Mining Engineers. Published by the Institute from New York City, New York.

AMER. JOUR. MINING. American Journal of Mining. Published commercially from New York City, New York.

AMER. JOUR. SCIENCE. American Journal of Science. Published commercially from Yale University, New Haven, Connecticut.

AMER. MEDICAL ASSOC. TRANS. Transactions of the American Medical Association. Published by the Association from various places.

AMER. MIDLAND NATURALIST. American Midland Naturalist. Published by Notre Dame University, Notre Dame, Indiana.
AMER. MINERALOGIST. American Mineralogist. Published by the Mineralogical Society of America from Lancaster, Pennsylvania.

AMER. MUSEUM JOUR. American Museum Journal. Published by the American Museum of Natural History from New York City, New York.

AMER. MUSEUM NATURAL HIST. BULL. Bulletin of the American Museum of Natural History. Published by the Museum from New York City, New York.

AMER. MUSEUM NOVITATES. American Museum Novitates. Published by the American Museum of Natural History from New York City, New York.

AMER. NATURALIST. American Naturalist. Published by the American Society of Naturalists from Boston, Massachusetts, New York City, New York, and elsewhere.

AMER. PHILOS. SOC. PROC.; . . . TRANS.; . . . YEARBOOK. Proceedings, Transactions, and Yearbook of the American Philosophical Society. Published by the Society from Philadelphia, Pennsylvania.


AMER. WATER WORKS ASSOC. JOUR.; . . . PROC. Journal, and Proceedings of the American Water Works Association. Published by the Association from various places.

AMER. WATER WORKS ASSOC. SOUTHEASTERN DIV. JOUR. Journal of the Southeastern Division of the American Water Works Association. Published by the Division from various places.

ANNALEN DER PHYSIK UND CHEMIE. Published commercially from Halle and Leipzig, Germany.

ANNALES DE CHIMIE ET DE PHYSIQUE. Published commercially from Paris, France.

ANNALES DE GEOGRAPHIE. Published commercially from Paris, France.

ANNALES DES MINES. Published by Ministère des Travaux Publix, des Postes, et des Télégraphies from Paris, France.

ANNALS OF IOWA. Annals of Iowa. Published by the Iowa State Historical Department from Des Moines, Iowa.

ANNUAIRE GÉOLOGIQUE UNIVERSEL. Published commercially from Paris, France.

ANTHROPOLOGIE. Published commercially from Paris, France.

APPALACHIA. Appalachia. Published by the Appalachian Mountain Club from Boston, Massachusetts.

ARCHIV FÜR MINERALOGIE. Published commercially from Berlin, Germany.

ARIZONA UNIV. PRESIDENT'S REPT. Annual Report of the President of the University of Arizona. Published by the University from Tucson, Arizona.


ASSOC. AMER. GEOGRAPHERS ANNALS. Annals of the Association of American Geographers. Published by the Association from various places.

ASSOC. AMER. GEOGRAPHERS SOUTHEAST DIV. MEMORANDUM FOLIO. Memorandum Folio of the Southeast Division of the Association of American Geographers. Published by the Division from various places.

ASSOC. AMER. GEOLOGISTS AND NATURALISTS REPT. Report of the American Association of Geologists and Naturalists. Published by the Association from various places.

ASSOC. AMER. STATE GEOLOGISTS GUIDEBOOK. Guidebook of the annual meeting of the Association of American State Geologists. Published by the Association from various places.

ATLANTA MEDICAL AND SURGICAL JOUR. Atlanta Medical and Surgical Journal. Published by the Fulton County Medical Society from Atlanta, Georgia.

BAYERISCHE AKADEMIE DER WISSENSCHAFT JAHRBUCH. Published by the Academy from Munich, Germany.

BEITRÄGE ZUR GEOPHYSICS. Published commercially from Leipzig and Stuttgart, Germany.

BERG- UND HUTTENMAENISCHE ZEITUNG. Published commercially from Freiburg and Leipzig, Germany.
BIOL. SOC. WASHINGTON PROC. Proceedings of the Biological Society of Washington, D. C. Published by the Society from Washington, D. C.

BOSTON JOUR. NATURAL HIST. Boston Journal of Natural History. Published by the Boston Society of Natural History from Boston, Massachusetts.

BOSTON SOC. NATURAL HIST. PROC. Proceedings of the Boston Society of Natural History. Published by the Society from Boston, Massachusetts.

BOT. GAZETTE. Botanical Gazette. Published commercially from Crawfordsville, Indiana.

BOT. REVIEW. Botanical Review. Published commercially from Lancaster, Pennsylvania.

BRICK AND CLAY RECORD. Brick and Clay Record. Published commercially from Chicago, Illinois.

BRITISH ASSOC. ADVANCEMENT SCIENCE REPT. Report of the British Association for the Advancement of Science. Published by the Association from various places.

BULLETIN VOLCANOLOGIQUE. Published by the International Geodetic and Geophysical Union, Association of Volcanology from various places.

BULLS. AMER. PALEONTOLOGY. Bulletins of American Paleontology. Published by the Paleontological Research Institute from Ithaca, New York.

CALIFORNIA UNIV. PUBS. ASTRONOMY. University of California Publications in Astronomy. Published by the University from Berkeley, California.

CANADA GEOL. SURVEY MEM. Memoirs of the Canada Geological Survey. Published by the Survey from Ottawa, Canada.

CANADIAN ALPINE JOUR. Canadian Alpine Journal. Published by the Alpine Club of Canada from Winnepeg, Canada.

CANADIAN FIELD-NATURALIST. Canadian Field-Naturalist. Published by the Ottawa Field-Naturalists Club from Ottawa, Canada.

CANADIAN JOUR. Canadian Journal. Published commercially from Toronto, Canada.
CANADIAN MINING AND METALLURGICAL BULL. Canadian Mining and Metallurgical Bulletin. Published by the Canadian Institute of Mining and Metallurgy from Ottawa, Canada.

CANADIAN MINING INST. MONTHLY BULL. Canadian Mining Institute Monthly Bulletin. Published by the Institute from Ottawa, Canada.

CANADIAN RECORD OF SCIENCE. Canadian Record of Science. Published by the Natural History Society of Montreal from Montreal, Canada.

CARNEGIE INST. WASHINGTON PUB. Publications of the Carnegie Institute of Washington, D. C. Published by the Institute from Washington, D. C.

CENTURY MAG. Century Magazine. Published commercially from New York City, New York.

CHARLESTON MEDICAL JOUR. AND REVIEW. Charleston Medical Journal and Review. Published commercially from Charleston, South Carolina.

CINCINNATI SOC. NATURAL HIST. JOUR. Journal of the Cincinnati Society of Natural History. Published by the Society from Cincinnati, Ohio.


CLIMATOLOGIST. Climatologist. Published commercially from Philadelphia, Pennsylvania.

COLLIERY ENGINEER. Colliery Engineer. Published commercially from Pottsville and Scranton, Pennsylvania.

COMPASS. The Compass of Sigma Gamma Epsilon. Published by the Fraternity from Menasha, Wisconsin, and elsewhere.

COPEIA. Copeia. Published by the American Society of Ichthyologists and Herpetologists from New York City, New York.

CUSHMAN FOUNDATION FORAMINIFERAL RESEARCH CONTRIBS.; ... SPEC. PUB. Contributions, and Special Publications of the Cushman Foundation for Foraminiferal Research. Published for the Foundation by the Paleontological Research Institute from Ithaca, New York.

CUSHMAN LAB. FORAMINIFERAL RESEARCH CONTRIBS.; ... SPEC. PUB. Contributions, and Special Publications from the Cushman Laboratory of Foraminiferal Research. Published by the Laboratory from Sharon, Massachusetts.
DE BOW'S REVIEW. DeBow's Review. Published commercially from New Orleans, Louisiana.

DENISON UNIV. BULL. (SCIENTIFIC LAB. JOUR.). Denison University Bulletin (Journal of the Scientific Laboratories). Published by the University from Granville, Ohio.

DENISON UNIV. SCIENTIFIC LAB. BULL. Bulletin of the Scientific Laboratories of Denison University. Published by the University from Granville, Ohio.

DE RE METALLICA. De Re Metallica. Published by the students and Alumni of the Montana School of Mines from Butte, Montana.

DESERT MAG. Desert Magazine. Published commercially from El Centro, California.

DEUTSCHE GEOLOGISCHE GESELLSCHAFT ZEITSCHRIFT. Published by the Society from Berlin, Germany.

DISSERTATION ABSTRACTS. Dissertation Abstracts. Published by the University of Michigan from Ann Arbor, Michigan.

DIXIE. Dixie. Published commercially from Atlanta, Georgia.

EARTH SCIENCE DIGEST. Earth Science Digest. Published commercially from Omaha, Nebraska.

ECLOGAE GEOLOGICAE HELVITIAE. Published by the Société géologique suisse from Lausanne, Switzerland and elsewhere.

ECOLOGY. Ecology. Published by the Ecological Society of America from Brooklyn, New York.

ECON. GEOLOGY. Economic Geology. Published by the Society of Economic Geologists from Lancaster, Pennsylvania.

EDINBURGH NEW PHILOS. JOUR. Edinburgh New Philosophical Journal. Published commercially from Edinburgh, Scotland.

ELISHA MITCHELL SCIENTIFIC SOC. JOUR. Journal of the Elisha Mitchell Scientific Society. Published by the Society from Chapel Hill, North Carolina.

EMORY UNIV. QUARTERLY. Emory University Quarterly. Published by the University from Atlanta, Georgia.

ENGINEERING AND MINING JOUR. Engineering and Mining Journal. Published commercially from New York City, New York.
GEOGRAPHICAL REVIEW. Geographical Review. Published by the American Geographical Society of New York from New York City, New York.

GEOGRAPHICAL SOCIETY CHINA JOUR. Journal of the Geographical Society of China. Published by the Society from Peking, China.


GEOGRAPHISCHE GESELLSCHAFT WIEN MITTHEILUNGEN. Published by the Society from Vienna, Austria.

GEOL. SOC. AMERICA BULL.; ... MEM.; ... PROC.; ... SPEC. PAPER. Bulletin, Memoir, Proceedings, and Special Papers of the Geological Society of America. Published by the Society from New York City, New York.

GEOL. SOC. CHINA BULL. Bulletin of the Geological Society of China. Published by the Society from Peiping, China.

GEOL. SOC. JAPAN JOUR. Journal of the Geological Society of Japan. Published by the Society from Tokyo, Japan.


GEOLOGISKA FOERENINGENS I STOCKHOLM FORHANDLINGAR. Published by the Society from Stockholm, Sweden.


GEOPHYSICS. Geophysics. Published by the Society of Exploration Geophysicists from Tulsa, Oklahoma, and Houston, Texas.

GEORGIA ACADEMY OF SCIENCE BULL. Bulletin of the Georgia Academy of Science. Published by the Academy from various places.

GEORGIA GEOL. SURVEY BULL. ... INF. CIRC.; ... PROG. REPT. Bulletin, Information Circular, and Progress Report of the Georgia Geological Survey. Also known as Department of Mines, Mining, and Geology, and as Department of Natural Resources, Division of Mines, Mining, and Geology.
GEORGIA INST. TECHNOLOGY ENGINEERING EXPER. STA. BULL.; · · · SPEC. REPT. Bulletin, and Special Report of the Georgia Institute of Technology Engineering Experiment Station. Published by the Institute from Atlanta, Georgia.

GEORGIA MINERAL NEWSLETTER. Georgia Mineral Newsletter. Published by the Georgia Geological Survey from Atlanta, Georgia. Succeeds Georgia Mineral Society Newsletter.

GEORGIA MINERAL SOC. NEWSLETTER. Georgia Mineral Society Newsletter. Published by the Society from Atlanta, Georgia. Succeeded by above.

GEORGIA REVIEW. Georgia Review. Published by the University of Georgia from Athens, Georgia.

GEORGIA SPELUNKER. Georgia Spelunker. Published by the Atlanta Grotto of the National Speleological Society from Forest Park, Georgia, and elsewhere.

GEORGIA UNIV. BULL. Bulletin of the University of Georgia. Published by the University from Athens, Georgia.

GEOTIMES. GeoTimes. Published by the American Geological Institute from Washington, D. C.

GESELLSCHAFT DEUTSCHER NATURFORSCHER UND AERTZE VERHANGLUNGEN. Published by the Society from Leipzig, Germany.

GULF COAST ASSOC. GEOL. SOCS. TRANS. Transactions of the Gulf Coast Association of Geological Societies. Published by the Association from various places.

HARVARD COLLEGE MUSEUM COMP. ZOOL. BULL.; · · · MEM. Bulletin, and Memoir of Harvard College Museum of Comparative Zoology. Published by Harvard University from Cambridge, Massachusetts.

HARVARD ENGINEERING JOUR. Harvard Engineering Journal. Published by Harvard University from Cambridge, Massachusetts.

HARVARD UNIV. BOT. MUSEUM LEAFLET. Leaflet of the Harvard University Botanical Museum. Published by the University from Cambridge, Massachusetts.

HISTOIRE DE L'ACADEMIE ROYALE DES SCIENCES PHYSIQUES. Published by the Academy from Paris, France.

HOBBIES. Hobbies. Published commercially from Chicago, Illinois.
ILLINOIS STATE ACAD. SCIENCE TRANS. Transactions of the Illinois State Academy of Science. Published by the Academy from Springfield, Illinois.


INDIA GEOL. SURVEY MEM. Memoirs of the India Geological Survey. Published by the Survey from Calcutta, India.

INDIANA ACAD. SCIENCE PROC. Proceedings of the Indiana Academy of Science. Published by the Academy from Brookville, Indiana.


INTERSTATE OIL COMPACT COMMISSION BULL. Bulletin of the Interstate Oil Compact Commission. Published by the Commission from Oklahoma City, Oklahoma. Succeeds the Quarterly Bulletin.

INTERSTATE OIL COMPACT COMMISSION QUART. BULL. Quarterly Bulletin of the Interstate Oil Compact Commission. Published by the Commission from Oklahoma City, Oklahoma. Succeeded by above.

JOHNS HOPKINS UNIV. CIRC. Circular of the Johns Hopkins University. Published by the University from Baltimore, Maryland.

JOUR. GEOGRAPHY. Journal of Geography. Published commercially from various places.

JOUR. GEOLOGY. Journal of Geology. Published by the University of Chicago from Chicago, Illinois.

JOUR. GEOMORPHOLOGY. Journal of Geomorphology. Published commercially from New York City, New York.

JOUR. MAMMALOLOGY. Journal of Mammalology. Published by the American Society of Mammalologists from Baltimore, Maryland.

JOUR. PALEONTOLOGY. Journal of Paleontology. Published by the Paleontological Society, the Society of Economic Paleontologists and Mineralogists, and the Geological Society of America from Menasha, Wisconsin.

JOUR. SEDIMENTARY PETROLOGY. Journal of Sedimentary Petrology. Published by the Society of Economic Paleontologists and Mineralogists from Menasha, Wisconsin.
JOURNAL DE PHYSIQUE, DE CHEMIE, D'HISTOIRE NATURELLE ET DES ARTS. Published commercially from Paris, France.

JOURNAL FUER PRAKTISCHE CHEMIE. Published commercially from Leipzig, Germany.

K. AKADEMIE DER WISSENSCHAFTEN BERLIN ABHANDLUNGEN. Published by the Academy from Berlin, Germany.

K. AKADEMIE DER WISSENSCHAFTEN BERLIN PHYSICHE ABHANDLUNGEN. Published by the Academy from Berlin, Germany.

K. PREUSSISCHE AKADEMIE DER WISSENSCHAFTEN BERLIN SITZUNGSBERICHTE. Published by the Academy from Berlin.

K. K. GEOL OGISCHE REICHANSTALT JAHRBUCH; VERHANDLUNGEN. Published by the Institution from Vienna, Austria.

K. K. NATURHISTORISCHEN HOFMUSEUMS ANNALEN. Published by the Museum from Vienna, Austria, and elsewhere.

KENTUCKY GEOL. SURVEY MEM. SPECIAL PUB. Memoir and Special Publication of the Kentucky Geological Survey. Published by the Survey from Frankfort, Kentucky.

L'ACADÉMIE IMPÉRIAL DES SCIENCES DE ST. PETERSBOURG BULLETIN. Published by the Academy from St. Petersburg, Russia.

LITERARY AND PHILOS. SOC. NEW YORK TRANS. Transactions of the Literary and Philosophical Society of New York. Published by the Society from New York City, New York.


LYCEUM NATURAL HIST. NEW YORK ANNALS. Annals of the Lyceum of Natural History of New York. Published by the Lyceum from New York City, New York.

MACON MAG. Macon Magazine. Published by the Macon Chamber of Commerce from Macon, Georgia.

MAĐEN TETKİK VE ARAMA, ENSTITÜSII MECMUARI. Published by the Institute from Ankara, Turkey.

MANUFACTURERS' RECORD. Manufacturers' Record. Published commercially from Baltimore, Maryland.

MARYLAND GEOL. SURVEY. Maryland Geological Survey. Published by the Survey from Baltimore, Maryland.

MAZAMA. Mazama. Published commercially from Portland, Oregon.

MEDICAL REPOSITORY. Medical Repository. Published commercially from New York City, New York.

MEDICAL SOC. STATE OF GEORGIA ANN. MTG. TRANS. Transactions of the Annual Meetings of the Medical Society of the State of Georgia. Published by the Society from Savannah, Georgia.

METEORITICS. Meteoritics. Published by the Meteoritical Society from Albuquerque, New Mexico.

MICHIGAN UNIV. MUSEUM ZOOLOGY OCCASIONAL PAPER. Occasional Paper of the University of Michigan Museum of Zoology. Published by the University from Ann Arbor, Michigan.

MICROPALAEONTOLOGIST. Micropaleontologist. Published by the American Museum of Natural History from New York City, New York.

MINERAL COLLECTOR. Mineral Collector. Published commercially from New York City, New York and elsewhere.

MINERALOGICAL MAG. Mineralogical Magazine. Published by the Mineralogical Society from London, England.

MINERALOGISCHE UND PETROGRAPHISCHE MITTHEILUNGEN. Published commercially from Vienna, Austria.

MINERALOGIST. Mineralogist. Published commercially from Portland, Oregon.

MINES AND MINERALS. Mines and Minerals. Published commercially from Scranton, Pennsylvania.

MINING AND ENGINEERING WORLD. Mining and Engineering World. Published commercially from Butte, Montana, and Chicago, Illinois.

MINING AND METALLURGICAL SOC. AMERICA BULL. Bulletin of the Mining and Metallurgical Society of America. Published by the Society from New York City, New York.

MINING AND METALLURGY. Mining and Metallurgy. Published by the American Institute of Mining and Metallurgical Engineers from New York City, New York.
MINING AND SCIENTIFIC PRESS. Mining and Scientific Press. Published commercially from San Francisco, California.

MINING AND STATISTICAL MAG. Mining and Statistical Magazine. Published commercially from New York City, New York.

MINING CONGRESS JOUR. Mining Congress Journal. Published by the American Mining Congress from Denver, Colorado.

MINING ENGINEERING. Mining Engineering. Published by the American Institute of Mining and Metallurgical Engineers from New York City, New York.

MINING MAG. Mining Magazine and Journal of Geology. Published commercially from New York City, New York.

MINING WORLD. Mining World. Published commercially from Seattle, Washington.

MONTHLY WEATHER REVIEW. Monthly Weather Review. Published by the United States Department of Commerce, Weather Bureau, from Washington, D. C.

MUSEE ROYALE D'HISTOIRE NATURELLE BELGIQUE MEMOIRE. Published by the Museum from Brussels, Belgium.

NATL. ACAD. SCIENCE BIOG. MEM.; ... MEM. Biographical Memoir, and Memoir of the National Academy of Sciences. Published by the Academy from Washington, D. C.

NATL. GEOGRAPHIC MAG. National Geographic Magazine. Published by the National Geographic Society from Washington, D. C.

NATL. INSTITUTE (WASHINGTON, D. C.) PROC. Bulletin of Proceedings of the National Institute for the Promotion of Science. Published by the Institute from Washington, D. C.

NATL. OIL SCOUTS AND LANDSMENS' ASSOC. YEARBOOK. Yearbook of the National Association of Oil Scouts and Landsmen. Published by the Association from Houston, Texas, and elsewhere.

NATL. SPELEOLOGICAL SOC. BULL. Bulletin of the National Speleological Society. Published by the Society from Washington, D. C.

NATUR UND VOLK. Published by the Senckenbergische Naturforschende Gesellschaft from Frankfort/Main, Germany.

NATURAL HIST. REVIEW. Natural History Review. Published by the Natural History Society of Dublin from London, England.
NATURAL HISTORY. Natural History. Published by the American Museum of Natural History from New York City, New York.


NATURE MAG. Nature Magazine. Published commercially from Washington, D. C. and elsewhere.

NATURHISTORISCHEN VEREIN DER PREUSSISCHEN RHEINLANDE UND WESTPHALENS VERHANDLUNGEN. Published by the Club from Bonn, Germany.

NAUTILUS. Nautilus. Published commercially from Philadelphia, Pennsylvania, and Boston, Massachusetts.

NEBRASKA UNIV. STUDIES. Nebraska University Studies. Published by the University from Lincoln, Nebraska.

NEIDERRHEINISCHEN GESELLSCHAFT FUER NATUR- UND HEILKUNDE IN BONN SITZUNGSBERICHTEN. Published by the Society from Bonn, Germany.

NEUES JAHRBUCH FUER MINERALOGIE . . . . Published commercially from Heidelberg and Stuttgart, Germany.

NEUES JAHRBUCH FUER MINERALOGIE . . . . , BEILAGE BAND. Published commercially from Heidelberg and Stuttgart, Germany.

NEW YORK ACAD. SCIENCE ANNALS. Annals of the New York Academy of Science. Published by the Academy from various places.

NEW YORK STATE GEOLOGIST ANN. REPT. Annual Report of the State Geologist of New York. Published by the State Museum from Albany, New York.

NEW YORK STATE MUSEUM ANN. REPT.; . . . BULL. Annual Report, and Bulletin of the New York State Museum. Published by the Museum from Albany, New York.

NEW YORK UNIV. REGENTS BULL. Bulletin of the Board of Regents of the University of New York. Published by the Regents from Albany, New York.

NORTH CAROLINA DIV. MINERAL RESOURCES BULL. Bulletin of the North Carolina Division of Mineral Resources. Published by the Division from Raleigh, North Carolina.
NORTH CAROLINA GEOL. SURVEY; ... BULL. Bulletin of the North Carolina Geological Survey. Published by the Survey from Raleigh, North Carolina.

NORTH CAROLINA UNIV. ENGINEERING EXPER. STA. BULL. Bulletin of the Engineering Experiment Station of the University of North Carolina. Published by the University from Asheville, North Carolina.

OIL. Oil. Published commercially from New Orleans, Louisiana.

OIL AND GAS JOUR. Oil and Gas Journal. Published commercially from Dallas, Texas, and elsewhere.

OIL WEEKLY. Oil Weekly. Published commercially from Houston, Texas.

OKLAHOMA GEOLOGY NOTES. Oklahoma Geology Notes. Published by the Oklahoma Geological Survey from Norman, Oklahoma.

PALAEOBIOLOGICA. Published commercially from Vienna, Austria.

PALAEOBOTANIST. Published by the Birbal Sahni Institute of Palaeobotany from Lucknow, India.

PALAEOGRAPHICA AMERICANA. Palaeographica Americana. Published by the Paleontological Research Institute from Ithaca, New York.

PALAEOLOGICA AMERICANA. Palaeontographica Americana. Published by the Paleontological Research Institute from Ithaca, New York.

PALEONTOLOGISCHE ZEITSCHRIFT. Published by the Paläontologische Gesellschaft from Berlin, Germany.

PALEONTOLOGICAL BULL. Paleontological Bulletin. Published privately by E. D. Cope from Philadelphia, Pennsylvania.

PAN-AMER. GEOLOGIST. Pan-American Geologist. Published commercially from Des Moines, Iowa.

PEKING NATURAL HIST BULL. Peking Natural History Bulletin. Published by the Peking Society of Natural History from Peking, China.

PENNSYLVANIA ACAD. SCIENCE PROC. Proceedings of the Pennsylvania Academy of Science. Published by the Academy from Harrisburg, Pennsylvania.

PENNSYLVANIA STATE COLLEGE MINERAL INDUSTRIES EXPER. STA. TECH PAPER. Technical Papers of the Pennsylvania State College Mineral Industries Experiment Station. Published by the College from State College, Pennsylvania.

PENNSYLVANIA STATE UNIV. MINERAL INDUSTRIES EXPER. STA. CIRC. Circular of the Pennsylvania State University Mineral Industries Experiment Station. Published by the University from University Park, Pennsylvania.

PENNSYLVANIA STATE UNIV. SCHOOL OF MINERAL INDUSTRIES TECH. REPT. Technical Report of the Pennsylvania State University School of Mineral Industries. Published by the University from University Park, Pennsylvania.

PENNSYLVANIA UNIV. LAB. CONTRIB. Contributions from the Laboratories of the University of Pennsylvania. Published by the University from Philadelphia, Pennsylvania.

PETERMANN'S GEOGRAPHISCHE MITTHEILUNGEN. Petermann's geographische Mittheilungen aus Justus Perthes' geographische Anstalt. Published commercially from Gotha, Germany.

PETROLEUM ENGINEER. Petroleum Engineer. Published commercially from Dallas, Texas, and Tulsa, Oklahoma.


PHILOS. SOC. WASHINGTON BULL. Bulletin of the Philosophical Society of Washington. Published by the Society from Washington, D. C.


POPULAR ASTRONOMY. Popular Astronomy. Published by Carlton College from Northfield, Minnesota.

POPULAR SCIENCE MONTHLY. Popular Science Monthly. Published commercially from New York City, New York.

POSTILLA. Postilla. Published by the Peabody Museum of Yale University from New Haven, Connecticut.

REVISTA DE LOS PROGRESOS DE LA CIENCIAS. Published by the Academia de Ciencias Morales y Politicos from Madrid, Spain.

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Oil News Company from Tulsa, Oklahoma.

ROCHESTER ACAD. SCIENCE PROC. Proceedings of the Rochester Acad-
emy of Science. Published by the Academy from Rochester, New
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ROCKS AND MINERALS. Rocks and Minerals. Published commercially by
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ROYAL INST. GREAT BRITAIN JOUR.; . . . PROC. Journal, and Proceedings
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RUBBER AGE. Rubber Age. Published commercially from New York City,
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SAN DIEGO SOC. NATURAL HIST. TRANS. Transactions of the San Diego
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Diego, California.

SCHOOL OF MINES QUARTERLY. School of Mines Quarterly. Published
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SCHOOL SCIENCE AND MATHEMATICS. School Science and Mathematics,
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SCIENCE. Science. Published commercially and by the American Association
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SCIENCE RECORD. Science Record. Published commercially from Boston,
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SCIENTIFIC AMERICAN. Scientific American. Published commercially from
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SCIENTIFIC MONTHLY. Scientific Monthly. Published commercially from
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SEISMOLOG. SOC. AMERICA BULL. Bulletin of the Seismological Society of
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SMITHSONIAN CONTRIBS. KNOWLEDGE. Smithsonian Contributions to
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SMITHSONIAN INST. ANN. REPT. Annual Report of the Smithsonian Institution. Published by the Institution from Washington, D. C.

SMITHSONIAN MISC. COLLECTIONS. Smithsonian Miscellaneous Collections. Published by the Smithsonian Institution from Washington, D. C.

SOC. FOR RESEARCH ON METEORITES. Society for Research on Meteorites. Published by the Society from various places.

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TENNESSEE VALLEY AUTH. DIV. GEOLOGY BULL. Bulletin of the Division of Geology of the Tennessee Valley Authority. Published by the Authority from Knoxville, Tennessee.

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TEXAS UNIV. PUB. University of Texas Publications. Published by the University from Austin, Texas.

TORREY BOT. CLUB BULL. Bulletin of the Torrey Botanical Club. Published by the Club from New York City, New York.
TORREYA. Torreya. Published by the Torrey Botanical Club from various places.

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UNIV. COLORADO STUDIES. University of Colorado Studies. Published by the University of Colorado from Boulder, Colorado.

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1. Selected electron micrographs of clays and other fine-grained minerals: Pennsylvania State Univ. Mineral Industries Exper. Sta. Circ. 51, vi, 61 p., illus., 1958. Excellent electron photomicrographs of kaolin from Twiggs Co., and attapulgite from Decatur Co., are shown; a very brief text is included.
2. Electron micrographs of some Georgia clays: Georgia Mineral Newsletter, vol. 12, p. 17-19, illus., 1959. Micrographs of kaolinite from Twiggs Co., and attapulgite from Decatur Co. are given. A brief description of each photo is included.
BAUER, GEORGE, see Cope, Edward Drinker, 2.

BAUM, ROBERT B., 1920-
1. Exploration activity in the southeastern states: Oil and Gas Jour., vol. 51, no. 42, p. 185-186, illus. incl. port., 1955. A general survey of the area includes discussions of Georgia. Small-scale maps show some of the large tectonic features of the Coastal Plain. The Coastal Plain is mapped as being an area of possible production from Mesozoic and Paleozoic rocks.
2. Oil and gas exploration in . . . Georgia . . . : Geophysics, vol. 18, p. 340-359, illus., 1953. A detailed review of the geologic structures of the southeastern states, amplified by geophysical information, is given. Many small-scale maps showing different features are included.

BAY, HARRY X., 1906-
1. (and Munyan, Arthur Claude). The bleaching clays of Georgia: U. S. Geol. Survey Bull. 901, p. 251-300, illus., 1940; summary, Forestry-Geological Review, vol. 5, no. 10, p. 7-8, illus.; no. 11, p. 7-8, illus.; no. 12, p. 7-8, illus., 1935; Georgia Geol. Survey Inf. Circ. 6, 4 p., illus., 1935. Bentonite from Dade, Chattooga, and Walker Cos. is described and analyzed, and many types of fuller's earth deposits on the Coastal Plain are also described and analyzed. The Twiggs Clay of Eocene age, the Oligocene Flint River Formation, and the Miocene Hawthorn Formation are the big sources of bleaching clay.

BAYLEY, WILLIAM SHIRLEY, 1861-1943, see also Ries, Heinrich, 4.
1. Geology of the Tate Quadrangle, [Pickens, Cherokee, Dawson, Forsyth Cos.] Georgia: Georgia Geol. Survey Bull. 43, ix, 170 p., illus. incl. geol. map, 1928. A complete geological description of the area is given. Precambrian-Cambrian metamorphosed rocks are mapped as are Paleozoic or older igneous rocks, and post-Paleozoic diabase. Folding, faulting, and accompanying metamorphism dominate the structure. Gold, pyrite, rutile, marble, and other materials are the mineral resources present. Each is described; analyses are included.

BEALL, ELIAS.

BEAUJOUR, LOUIS AUGUSTE FELIX DE, 1763-1836.
1. Aperçu des États Unis. . . 272 p., illus. incl. geol. map, Paris, Delaunay Libraire, 1814; also an English edition, London, J. Booth and others, 1814. An extremely cursory description of the geology of the United States is included, with no direct allusion to Georgia at all. Maclure's geological map of the United States, dated 1814, which includes Georgia, is reproduced, however.
BECK, WILLIAM AUGUST, see also Kline, Mitchell Heeney, 1.

1. Exploration of the Piedmont manganese belt, . . . Wilkes County, Georgia: U. S. Bur. Mines Rept. Inv. 3858, 5 p. (♀) illus., 1946. Manganese deposits, as lenses of massive ore conforming with the foliation of the enclosing schist, and as beds of nodules in the weathered zone, are described. Pyrolusite and psilomelane are the chief minerals. Analyses are included.


BECKER, GEORGE FERDINAND, 1847-1919.

1. Gold fields of the southern Appalachians: U. S. Geol. Survey Ann. Rept. 16, pt. 3, p. 251-331, illus., 1895. Gold occurs in quartz veins in metamorphic rocks, as placer deposits, and in the surface residuum. General aspects are described and details of many deposits in the Piedmont of Georgia are included.


BEHRE, CHARLES HENRY, JR., 1896-

1. Problems of the genesis of mineral deposits of the southeastern states, in Snyder, Frank G., ed., Symposium on mineral resources of the southeastern United States, p. 26-41, illus., 1950. A general review of the geologic setting and genesis of mineral deposits in the southeast includes a few references to examples from Georgia. No details are included.
BELL, AGrippa Nelson, 1820-1911.
1. Climatology and mineral waters of the United States. 386 p., illus., New York, William Wood and Co., 1885. This is a treatise on the influence of climate and one's health, and the concurrent influence of mineral waters. A cursory description of the topography of Georgia is included, as are descriptions of numerous mineral springs. Analyses are included for Warm Springs in Meriwether County and Indian Springs in Butts County.

BELL, Alfred Hannam, 1895-

BELL, Isaac Lowthian, 1816-1904.
1. On the American iron trade and its progress during sixteen years, in Iron and Steel Inst. in America, Spec. Vol. of "Proc.," p. 1-208, illus., London, E. and F. N. Spon, 1892. A review of the entire iron trade as reported by a British observer includes descriptions of the ore occurrences in the United States and in Georgia. No new data are given, however. A geological map of the United States is included, along with a survey of the coal and iron fields. Some analyses are given also.

BELL, John, 1796-1872.

BEMENT, Clarence Sweet, 1843-1923.

BENJAMIN, Marcus, 1857-1932.

BERDAN, Jean Milton, 1916- see Bridge, Josiah, 2.
BERKEY, CHARLES PETER, 1867-1955, see also Fairbanks, Helen R., 1.


BERONI, ERNEST PETE, see Gott, Garland Bayard, 1.

BERRY, EDWARD WILBUR, 1875-1945, see also Clark, William Bullock, 4.

2. (An) Eocene flora in Georgia and the indicated physical conditions. Bot. Gazette, vol. 50, p. 202-208, illus., 1910. Claiborne sediments in Columbia County contain a flora of 14 species, mixed with estuarine and shallow water marine invertebrates. They represent a much warmer climate than now exists at this place. They are related to the modern flora of tropical America.
3. (A) study of the Tertiary floras of the Atlantic and Gulf Coastal Plain: Amer. Philos. Soc. Proc., vol. 50, p. 301-315, illus., 1911. A generalized review of the Cenozoic rocks of the Coastal Plain includes those of Georgia. Floral lists for each Tertiary stage are included. The position of the shoreline at various times is estimated from the nature of the plant remains. Few details are included.
4. The affinities and distribution of the Lower Eocene flora of southeastern North America: Amer. Philos. Soc. Proc., vol. 53, p. 129-250, illus., 1914. A review of the Lower Eocene flora includes much about the Coastal Plain of Georgia. The North American distribution in time and space of the various groups of plants is discussed; many are from Georgia. The Wilcox Stage is especially discussed; the flora is a subtropical strand-line type.
5. (The) Upper Cretaceous and Eocene floras of South Carolina and Georgia: U. S. Geol. Survey Prof. Paper 84, 200 p., illus., 1914. Many genera and species from many places in the Coastal Plain are described and illustrated.
6. (The) Upper Cretaceous floras of the world, in *Upper Cretaceous*, vol. 1, p. 183-313, Maryland Geol. Survey, 1916. The flora of the Eutaw and Ripley formations are listed and compared with similar floras from elsewhere around the world.

7. (The) delta character of the Tuscaloosa Formation: Johns Hopkins Univ. Circ., new ser. 1917, no. 3, p. 18-24, illus., 1917. The Tuscaloosa Formation in Alabama is shown to be deltaic, thus supporting the idea of the Coosa River having been the main drainage toward the southwest during at least Upper Cretaceous time. The Tertiary capture of the Coosa River by the Tennessee River interrupted the delta deposition.

8. (A) Middle Eocene member of the “Sea Drift” [Clay Co.]: Amer. Jour. Science, 4th ser. vol. 43, p. 298-300, illus., 1917. A seed of *Caropa xylocarpooides* from the Claiborne Stage of Clay County is described and illustrated. It is exotic to the fossil flora and probably was mixed with the local flora after having drifted ashore.


11. American Tertiary terrestrial plants and their interdigitation with marine deposits: Geol. Soc. America Bull., vol. 35, p. 767-784, 1924. The floras of the various stages of the Tertiary are described, and the relationships of the flora deposits to the various Tertiary strand lines are considered; a fluctuation of the strand is interpreted. Material from Georgia is used in the evaluation and in a comparison of the North American flora with similarly-aged European floras.

12. (The) Middle and Upper Eocene floras of southeastern North America: U. S. Geol. Survey Prof. Paper 92, 206 p., illus., 1924. Several genera and species of poorly-preserved plants from the Claiborne Stage in Clay County are described and illustrated, as are genera and species from the Jackson Stage in Columbia and Bibb Counties.

13. (The) Mississippi Gulf in the Middle and Upper Eocene: Scientific Monthly, vol. 19, p. 80-42, illus., 1924. This is a popular account of the sediments and flora of this time interval on the Gulf Coast, including Georgia. No new data are included.

14. (The) flora of the Ripley Formation: U. S. Geol. Survey Prof. Paper 136, 94 p., illus., 1925. The Cretaceous flora from Tennessee is described and discussed. It is compared with the Cretaceous flora of Georgia, mostly that from Houston and Marion Counties, which is in turn analyzed.

15. Eocene botany of our Gulf states: Pan-Amer. Geologist, vol. 47, p. 269-278, illus., 1927. A very general review of the Eocene history of the Coastal Plain shows the reasons why the paleobotanical material is distributed the way it is. Very little direct reference to the Georgia Coastal Plain is made, however.

BERRY, EDWARD WILLARD, 1900-
1. The Pleistocene plant remains of the Coastal Plain of eastern North America: Paiaeoootanist, vol. 1, p. 79-98, illus., Lucknow, 1952. A list of known Pleistocene plants is given, along with a brief abstract of their past and present distribution. An exposure along the Chattahoochee River is mentioned, as is an unidentifiable location.

BERSHAD, SUZANNE F.

BETHUNE, PIERRE DE.
1. La physiographie de l’est des Etats Unis d’ Amérique: Revue des questions scientifiques, 4th ser. vol. 22, p. 335-354, illus., Brussels, 1932. A very general review of the physiography of the eastern United States includes that of Georgia. No new data are included.

BEURLEN, KARL.

BEVAN, ARTHUR CHARLES, 1888-

BIEDERMAN, C. A.
A prospectus for the sale of land in New Switzerland, Habersham Co., includes general, attractive descriptions of the geology and topography. It is made to sound like Valhalla here in Georgia.
BILLINGS, MARLAND PRATT, 1902-

1. (and Williams, Charles Regan). Origin of the Appalachian Highlands: Appalachia, vol. 19, (Appalachian Mountain Club Bull., vol. 25, no. 10) p. 1-33, illus., 1932. This is a popular account of the geology of the Appalachian Mountains. Those in Georgia are mentioned only as a part of the larger dimension, and no new data are included.

BIRKINBINE, JOHN, 1844-

1. The iron ores east of the Mississippi River: U. S. Geol. Survey Mineral Resources 1886, p. 39-103, 1887. Analyses of iron ore from Silurian rocks in northwestern Georgia are included in a very brief review of the occurrence of the ore.

BLACKWELDER, ELIOT, 1880-


BLAIR, WILLIAM FRANKLIN, 1912-

1. Distributional patterns of vertebrates in the southern United States in relation to past and present environments, [Chap.] 17 in Pt. 2, of Hubbs, Carl Leavitt, ed., Zoogeography: p. 433-468, illus., Amer. Assoc. Advancement Science, 1958. Evidence is shown by the distribution of modern and Pleistocene vertebrates, that the Pleistocene glaciation in the north forced certain animals to move southward, some into Georgia, where they now remain as relict populations.

BLAKE, WILLIAM Phipps, 1826-1910, see also Hitchcock, Charles Henry, 2, 3; Lumpkin Chestatee Fluming and Mining Co., 1; Marcou, Jules, 2; Nacoochee Hydraulic Mining Co., 1; Southern Gold Mining Co., 1.


2. Report upon the gold placers of a part of Lumpkin County, Georgia . . . 39 p., illus., New York, J. F. Trow, 1858; also in Prospectus of the Chestatee Hydraulic Company, 39 p., New York, John F. Trow, 1858; also in Mining and Statistics Mag., vol. 10, p. 457-476, 1858. A description of gold occurring as residuum in the saprolite of the area is given. Gold also occurs as placers in the river as well as in gold-bearing quartz veins in mica schist. Hydraulic methods are proposed as a mining technique.
3. (and Jackson, Charles Thomas). (The) gold placers of the vicinity of Dahlonega [Lumpkin Co.] Georgia. Report . . . to the Yahoola River and Cane Creek Hydraulic Hose Mining Company. . . . 64 p., illus., Boston, 1859; in part, Mining Mag., 2d ser. vol., 1, p. 360-366, 1860. A description of the occurrence of gold in placer deposits is given. The gold's origin in quartz veins in mica schist is also described; hydraulic mining methods are recommended.

4. Contributions to the mineralogy and geology of Georgia, no. 1, Notices of some mineral localities, with remarks: Mining Mag., 2d ser. vol. 2, p. 76-80, 1860. The important minerals of many of the counties in the Piedmont and Blue Ridge are cursorily described. There is little more than a list of what he considers significant mineral species.

5. The Fields gold vein, [Lumpkin Co.] Georgia: Mining Mag., 2d ser. vol. 1, p. 480-481, 1860. A discussion of the reasons for the lack of mining in this mine is given. Gold occurs in quartz veins at the level of the Chestatee River. It is associated with tetradymite and other rare minerals.

6. Report on the Cherokee gold mine [Cobb. Co.]: Mining Mag., 2d ser. vol. 1, p. 453-457, illus., 1860. Four gold-bearing, micaceous quartz veins in mica schist are described. Pyrite is also present. The problems associated with the mining engineering are discussed.

7. Report on the Hendricks gold lots, Lumpkin County, Georgia: Mining Mag., 2d ser. vol. 1, p. 457-461, illus., 1860. Placer and residual saprolite deposits of gold are described, as is the gold-bearing Hendricks Vein. Much emphasis is placed on the engineering problems of the vein-mining, with very little mineralogy included.

8. Report upon the property of the mining company called the "Auraria Mines of Georgia" situated in Lumpkin County, Georgia. 11 p., illus., Boston, [n.p.] 1860. An account of the occurrences of gold in placers, saprolite, and in quartz veins is given. All occurrences are south of Dahlonega. Much emphasis is placed upon the potential of hydraulically working the deposits with water from the local rivers.


10. Notes and recollections concerning the mineral resources of northern Georgia and western North Carolina: Amer. Inst. Mining Engineers Trans., vol. 25, p. 796-811, 1896. This is a generalized review of the occurrence of gold, copper, and a few other less-important mineral resources. No new data are included.

BLAKEMORE, PAGE B., JR.

1. Minerals of the Ducktown Basin: Mineralogist, vol. 4, no. 8, p. 5-6, 28, 1936. A popular account is given of the variety of minerals which are to be found in the "Twenty One Mine" in Fannin Co. No details are given.
BLANK, EUGENE W.


BLOSS, FRED DONALD, 1920-

1. Geochemical prospecting in the southeastern states: Southeastern Geology, vol. 1, p. 33-38, illus., 1959. This is an exhortation for the use of various geochemical prospecting methods in the southeastern United States, including Georgia. The lack of glacial cover, deep weathering, and known potential are cited as being favorable factors for consideration.

BOARDMAN, LEONA, 1894-1957.


BODLE, RALPH ROBINSON, see Heck, Nicholas Hunter, 2.

BOESCH, HANS HEINRICH, 1911-

1. Zur Geologie des oestlichen Nordamerika: Eclogae Geologicae Helveticae, vol. 32, p. 17-23, illus., Basel, 1939. A review of the geological history of the Appalachian Geosyncline includes that portion which was in Georgia. The relationships of the American orogenic phases to the orogenic phases of Europe are pointed out.

BONINI, WILLIAM EMORY, 1926- see Woollard, George Prior, 5.

BOONE, WILLIAM JEFFERSON, JR.


BOUË, AMI, 1794-1881.


BOUVE, THOMAS TRACY.


2. [New species of echinoids from the Lower Tertiary rocks of Georgia]: Boston Soc. Natural Hist. Proc., vol. 4, p. 2-4, illus., 1851. Several echinoids are described and illustrated; no age or location are included, but they appear to be Oligocene.

BOWDEN LITHIA SPRINGS.

1. Bowden lithia water, and Georgia bromine lithia water. The American Carlsbad . . . [Douglas Co.]. 32 p., illus., Lithia Springs, Ga., [priv. pub.] [1889?]; 2d ed., New York, 1891. A riotous account of the healthful aspects of this spring and spa include analyses which show the lithium and bromine content to be unusually high.

BOWEN, BOONE MOSS, JR., 1933- see Edgerton, J. H., 1.

BOWLES, EDGAR OLIVER, 1911- see also Gardner, Julia Anna, 5.

1. Eocene and Paleocene Turritellidae of the Atlantic and Gulf Coastal Plain of North America: Jour. Paleontology, vol. 13, p. 267-336, illus., 1939. Many species from many places throughout the Coastal Plain are described and illustrated.

BOWLES, OLIVER, 1877-1958.

1. The stone industries. 1st ed., xi, 519 p., illus., New York, McGraw-Hill Book Co., 1934; 2d ed., 519 p., 1939. The general principles of stone occurrence and use are discussed. A brief outline of occurrences in each state, of different types of stone, includes those from Georgia.


BOWMAN, ISAIAH, 1878-1950.

1. Forest physiography. xxii, 759 p., illus., New York, John Wiley and Sons, 1911. A discussion of the physiographic provinces of the United States includes those in Georgia. Much emphasis is placed upon the factors relating to soil formation.

BOYD, WILLIAM BAXTER.


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BRADLEY, FRANK HOWE, 1838-1879.
2. On the Silurian age of the southern Appalachians: Amer. Jour. Science, 3d ser. vol. 9, p. 279-288, 370-383, 1875. The metamorphic terrane of Georgia, north of a line parallel with, and 10 miles north of, the Chattahoochee River, and probably a little south of the line, are Silurian in age or younger. The unmetamorphosed Cambrian to Silurian section in eastern Tennessee is described and is compared to the metamorphosed stratigraphic sequence in the Blue Ridge and Piedmont areas. The Murphy marble is correlated with the Knox Dolomite, for example. Gross structural trends are described.

BRADLEY, WILLIAM FRANK, 1908-
1. The structural scheme of attapulgite: Amer. Mineralogist, vol. 25, p. 405-410, illus., 1940. X-ray diffraction patterns of attapulgite from Decatur County are used in determining the internal crystal structure of the mineral.

BRANNER, GEORGE CASPER, 1890-
1. Are our aluminum ore reserves adequate?: Mining and Metallurgy, vol. 22, p. 351-353, illus., 1941. A generalized review of the bauxite reserves of the southeastern states includes those of Georgia. Four hundred and fifty six thousand tons are estimated to remain in Georgia.

BRANSON, CARL COLTON, 1906-

BRANTLY, JOHN EDWARD, see also Barrows, Harry H., 1.
1. (A) report on the limestones and marls of the Coastal Plain of Georgia: Georgia Geol. Survey Bull. 21, x, 300 p., illus. incl. geol. map, 1916. A general review of Cretaceous to Quaternary rocks includes measured sections and fossil lists. Individual occurrences of limestone and marl are then described; analyses are included.
2. Agricultural drainage in Georgia: Georgia Geol. Survey Bull. 32, xii, 122 p., illus., 1917. A discussion designed to point out the problems in draining swampy lands for agricultural use includes a general description of much of the swampy lands of Georgia.
BRATTSTROM, BAYARD HOLMES, 1929-

1. The fossil pit-vipers (Reptilia: Crotalidae) of North America: San Diego Soc. Natural Hist. Trans., vol. 12, p. 31-46, illus., 1954. A monograph on the group includes a discussion of *Crotalus horridus* vertebrae which are reported from near Cartersville, Bartow County. They are Pleistocene.

BRAUNSTEIN, JULES, 1913-

1. Habitat of oil in eastern Gulf Coast, in Weeks, Lewis George, ed., Habitat of oil—a symposium, p. 511-522, illus., 1958; summary, with title, Eastern Gulf Coast oil and gas geology: World Oil, vol. 146, no. 7, p. 138-139, illus., 1958; Georgia Mineral Newsletter, vol. 12, p. 12-16, illus., 1959. A general discussion of the occurrence of petroleum in the southeastern Coastal Plain includes discussions of some of the major structural features of Georgia. In Georgia are to be found the Decatur Arch, the Peninsular Arch, the Suwanee Strait, and the Suwanee River Basin.

BRAYLEY, EDWARD WEDLAKE, 1773-1854, see Couper, John Hamilton, 2; Lyell, Charles, Jr., 2.

BRAZEE, RUTLAGE J.

1. (and Cloud, William K.). United States earthquakes 1957. v, 108 p., illus., U. S. Coast and Geod. Survey, 1959. The earthquake of April 28, 1957, with an intensity of V, is described. The epicenter was in Alabama but the quake was felt in western Georgia. Another quake, whose epicenter was in North Carolina, was felt in northeastern Georgia on November 24, 1957.

BRENT, WILLIAM BONNEY.


BREWER, WILLIAM HENRY, 1829-1910.


BREWER, WILLIAM MARTEN, see also King, Francis Plaisted, 1; Nitz, Henry Benjamin Charles, 1.

1. Mineral resources of Georgia—gold—manganese—iron ores—bauxite—mica—coal—pyrites—marble: Dixie, vol. 9, no. 10, p. 45-46, 1893. A review of the mineral resources of Georgia points out that Georgia was at one time first in gold production.


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3. (The) first gold mining camp in the United States [Dahlonega, Lumpkin Co.]... : Dixie, vol. 10, no. 12, p. 49-54, illus. incl. port. [on p. 41], 1894. An historical account of the development of the gold fields around Dahlonega includes much description of the occurrence of the gold and its mining.

4. Georgia gold fields—Cherokee, Paulding, and Carroll Counties—the Franklin, Latham, Bonner, and Clopton mines: Dixie, vol. 11, no. 1, p. 42, 1895. A few cursory remarks about these deposits are given. No new information is included.

5. Iron ores of the south... : Dixie, vol. 11, no. 12, p. 43-49, illus., 1895. A general survey of iron ore deposits includes very general descriptions of the residual deposits in Bartow County.

6. Mineral resources on the Southern Railway from Atlanta to Birmingham: Engineering and Mining Jour., vol. 60, p. 610-611, 1895. A general description of the mineral resources of the Piedmont area west of Atlanta is given. No new data are included. Granite and gold are the chief products.

7. Iron ores—bauxite in the Paleozoic area—Coal Measures: Dixie, vol. 11, no. 5, p. 47-48; no. 6, p. 44-45; no. 8, p. 43-44, 1895. A cursory review of these mineral resources is given. No new data are included.

8. Talc in Georgia—Murray County's talc mines... : Dixie, vol. 11, no. 6, p. 44, 1895. An extremely brief description of the deposit is given.

9. (The) gold regions of Georgia and Alabama: Amer. Inst. Mining Engineers Trans., vol. 25, p. 569-587, 1896. This is a generalized review of the occurrence of gold in Georgia. While it deals extensively with mining problems and techniques, a little data about the gold ore is included. No new data are given, however.


11. Mineral resources along the line of the East Tennessee, Virginia, and Georgia Division of the Southern Railway: Engineering and Mining Jour., vol. 61, p. 65-66, 1896. A general discussion of the mineral resources of northwestern Georgia is included. No new data are present. Iron ore, bauxite, talc, and slate are the major products.

12. Further notes on the Alabama and Georgia gold fields: Amer. Inst. Mining Engineers Trans., vol. 26, p. 464-472, 1897. Scattered remarks about the occurrence of gold in Georgia are included. The low-grade gold ore is most commonly associated with the mica schist or garnet slate and basic igneous rocks. High-grade gold ore occurs in narrow quartz veins.

13. Gold fields of the south: Colliery Engineer, vol. 17, p. 333-335, illus., 1897. A cursory description of the gold mining areas of the Piedmont and Blue Ridge Provinces places some emphasis upon the engineering aspects. The metamorphic rocks containing the gold-bearing quartz veins are described.

15. (The) Villa Rica mining district of [Carroll Co.] Georgia: Engineering and Mining Jour., vol. 63, p. 483, 1897. The gold occurs in a quartz vein in granite and in metamorphic-rock saprolite. Most of the article deals with development progress.

BREWSTER, EDWIN TENNEY, 1866-


BREZINA, ARISTIDES, i.e., MARIA ARISTIDES SEVERIN FERDINAND, 1848-1909.

1. Vorläufiger Bericht über neue oder wenig bekannte Meteoriten: Akademie der Wissenschaften Wien Math.-Naturwissenschaftliche Klasse Sitzungsberichte, vol. 82, abt. 1, p. 348-352, 1880. A brief description of the Whitfield Co. meteorite is given; the text indicates that a meteorite from Casey Co., Georgia, is also known, but this is probably an error for Casey Co., Kentucky.

2. (Die) Meteoritensammlung des k. k. mineralogischen Hofkabinettes in Wien am 1 Mai, 1885; K. k. geologische Reichsanstalt Jahrbuch 1885, vol. 35, p. 151-276, illus., Vienna, 1885; also separate, A. Holder, Vienna, 1885. A discussion of the physical and chemical classification of meteorites is followed by a brief description of each of those in the museum. The museum contains fragments of the Monroe, Union, Cherokee, Stewart, Whitfield, Casey, Dalton, and Putnam County meteorites in its collection. The Casey County reference is probably an error for Casey County, Kentucky.

3. (and Cohen, Emil Wilhelm). (Die) Struktur und Zusammensetzung der Meteoreisen ... vol. 1, Lithosiderite und Octahedrite mit feinsten und feinen Lamellen. 6 p., illus. with heavy plates, Stuttgart, E. Schweizerbart'sche, 1886-1906. Illustrations of polished sections of the Putnam Co. siderite are included.


6. (Die) Meteoritensammlung des k. k. naturhistorischen Hofmuseums am 1 Mai, 1895: K. k. Naturhistorischen Hofmuseums Annalen, vol. 10, p. 231-370, illus., Vienna, 1896. A discussion of the classification of meteorites is followed by a catalog of the museum. Brief data about each specimen are included. Fragments of the Putnam, Union, Cherokee, Stewart, Whitfield, Casey [= Bartow?], and Chattooga County meteorites are there. At the Tubingen museum are fragments of the Monroe and Union County meteorites. The Casey County reference is probably an error for Casey County, Kentucky.

BRIDGE, JOSIAH, 1890-1953, see also Yochelson, Ellis Leon, 1.

1. Bauxite deposits of the southeastern United States, in Snyder, Frank G., ed., Symposium on mineral resources of the southeastern United States, p. 170-201, illus., 1950. A generalized discussion of the occurrence of bauxite includes descriptions of those deposits in northwestern Georgia and in the Coastal Plain. A detailed explanation of the origin of the ore is given. All are thought to be Tertiary in age.

2. (and Berdan, Jean Milton). Preliminary correlation of the Paleozoic rocks from test wells in Florida and adjacent parts of Georgia and Alabama: U. S. Geol. Survey Repts. Open File 79, 8 p. (†), illus., 1951; Assoc. Amer. State Geologists Guidebook, 44th Ann. Mtg., p. 29-38(†), illus., Florida Geol. Survey, 1952. Fifty two deep wells, eleven of which are in southern Georgia, are mapped. The lithology and tentative Paleozoic correlation of the rocks at the bottom of each are given. All of the basement rocks encountered are clastic. The Paleozoic rocks appear to be in a great triangular area and are surrounded by crystalline rocks.

BRILL, KENNETH GRAY, JR., 1910-


BRINDLEY, GEORGE WILLIAM, 1905- see also Caillère, S., 1.


BRITISH MUSEUM (NATURAL HISTORY).

1. A guide to the collection of meteorites in the department of mineralogy . . . 40 p., [London?], 1882. Fragments of meteorites from Putnam, Cherokee, Whitfield, Forsyth, and Stewart Counties are present in this collection. Only the weight of the fragment and date of fall are given.
BROADHURST, SAM DAVIS.
1. (and Teague, Kefton Harding). Halloysite in Chattooga County, Georgia: Georgia Mineral Newsletter, vol. 7, p. 56-61, illus., 1954. Halloysite, of unknown origin, occurs within the Armuchee Chert formation. It may be of sedimentary origin as it replaces the chert in part. It averages 28 inches thick. Sketch maps are included.

BROBST, DONALD ALBERT, 1925-

BROECKER, WALLACE S.
1. (and Kulp, John Laurence, and Tucek, Charles S.). Lamont natural radiocarbon measurements III [Brantley Co.]: Science, vol. 124, p. 154-165, 1956. Material from soil in Brantley County is dated. That from 17-20 inches deep is 1,150 years old, whereas that from 88-133 inches is 23,000 years old.

BROKAW, ALBERT DUDLEY, 1880-1966
1. (and Smith, Leon P.). Zonal weathering of a hornblende-gabbro [Troup Co.]: Jour Geology, vol. 24, p. 200-205, illus., 1916. Detailed petrographical and chemical analyses are given for fresh rock and the altered, or weathered surface. The transition is very sharp, which is unusual. The original rocks are Triassic diabase dikes.

BROOKS, ALFRED HUISE, 1871-1924, see also Hayes, Charles Willard, 13.

BROOKS, WILLIAM KEITH, 1848-1908.

BROTZEN, FREDERIK.

BROWN, ANNABEL, see Boardman, Leona, 1.

BROWN, CARL BARRIER, 1910-
1. Rates of silting in representative reservoirs throughout the United States: Amer. Geophysical Union Trans., vol. 18, p. 554-557, 1937. Lloyd Shoals Reservoir, near Jackson, in Jasper County, is silting at the rate of .51 ft. per year. No other details are given.
BROWN, EUGENE, 1919- see also Thomson, Medford Theodore, 2.

BROWN, HARRISON SCOTT, 1917- see Goldberg, Edward D., 1.

BROWN, ROLAND WILBUR, 1893-1961, see also Cloud, Preston Ercelle, Jr., 1.

BROWN, WILLIAM ROBERT.
1. (and others). Magnetic reconnaissance, Dahlonega Special Quadrangle, Lumpkin County, Georgia, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 136-141, illus., 1953. Magnetite and hematite zones, conformable with the surrounding schists, are examined. They are structurally distorted but are worth more detailed investigation.

BROWNE, JOHN ROSS, 1821-1875.

BRUCE, GEORGE A., see also Barnes, Virgil Everett, 1.
1. Tektites in [Dodge and Irwin Cos.] Georgia: Gems and Minerals, no. 264, p. 22-23, 65-69, illus., 1959. This is a popular account of the origin and occurrence of the tektites found in Dodge and Irwin Counties. The name empirites is proposed. Nine specimens are known, and three others have been reported.

BRUHL, PAUL T.
1. Gold in McDuffie County, Ga.: Engineering and Mining Jour., vol. 110, p. 265, 1920. Gold occurs in quartz veins and in galena, pyrite, and chalcopyrite veins in metamorphic rocks. The gold is no doubt igneous in origin, and secondary enrichment is inconspicuous.

BUCH, LEOPOLD VON, i.e., CHRISTIAN LEOPOLD, 1774-1853.

51
BUCHER, WALTER HERMANN, 1888-1965.

BUCHNER, CHRISTIAN LUDWIG OTTO, 1828-1897.
1. (Die) Feuermeteore, insbesondere die Meteoriten, historisch und naturwissenschaftliche betrachtet. 192 p., Geissen, J. Riker'sche Buchhandlung, 1859. In a general treatise on meteorites, those from Union and Putnam Counties are cursorily described.

BUCK, CATHERINE LUTZ, see Twenhofel, William Stephens, 1.

BUCKLEY, STUART EDWARD, 1908-

BUDDINGTON, ARTHUR FRANCIS, 1890-

BUERGER, MARTIN JULIAN, 1903-

BUNCE, ELIZABETH T., see Hersey, John Brackett, 1.

BURCHARD, ERNEST FRANCIS, 1875-1961. see also Pallister, Hugh Davidson, 3; Thoenen, John Roy, 1; Watson, Thomas Leonard, 13.
1. Notes on various glass sands, mainly undeveloped: U. S. Geol. Survey Bull. 315, p. 377-382, 1907. Sand from the Savannah River, location not given, but probably from the Coastal Plain, is being used to make glass bottles. Both clear and milky quartz make up the angular sand.
2. Southern red hematite as an ingredient of metallic paint: U.S. Geol. Survey Bull. 315, p. 430-434, 1907. Exposures of the hematite-bearing rocks of the [Red Mountain Formation] are described as possible sources of paint-color ore. Dade County is the chief source of the material.


5. ... Georgia ... , in Stone: U.S. Geol. Survey Mineral Resources 1911, pt. 2, p. 827-881, illus., 1912. Little detail is included, but a map shows the distribution of sources of stone in the state. Most stone sources are in the northwestern part and in the Piedmont.


BURDICK, GLENN A.

BURFOOT, JAMES DABNEY, JR., 1896-

BURGESS, BLANDFORD CORNEILOUS, 1893-1959, see also Warriner, Lendall P., 1.
BURNS, JAMES AUSTIN.

1. An outline of the structural, surface, and economic geology of northern [northern] Georgia: Dixie, vol. 8, p. 640-643, 896-899, illus., 1892; also separate, 22 p., Atlanta, Constitution Book and Job Print, 1887. A cursory geological description and review of the region is given. Precambrian to Pennsylvanian rocks are described, as are the mineral resources associated with each system.

BUTLER, ARTHUR PIERCE, JR., 1908-

1. The Geological Survey's work on the geology of uranium and thorium deposits: U. S. Geol. Survey Trace Elements Investigations 207, 26 p., illus., 1952. A general discussion about the occurrence of radioactive materials includes maps showing the places that have been examined by geologists of the U.S. Geological Survey. Georgia has been extensively investigated.

BUTLER, BERT SYLVENUS, 1877-1960.


BUTTS, A. G.

1. Map of the State of Georgia . . . . Scale, 1 inch to 5 miles, Macon, Georgia, 1882. The locations of some mineral resources are noted on an otherwise political map.

BUTTS, CHARLES, 1863-1946.


3. Variations in Appalachian stratigraphy: Washington Acad. Science Jour., vol. 18, p. 367-380, illus., 1928. A general discussion of facies changes, both formational and systematic, includes many examples from the Paleozoic terrane of northwestern Georgia. Local movements within the Appalachian Geosyncline during the Paleozoic Era are cited as the major causes of the variations.

4. (and Gildersleeve, Benjamin). Geology and mineral resources of the Paleozoic area in northwest Georgia: Georgia Geol. Survey Bull. 54, xii, 176 p., illus. incl. geol. map, 1948. A complete geological description of the area is given. Cambrian-Pennsylvanian rocks are described and mapped. Folds and thrust faults are the major structures. Sections are measured; fossils are listed and illustrated; analyses are given. Iron, barite, and stone are the chief mineral resources. Bauxite, bentonite, cement, clay, coal, fluorite, halloysite, manganese, ochre, potash, and others are also discussed.

BUZARDE, LAVERNE ERNEST, JR., 1933-

C.-, J. M.
1. Waldemar Lindgren [1860-1939]: Sociedad nacional de Minería Bol. Minero, año 46, no. 477, p. 5-8, port., Santiago de Chile, 1940.

CAHN, ALVIN ROBERT, 1892-

CAILLERE, SIMONNE.
1. (and Hénin, Stéphane). Palygorskite—attapulgite, Chap, 9 of X-ray identification and crystal structures of clay minerals, George William Brindley, ed., p. 234-243, illus., London, Mineralogical Society, 1951. Crystallographic details, and chemical and x-ray data are used to show that these two minerals, one much developed in Decatur Co., are the same.

CAIN, ANDREW W.
1. Gold in the history of Lumpkin County, Chap. 6 in History of Lumpkin County . . ., p. 92-118, incls. port. of Matthew F. Stephenson, Atlanta, Stein Printing Co., 1933. An historical resumé of the gold mining operations around Dahlonega is given. There is little geological data however.

CALHOUN, FRED HARVEY HALL, 1873-1959.
2. Geological resources [along the] Seaboard Airline Railway Territory. 51 p., illus., [Savannah?], Seaboard Airline Railway, 1925. A general description of the mineral resources along the railroad area is given. No geological data are included. Some analyses are given. The whole of Georgia is included.

CALLAHAN, JAMES EMMETT, 1933-

CALLAHAN, JOSEPH THOMAS, 1922-
1. Georgia's ground water resources: Georgias Mineral Newsletter, vol. 10, p. 94-95, illus., 1957. This is a popular account of the occurrence of ground water in Georgia. No new data are included.
2. Ground water in Floyd County, Georgia: Georgia Mineral Newsletter, vol. 11, p. 16-18, 1958. The various rocks which produce ground water in the county are described. Springs are described and the water analyzed. The dolomite in the Knox Formation is the best water source.

3. Large springs in northwestern Georgia: Georgia Mineral Newsletter, vol. 11, p. 80-86, illus., 1958. Over one hundred springs issuing from the Paleozoic rocks of the region are located. Tables show temperature and flowage. Some are analyzed; some flow over 2000 gallons per minute.


7. Jekyll Island [Glynn Co.]—its geology and water resources: Georgia Mineral Newsletter, vol. 12, p. 33-39, illus., 1959. A popular account of the geology of the island includes a discussion of its water supply which is artesian and which is from Eocene limestone over 500 feet below the surface.

CALVER, JAMES LEWIS, 1913- see also Furcron, Aurelius Sydney, 13.

1. The fuller's earth industry in the Georgia-Florida district: Georgia Mineral Newsletter, vol. 9, p. 37-44, illus., 1956. A popular survey of the nature and occurrence of fuller's earth includes descriptions of those deposits in Decatur County. No new data are included.

CAMP, CHARLES LEWIS, 1893-


CAMPBELL, JOHN LYLE, 1818-1886.

1. (and Ruffner, William Henry). A physical survey from Atlanta, Ga. . . . , to the Mississippi River along the line of the Georgia Pacific Railway . . . 147 p., illus., E.F. Weeks, New York, 1888. An outline of the geology, topography, and mineral resources is given. Only Archean [Pre-Cambrian] and Silurian to Devonian rocks are along the route in Georgia. They are cursorily described.
CAMPBELL, MARIUS ROBINSON, 1858-1940, see also Hayes, Charles Willard, 5, 15; LaForge, Lawrence, 3; Parker, Edward Wheeler, 1.

1. Drainage modifications and their interpretations: Jour. Geology, vol. 4, p. 567-581, 657-678, illus., 1896. A general treatise on geomorphic interpretation of streams includes an example from Georgia. The peculiar shape of the Chattahoochee River drainage basin above Columbus is due to the migration of the southern divide caused by the southeastward flowing streams' headward erosion. The course of the stream is due also, in part, to the influence of downwarping which took place during Triassic time.


CANNON, L. C.

1. Gold mining in the Piedmont belt: Products of the Piedmont, vol. 1, Spartanburg, South Carolina, 1895 [not seen].

CANRIGHT, JAMES EDWARD.


CANU, FREDINAND, 1863-1932.

1. (and Bassler, Ray Smith). A synopsis of American early Tertiary cheilostome Bryozoa: U.S. Natl. Museum Bull. 96, 87 p., illus., 1917. Eocene Bryozoa from especially Crawford and Decatur Cos., but also elsewhere in the state, are described and illustrated.


CAPPÉL, HOWARD NOBLE, JR., 1932-


CARLSTON, CHARLES WILLIAM, 1912-

1. Notes on the early history of water-well drilling in the United States: Econ. Geology, vol. 38, p. 119-136, illus., 1943. An extremely brief history of artesian well drilling on the Coastal Plain is included. In 1881, the first artesian well was drilled near Albany, Dougherty County.

CARROLL, DON LLEWELLYN, 1902-1954.

CARSEY, J. BEN.

CARTER, GEORGE FRANCIS, see Wright, John Kirtland, 2.

CARTER, ROLAND W.
1. (and Herrick, Stephen Marion). Water resources of the Atlanta metropolitan area: U.S. Geol. Survey Circ. 148, 19 p., illus., 1951. A detailed hydrologic survey of the area includes a discussion of the ground water potential, which is considerable.

CASE, ERMININE COWLES, 1871-1953.
1. [Edward Drinker] Cope [1840-1897]—the man: Copelia, no. 2., p. 61-65, illus. incl. port., 1940.

CASWELL, ALEXIS, 1799-1877.

CATHCART, JAMES BATCHELDER, 1917- see also McKelvey, Vincent Ellis, 2.
1. Drilling of airborne radioactivity anomalies in Florida, Georgia, and South Carolina—1954: U.S. Geol. Survey Repts. Open File 291, 10 p.(?), illus., [1954]. The Altamaha River drainage area, which showed a bit higher count in a radioactivity survey, was drilled by three holes; none showed radioactivity indications above the background count.

CATLETT, CHARLES, see also Watson, Thomas Leonard, 9.
1. [Discussion of] A new theory of the genesis of brown hematite ores; and a new source of sulphur supply, by Henry Martyn Chance: Amer. Inst. Mining Engineers Bull., vol. 24, p. 1179-1183, 1908. Evidence from the Cartersville area in Bartow Co. is cited to support the idea that the source of the iron in the residuum of the area was originally from carbonate minerals rather than sulphide minerals as proposed by Chance, who used data from other areas for his theory.

58
CAVE, HAROLD SERGIUS, 1895- see also Prettyman, Thomas Mann, 1.
1. Historical sketch of the Geological Survey of Georgia. Bibliography, and other data: Georgia Geol. Survey Bull. 39, [vi], 154 p., illus., 1922. A detailed account of the history of the Survey from 1792, with Bartram's observations, to 1922 is given. An indexed bibliography is also included.

CAZEAU, CHARLES J.
2. (and Lund, Ernest Howard). Sediments of the Chattahoochee River, Georgia-Alabama: Southeastern Geology, vol. 1, p. 51-58, illus., 1959. Samples from the headwaters of the river, to Florida, are analyzed. The average diameter decreases downstream; sorting improves downstream, and the river sands are generally unimodal. Mineralogical analyses are included.

CENTRAL OF GEORGIA RAILWAY INDUSTRIAL DEVELOPMENT DEPT.

CHAMBERLIN, ROLLIN THOMAS, 1881-1948.

CHAMBERLIN, THOMAS CHROWDER, 1843-1928.

CHAMBERLIN, WILLIS A. see Wright, Frank James, 3.

CHANCE, HENRY MARTYN, see Catlett, Charles, 1.

CHANCEY, C. N., see Furcron, Aurelius Sydney, 43.

CHAPMAN, ASHTON.
1. Gem stones of the Appalachians: Nature Mag., vol. 44, p. 21-24, illus., 1951. A popular account of the occurrence of gems includes casual references to those found in Georgia. No new data are included.

CHAPMAN, EDWARD JOHN, 1821-1904.
1. On the klaprothine or lazulite of North Carolina: Canadian Jour., new ser. vol. 6, p. 363-368, illus., 1861; correction, p. 455-456, 1861. Lazulite from Lincoln County is described chemically and crystallographically. He is in error in thinking it from North Carolina and in being the first occurrence from North America. The correction rectified this.
CHAPMAN, HENRY CADWALADER, 1845-1909.


CHAPMAN, H. H., see Pallister, Hugh Davidson, 3.

CHAPMAN, JOSEPH ROY, 1898-1957.


2. Case Cave, Dade County, Georgia: Georgia Mineral Soc. Newsletter, vol. 2, no. 4, p. 18-21 (†), illus., 1949. A popular account of this large cave is given.


CHATARD, THOMAS MARIEAN, 1848- see also Clarke, Frank Wigglesworth, 1.


CHELIKOWSKY, JOSEPH RUDOLPH, 1907-

1. Geologic distribution of fire clays in the United States: Amer. Ceramic Soc. Jour., vol. 18, p. 367-390, 1935. Fire clay occurs in the Paleocene Midway Formation and the Cretaceous Tuscaloosa Formation on the Coastal Plain; it occurs as residual clay in the Paleozoic terrane of northwestern Georgia. A small amount is known from the weathering of pegmatites in the Piedmont also. No details are given.

CHENEY, MONROE GEORGE, 1893-1952.


60
CHILDs, ROSS RENFROE.

CHRISTIAN, SCHUYLER MEDLOCK.

CHRISTY, DAVID, 1802-
1. Letters on geology . . . . 68 p., 11 p., illus., Rossville, Ohio, J. M. Christy, 1848. These are published letters written by a traveller to a person in Cincinnati, describing the geology and mineral resources of various places, some being in Georgia. Very cursory descriptions of the area between Augusta and Sandersville are included. His observations are very good.

CIZANCOURT, MARYA DE, see Cole, William Storrs, 2.

CLARK, FRANK RINKER, 1881-

CLARK, LORIN DELBERT, 1918-

CLARK, THOMAS HENRY, 1893-

CLARK, WILLIAM BULLOCK, 1860-1917.
3. (and Twitchell, Mayville William). The Mesozoic and Cenozoic Echinodermata of the United States: U. S. Geol. Survey Mon. 54, 341 p., illus., 1915. Many echinoids, one from the Cretaceous Ripley Formation in Clay Co., and the rest from Eocene and Oligocene rocks in many other Coastal Plain counties, are described and illustrated.
CLARKE, FRANK WIGGLESWORTH, 1847-1931.
2. Miscellaneous analyses, in Report of work done in the division of chemistry and physics . . . 1886-87: U. S. Geol. Survey Bull. 55, p. 77-93, 1889. Analyses of ground water from artesian wells from several places on the Coastal Plain are included.
4. Analyses of rocks . . . 1880-1896: U. S. Geol. Survey Bull. 148, 306 p., 1897; . . . 1880-1899, Bull. 168, 308 p., 1900; . . . 1880-1903, Bull. 228, 375 p., 1904; . . . rocks and minerals . . . 1880-1908, Bull. 419, 324 p., 1910; . . . 1880-1914, Bull. 591, 376 p., 1915. These are cumulative. That is, the last contains all the data of the others. Chemical analyses for meta quartz diorite from Gordon Co., augite-microcline granite from Bartow Co., quartz gabbro from Cherokee Co., marble and black shale from Walker Co., and clay from Richmond Co. are included. Analyses of the meteorites from Cherokee and Chattooga Cos. are also present.

CLARKE, JAMES WOOD, 1922.
1. Geology and mineral resources of the Thomaston quadrangle, [Upson, Talbot, Pike, Lamar Cos.]. Georgia: Ph.D. Thesis, Yale Univ., 1950; Georgia Geol. Survey Bull. 59, x; 99; p., illus. incl. geol. map, 1952. A complete geologic description of the area is given. All the rocks are metamorphic and are considered Precambrian (?). Much faulting also characterizes the area. Mica, graphite, iron ore, sand and gravel, and kyanite are the mineral resources present.

CLARKE, JOHN MASON, 1857-1925, see also Hall, James, 4.

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CLEAVELAND, PARKER, 1780-1858.
1. An elementary treatise on mineralogy and geology . . . . 2 vols., 668 p., illus. incl. geol. map, Boston, Cummings and Hilliard, 1816; 2d ed., 1822. A discussion of the origin, classification, and distribution of minerals includes a geological map of the United States which includes Georgia.

CLEMENT, WILLIAM GILBERT, 1922-

CLOUD, PRESTON ERCELLE, JR., 1912-

CLOUD, WILLIAM K., see Brazee, Rutlage J., 1.

COBBAN, WILLIAM AUBREY, 1916-

COFER, HARLAND ELBERT, JR., 1922- see also Peyton, Alexander L., 2.
3. Cenozoic fossils in a conglomerate interstratified with Paleozoic rocks [Polk Co.], in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 200-204, illus., 1958; Georgia Mineral Newsletter, vol. 6, p. 114-115, 1853. Tertiary to Recent gastropods are found in a breccia interbedded between two Paleozoic limestone beds. The breccia formed locally by the filling of the space with limestone fragments, snails, and other detritus and then was cemented by calcite.
4. Gahnite occurrence and association at Magruder Mine, Lincoln County, Georgia, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 309-312, 1953. Gahnite and spessartite in the schist which borders the mineralized zones is due largely to wall-rock alteration produced early in the mineralization process.
5. (and Renshaw, Ernest Wilroy). Luminescent properties of some of the minerals of Arabia Mountain, DeKalb County, Georgia, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 312-315, 1953. Fluorapatite, fluorite, and microcline in granite display various luminescent properties which are described and explained. Each type of luminescence is different.


COHEN, ALVIN JEROE, 1918-

1. The absorption spectra of tektites and other natural glasses: Geochemica et Cosmochemica Acta, vol. 14, p. 279-286, illus., London, 1958. The absorption spectra of the Empire, Dodge Co., tektite is such that this tektite can be considered similar to moldavites. Much detail regarding the methods used, and comparisons with other tektites are given.

2. Moldavites and similar tektites: from [Dodge, Irwin Cos.] Georgia, U.S.A.: Geochemica et Cosmochemica Acta, vol. 17, p. 150-153, illus., London, 1959. The Georgia tektites are compared chemically and physically with tektites from elsewhere. They resemble moldavites and bediasites. They are also compared geologically with the others, and since all may be in or on rocks of about the same age, they may be related genetically to one great fall.

COHEN, EMIL WILHELM, 1842-1905, see also Brezina, Aristides, 3.

1. Meteoritenkunde. 3 parts, 355, 302, 419 p., illus., Stuttgart, E. Schweizerbart'sche, 1894-1905. A treatise on the characteristics, chemical, physical, and otherwise, of meteorites, includes descriptions of several from Georgia. Those from Chattoga, Stewart, Whitfield, Monroe, and Henry Cos. are included.

2. Meteoriten-studien IV: K. k. Naturhistorischen Hofmuseums Annalen, vol. 10, p. 81-93, Vienna, 1895. The Putnam Co. iron meteorite is shown to be permanently magnetic and the Holland's Store meteorite, from Whitfield Co., has a specific gravity of 7.615.

3. (Das) Meteorisen von Forsyth County, Georgia [!North Carolina] Vereinigte Staaten: K. preussische Akademie der Wissenschaften Berlin Sitzungsberichte 1897, p. 386-396, illus., 1897. This meteorite is described chemically and physically. It is composed of about 94 per cent iron, 5 per cent nickel, and a little cobalt and phosphorous. It is from North Carolina, however; the title is in error.

5. Zusammenfassung der bei der Untersuchung der Koerigern bis dichten Meteoreisen erhaltenen Resultate: K. preussische Akademie der Wissenschaften Berlin Sitzungsberichte 1900, pt. 2, p. 1122-1135, 1900. This is a study of granular, dense iron meteorites. The Locust Grove, Henry Co., meteorite is in the schlieren-free group with the nickel-cobalt content between 6 and 7 per cent.

COLE, WILLIAM STORRS, 1902-


3. Names of and variation in certain American larger Foraminifera, particularly the camerinids, no. 2: Bulls. Amer. Paleontology, vol. 38, no. 173, p. 261-284, illus., 1958. A general discussion of the classification problems of this group includes a detailed review of the species of six different genera. Some are from the Georgia Eocene.

COLEMAN, GEORGE L., 2d.


COLLINS, GEORGE ERNEST, 1870-1946.


COLLINS, WILLIAM DENNIS, 1875-

COLTON, HENRY E.

1. Notes on the topography and geology of western North Carolina—the Hiawassee Valley: Amer. Inst. Mining Engineers Trans., vol. 16, p. 839-851, illus., 1888. A discussion of the topographic boundaries of this valley region includes those parts which are in Georgia. The divides which separate the valley from its neighbors can be traced southwestward into the Georgia Piedmont.

2. The East Tennessee, Virginia, and Georgia Railway System. Mineral wealth, agriculture, and timber resources of the main line and branches . . . 97 p., illus., [n. p.] 1890 [not seen].

CONANT, LOUIS COWLES, 1902-

1. Environment of accumulation of the Chattanooga Shale: Internat'l. Conference on Peaceful Uses of Atomic Energy [1st], Geneva 1955, Proc., vol. 6, p. 435-438, illus., 1955; U. S. Geol. Survey Prof. Paper 300, p. 463-467, illus., 1956. Evidence is described, some from northwestern Georgia, to support the hypothesis that the shale is marine, and was deposited on a very smooth erosion surface, if not a peneplane.

CONDRA, GEORGE EVERT.

1. (and Elias, Maxim Konrad). Study and revision of Archemides (Hall): Geol. Soc. America Spec. Paper 53, viii, 243 p., illus., 1944. A detailed discussion of this genus includes descriptions of its species, many of which are from Mississippian rocks in northwestern Georgia.

CONN, WILLIAM V.

1. Soil and geologic features of the Buford Project, [Gwinnett, Forsyth Cos.] Georgia: Amer. Soc. Civil Engineers Proc., vol. 80, no. 425, 10 p., illus., 1954. Features of the gneiss, such as foliation, depth of weathering, etc., are described in relation to their influence on the Buford Dam site.


CONNELL, JAMES FREDERICK LOUIS, 1920-


2. Historical geology laboratory manual for the southern states. vi, 143 p., illus., Dubuque, Iowa, Wm. C. Brown, [1959]. This is a college classroom workbook, with many of the exercises pointed at the geology of Georgia.
3. (The) Tivola Member of the Ocala Limestone of Georgia: Southeastern Geology, vol. 1, p. 59-72, illus., 1959. The Eocene limestone unit is described in detail. Sections are measured; fossils are listed. It occurs along the Fall Line and southward.

CONRAD, TIMOTHY ABBOTT, 1803-1877, see also Hodge, James Thacher, 1.


2. Observations on the Tertiary and more recent formations of a portion of the southern states: Acad. Natural Science Philadelphia Jour., vol. 7, p. 116-129, 1834. Eocene rocks are described from along the Coastal Plain. They occur along the Savannah River at Shell Bluff and vicinity, along the Oconee River, and at Fort Gaines, in Clay Co. The Pliocene is not recognized from Georgia, although Recent sediments are discussed.

3. Observations on a portion of the Atlantic Tertiary region, with a description of new species of organic remains: Natl. Inst. [Washington, D.C.] Proc. Bull. no. 2, p. 171-196, illus., 1842. A general description of the entire Atlantic Coastal Plain is given. Eocene rocks are described from the eastern part of the Coastal Plain in Georgia and from along the Chattahoochee River. No Miocene or Pliocene rocks are recognized.


5. Remarks on the Tertiary strata of St. Domingo and Vicksburg (Miss.): Acad. Natural Science Philadelphia Proc., vol. 6, p. 198-199, 1854. The occurrence of Ecphora 4-costata in Georgia, found on St. Simons Island, Glynn Co., is cited as supporting evidence that the deposits at Vicksburg, occurring farther north, may be [Oligocene].

6. Notice of a new group of Eocene shells [Burke Co.]: Amer. Jour. Science, 2d ser. vol. 41, p. 96, 1866. The age of the Ostrea georgiana beds at Shell Bluff, in Burke Co., is considered to be Eocene, based upon the finding of this large oyster in undoubted Eocene beds in Mississippi.

CONYBEARE, ADRIENNE B., see Joffe, Jacob Samuel, 1.
COOKE, CHARLES WYTHE, 1887- see also Flint, Richard Foster, 1; Henderson, Edward Porter, 1; LaForge, Lawrence, 3.

1. The age of the Ocala Limestone: U. S. Geol. Survey Prof. Paper 95, p. 107-120, illus., 1916. Stratigraphic and paleontological data are evaluated to show that the Ocala Limestone is Upper Eocene in age. Some of the data come from Decatur County. Fossils are listed.
2. (and Shearer, Harold Kurtz). Deposits of Claiborne and Jackson age in Georgia: U. S. Geol. Survey Prof. Paper 120, p. 41-81, illus. Incl. geol. map, 1918. Eocène rocks from many places on the Coastal Plain are described. Sections are measured and fossils are listed. Intertonguing and facies changes are described.
3. (The) stratigraphic position and faunal associates of the orbitoid Foraminifera of the genus Orthophragmina from Georgia and Florida: U. S. Geol. Survey Prof. Paper 108, p. 109-118, illus., 1918. The faunal content of the Ocala Limestone from numerous exposures along Flint River in southwestern Georgia is listed. An Eocene age for the Foraminifera is supported.
5. Macon [Bibb Co.] five million years ago: Macon Mag., vol. 1, no. 6, p. 7-8, 1921. This is a popular account of the geological history of the area. Most of the emphasis is upon Cretaceous and Eocene history.
7. Recent contributions to the stratigraphy of the Coastal Plain of the United States [abs.]: Pan-Pacific Science Cong. [2d], Melbourne, Australia 1923, Proc., vol. 1, p. 862-863, illus., [1923].
8. American and European Eocene and Oligocene mollusks: Geol. Soc. America Bull., vol. 35, p. 851-856, 1924. Reference is made to Georgia in pointing out that faunal comparisons between the two continents show that paleontologically both have much in common. Stages are in general recognizable, but formation to formation correlation is not practicable.
10. Correlation of the basal Cretaceous beds of the southeastern states: U. S. Geol. Survey Prof. Paper 140, p. 137-139, illus., 1925. The basal Cretaceous rocks of Georgia and neighboring states are shown to be Upper rather than Lower Cretaceous. The evidence is primarily lithological correlation with fossiliferous beds elsewhere. This is the Tuscaloosa Formation here in Georgia.
11. Correlation of coastal terraces: Jour. Geology, vol. 39, p. 577-589, illus., 1930; discussion with title, Cooke’s correlation of coastal terraces, by Richard Foster Flint, vol. 39, p. 82-83, 1931. The Atlantic coast terraces, including those in Georgia, are correlated internationally and shown to be the result of Pleistocene inundation rather than crustal upwarp.

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14. Seven coastal terraces in the southeastern states: Washington Acad. Science Jour., vol. 21, p. 503-513, 1931. Seven terraces are described; they are: Brandywine, 270 feet; Coharie, 215 feet; Sunderland, 170 feet; Wicomico, 100 feet; Penhaloway, 70 feet; Talbot, 42 feet; and Pamlico, 25 feet. They are attributed to interglacial sea level changes.

15. Tentative correlation of American glacial chronology with the marine time scale: Washington Acad. Science Jour., vol. 22, p. 310-312, illus., 1932. A table shows the relationships of the coastal terraces of the Atlantic coast to the glacial stages. The upper Brandywine Terrace is a result of pre-Nebraskan warm stage and the lowest Princess Anne Terrace is correlated with the third interglacial substage of the Wisconsin.


17. Tentative ages of Pleistocene shore lines: Washington Acad. Science Jour., vol. 25, p. 331-333, illus., 1935. The Brandywine Terrace is considered to be Aftonian in age; the Coharie and Sunderland are Yarmouth; the Wicomico, Penhaloway and Talbot are Sangamon, and the Pamlico Terrace is of Peorian interglacial age. A table shows the relationships.


19. Boundary between Oligocene and Miocene: Amer. Assoc. Petroleum Geologists Bull., vol. 23, p. 1560-1561, 1939. The Vicksburg Group, which includes the Flint River Formation in Georgia, has been classed as Oligocene chiefly because it lies between known Eocene and Miocene and because its suspected West Indies equivalent is considered Oligocene. The Miocene boundary awaits further international correlation.


23. Geology of the Coastal Plain of Georgia: U. S. Geol. Survey Bull. 941, vi, 121 p., illus. incl. geol. map, 1943. Cretaceous to Recent rocks and sediments are mapped and described. Sections are measured; fossils are listed.


25. Cenozoic echinoids of eastern United States: U. S. Geol. Survey Prof. Paper 32, iii, 106 p., illus., 1959. Many echinoids from many rock units in many counties on the Coastal Plain are described and illustrated.

COOPER, BYRON NELSON, 1912-

COOPER, GEORGE FRANKLIN, 1825-1882.
1. Topography and prevalent diseases of the third congressional district [Central Georgia]: Medical Soc. State of Georgia Ann. Mtg. Trans., vol. 4, p. 28-34, 1853. The area from the Okmulgee River to the Chattahoochee River, on both sides of the Fall Line, is cursorily described. The distinction of the Piedmont and Coastal Plain is recognized. While geology is scant, the relationship of disease to geology is discussed.

COOPER, GUSTAV ARTHUR, 1902-
1. (and others). Correlation of the Devonian sedimentary formations of North America: Geol. Soc. America Bull., vol. 53, p. 1729-1794, chart, 1942. A general discussion of terminology and formations includes a time-rock chart. Only the Frog Mountain Sandstone and the Armuchee Chert are considered to be present; they are Lower Devonian.

3. Chazyan and related brachiopods: Smithsonian Misc. Collections, vol. 127, 2 vols., 1245 p., illus., 1956. Many brachiopods of Middle and Upper Ordovician age from the limestones of Walker Co. are described and illustrated; many are new. New correlations are suggested.

COOPER, HILTON HAMMOND, JR., 1913- see also Stringfield, Victor Timothy, 3, 5.

1. (and Warren, Moultrie Alfred). The perennial yield of artesian water in the coastal area of Georgia and northeastern Florida: Econ. Geology, vol. 40, p. 263-282, illus., 1945. A large cone of depression in the Ocala Limestone is present at Savannah as is a smaller one in the same limestone at Brunswick. Most of the withdrawal is coming from storage and not recharge. New wells should be in other aquifers. Piezometric maps are included.

COOPER, WILLIAM, -1864.


COPE, EDWARD DRINKER, 1840-1897.


CORMIER, RANDALL F., see Pinson, William Hamet, Jr., 3.

CORNELIUS, ELIAS, 1758-1823.


COTTING, JOHN RUGGLES, 1784-1868.

1. Analysis of a species of clay found in Richmond County, which is eagerly sought after, and eaten, by many people, particularly children: Southern Medical and Surgical Jour., vol. 1, p. 288-290, 1836; discussion, p. 290-292, 1836. An analysis, as well as a description of the practice, is given. Judging from the description, the clay resembles kaolin. Its medicinal properties are questioned.

2. Report of a geological and agricultural survey of Burke and Richmond Counties, Georgia . . . 198 p., Augusta, Gnieu and Thompson, 1836. A detailed account of the general geology of the area is given. [Precambrian]-Quaternary rocks are described, as are the soils and mineral resources. Fossils are listed. Analyses are included.

3. An essay on the soils and available manures of the State of Georgia . . . 121 p., Milledgeville, Park and Rogers, 1843. A very general description, including origin, of the various soils around the state is given. A general discussion of fertilizer, some inorganic, is also included. The [Cretaceous rocks] are recognized as a source of [glauconite]. Analyses are included.

COULSON, ARTHUR LENNOX.


COUNTS, HARLAN BRYAN, see also Davis, George Hamilton, 1.

1. (and Donsky, Ellis). Salt-water encroachment, geology, and ground-water resources of Savannah area, [Chatham Co.] Georgia and South Carolina—a summary: Georgia Mineral Newsletter, vol. 12, p. 96-104, illus., 1959. The Cretaceous to Quaternary rocks of the area are briefly described, as well as are their hydrological properties. The lower part of the Ocala Limestone has some salt water in it; this limestone is the main aquifer of the area.

COUPER, JAMES HAMILTON, 1794-1866.

2. On fossil bones found in digging the new Brunswick Canal in [Glynn Co.] Georgia: Geol. Soc. London Proc., vol. 4, p. 33-34, 1843; Geologist 1843, p. 163-164, London, 1843; Philosophical Mag., 3d ser. vol. 23, p. 189-190, London, 1843; discussion by Edward Wedlake B[rayley], p. 193-194. The mammal bones found are associated with [Pleistocene] marine shells which are in rocks which extend as far north as Maryland. Since there is no discontinuity of time between these and the present, the large mammals must be relatively young.


4. Observations on the geology of a part of the sea-coast of Georgia, with a description of the fossil remains of the Megatherium, [Glynn Co.] . . . , in William Brown Hodgson, Memoir on the Megatherium, p. 31-47, illus., 1846. A discussion of the Pleistocene sediments of the Glynn Co. area and Skidaway Island in Chatham Co. includes a list of the fossil vertebrates which have been found enclosed in them. The deposits of the two areas are considered contemporaneous.

COUPER, ROBERT H.

1. The yellow ocher mines of the Cartersville District, [Bartow Co.] Georgia: Engineering and Mining Jour., vol. 69, p. 738, 1900. Ochery clay occurs at the contact of the [Weisner] Formation with the overlying formations. A cursory review of its nature, occurrence, and origin is given.

CRABB, GEORGE ARTHUR, 1915-


CRANE, WALTER RICHARD, 1870- see also Hull, Joseph Poyer Deyo, 2.

1. Gold and silver . . . . xii, 727 p., illus., New York, John Wiley and Sons, 1908. A general treatise on the precious metals includes descriptions of the gold occurrences in Georgia. No new data are included.

CRAWFORD, THOMAS JONES, 1932-

1. Natural etching on quartz crystals, Jackson County, in Mineralogical notes: Georgia Mineral Newsletter, vol. 8, p. 150, 1955. Small crystals, ranging from 0.2 cm. to 8 cm., occur in weathered pegmatite. The etching may be from alkalies released during the weathering process.

2. Geology of parts of Indian Mountain, Polk County, Georgia and Cherokee County, Alabama: M. S. Thesis, Emory Univ., 1957; Georgia Mineral Newsletter, vol. 10, p. 39-51, illus. incl. geol. map, 1957. A complete geologic description of the area is given. Cambrian, Ordovician, and Mississippian rocks are present. Fossils are listed and illustrated. Large folds compose the major structural features. Iron ore is the chief mineral resource.
1. Beschreibung einiger paragenetisch interessanter Goldvorkommen in [Piedmont] Georgia, Nord-Amerika: Neues Jahrbuch fur Mineralogie ... 1867, p. 442-448, Stuttgart, 1867. Gold, occurring with granite and tellurbismuth in chlorite schist, with tellurbismuth in hornblende gneiss, with sulphides in talc-schist, and with sulphides and [hematite] in quartz, is discussed. The occurrences are in several different places.


3. (Die) Gliederung der eozoischen (vorsilurischen) Formationsgruppe Nord-Amerikas: Zeitschrift fuer die gesammte Naturwissenschaften, vol. 32, p. 353-405, illus., Berlin, 1868; also Habilitationsschrift, Leipzig Univ., 54 p., Halle, 1869. A general survey of the [Precambrian] rocks of North America includes much discussion of those in the [Blue Ridge and Piedmont], and cursorily those in Georgia. Laurentian and Huronian rocks are recognized and described. Little or no detail is included.


CRIBB, ROBERT EUGENE, 1922-


CRICKMAY, GEOFFREY WILLIAM, see also Hewett, Donnel Foster, 1; Park, Charles Frederick, Jr., 1.

1. (The) ore deposits of the Cartersville district, [Bartow Co.] Georgia, in Mining districts of the eastern states: Internatl. Geol. Cong. 16th, Washington 1933, Guidebook 2, p. 126-139, illus., 1932. A generalized review of the occurrence of residual manganese and barite is given. Iron is mined as ocher, and limonite comes from the local bedrock.

2. Gold in Georgia: Forestry-Geological Review, vol. 3, no. 4, p. 7-8, illus.; no. 5, p. 7-8, illus., 1933; Georgia Geol. Survey Inf. Circ. 1, 6 p. (†), illus., 1933. This is a popular account of the origin and occurrence of gold in the Piedmont and Blue Ridge areas of Georgia. No new details are included.


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4. (The) occurrence of mylonites in the crystalline rocks of Georgia: Amer. Jour. Science, 5th ser. vol. 26, p. 161-177, illus., 1933. Mylonite exposures near Neel's Gap, Union Co., are described in detail. They occur in Carolina Gneiss. They are not associated with any known major thrust zone but result from local movement within the Carolina Gneiss. Photomicrographs are included. Other mylonite exposures from elsewhere in the Piedmont are discussed also.

5. Oil possibilities in Georgia: Forestry-Geological Review, vol. 3, no. 11, p. 7-8, illus., 1933. A cursory, popular account of the origin and occurrence of petroleum includes a pessimistic consideration of the potential of Georgia.

6. Pine Mountain District, [Meriwether, Lamar Cos.], Georgia: Forestry-Geological Review, vol. 3, no. 8, p. 7-8, illus., 1933. This is a cursory, popular account of the geology of the Pine Mountain area. A block diagram is described.

7. (The) precious stones of Georgia: Forestry-Geological Review, vol. 3, no. 7, p. 7-8, 1933. This is a cursory, popular account of the various types of gem stones found in Georgia. Most are from the Blue Ridge and Piedmont.

8. Meteorites found in Georgia: Forestry-Geological Review, vol. 4, no. 7, p. 7-8, illus, 1934. A popular account of the origin of meteorites is followed by a brief discussion of some of those found in Georgia.


10. Granite pedestal rocks in the southern Appalachian Piedmont: Jour. Geology, vol. 43, p. 745-758, illus., 1935. Pedestal rocks, composed of a cap and a shaft, from many places in the Piedmont are described and illustrated. The chief agent is granular disintegration brought about by hydration from water near the ground.


13. Origin of barite in the Appalachian Valley: Econ. Geology, vol. 30, p. 563-564, 1935. The barite in the Cartersville district in Bartow Co. is both hypogene and supergene. Barite occurs as veins, replacement deposits in limestone, in breccia, as matrix to limestone fragments, and as fragments with ocher as the matrix. These are hypogene. Barite occurs as supergene concentrations in open cavities created by post-vein-forming movement.


18. (and Mitchell, Lane). (The) Georgia State Museum: Georgia Geol. Survey Inf. Circ. 7, 4 p., illus., 1936; reprinted for Forestry-Geological Review, vol. 6, nos. 5 and 6, 1936. A popular account of the museum and the geological display is given. Most of the material on display is from Georgia.

19. Ground water in the crystalline rocks of Georgia: Forestry-Geological Review, vol. 6, no. 12, p. 7-8; illus., 1936. A general, popular account of the occurrence of ground water includes a discussion of the water in the rocks of the Piedmont and Blue Ridge. No new details are included.

20. Status of the Talledega Series in southern Appalachian stratigraphy: Geol. Soc. America Bull., vol. 47, p. 1371-1392; illus., 1936. The Talledega Series is described stratigraphically and geographically. They are separated from the known Paleozoic rocks of northwestern Georgia by a great fault, and also by a fault from Precambrian crystalline rocks to the south. The Talledega Series are considered a possible metamorphic equivalent of both bounding terranes. Age evidence is reviewed and no positive conclusion reached; they are considered probably Precambrian, however.

21. Talc deposits of Georgia: Forestry-Geological Review, vol. 6, no. 11, p. 7-8, illus., 1936. A general, popular account of the origin and occurrence of talc in Georgia is given. Most of the talc is from Murray County.

22. Tripoli deposits of Georgia: Forestry-Geological Review, vol. 7, no. 1, p. 7-8, illus., 1937; enlarged, Georgia Geol. Survey Inf. Circ. 9, 8 p., illus., 1937. A popular, general discussion of tripoli includes a description of its origin and occurrence in Georgia. It occurs as weathered chert from the Knox Formation in northwestern Georgia. Analyses are included.

23. (The) mineral resources of Georgia: Georgia Univ. Bull., vol. 41, no. 9, (Inst. Study Georgia Problems Pamph. 7), 30 p., illus., 1941. A general survey of the mineral resources of Georgia is given. Very few geologic data are included.

25. Geology of the crystalline rocks of Georgia: Georgia Geol. Survey Bull. 58, vi, 54 p., illus., 1952. Metamorphic rocks of all varieties, probably Precambrian in age from the Piedmont and Blue Ridge, are described in great detail as are igneous rocks of great varieties which have intruded the metamorphic rocks. Analyses are included. The major structural features are also discussed.

CRISLER, ROBERT MALCOLM, JR., 1930-

CROFT, MACK G.
1. The geology of Cloudland Canyon State Park, Dade County, Georgia: Georgia Mineral Newsletter, vol. 12, p. 84-90, illus. incl. geol. map, 1959. A complete geologic description of the area is given. Mississippian, Pennsylvanian, and Quaternary rocks are mapped and described. The park is underlain by a broad syncline.

CROOK, JAMES KING, 1859-
1. Mineral waters of the United States and their therapeutic uses. viii, 587 p., New York, Lea Bros. and Co., 1899. 28 different springs, from many locations in Georgia, are described and analyzed.

CROSBY, WILLIAM OTIS, 1850-1925.

CROSS, CHARLES WHITMAN, 1854-1949.

CUDWORTH, JAMES ROWLAND, 1897- see Shotts, Reynold Quinn, 1.

CUMINGS, EDGAR ROSCOE, 1874-

CUMMING, W. P., see LeMoyne de Morgues, Jacques, 1; Tatton, M., 1.

CUNYUS, LUCY JOSEPHINE.
1. Minerals, Chapter 15 of The history of Bartow County, formerly Cass, p. 187-205, illus., [Cartersville], Bartow Co., Georgia [1933]. A review of the mineral wealth of the county is given. Little detail is included, as the emphasis is upon the historical development of the deposits.
CUPPELS, NORMAN PAUL, see Overstreet, William Courtney, 1.

CURRIE, WILLIAM, 1754-1828.
1. Historical account of the climates and diseases of the United States of America. 409 p., Philadelphia, T. Dobson, 1792. Each state is discussed separately, Georgia last; the topography of the eastern part of the state is cursorily described; few details are included.

CURRIER, LOUIS WADE, 1890-

CURRY, RICHARD O.
1. (and Proctor, Charles A.). Copper district of Tennessee, Georgia, North Carolina and Virginia—its history-geography-geology and mining interests: Southern Jour. Medical and Physical Sciences, vol. 3, p. 38-44, 1855. An account of the early history of the area around Ducktown is given. References are made to northern Georgia also. Iron, gold, and copper are the mineral deposits present. It is far more historical than geological.

CUSHMAN, JOSEPH AUGUSTINE, 1880-1949.
2. The American species of Orthophragmina and Lepidocyclina: U. S. Geol. Survey Prof. Paper 125, p. 39-108, illus., 1920. Several species of Orthophragmina from the Eocene Ocala Limestone in the Coastal Plain, and several species of Lepidocyclina from the same formation and also Oligocene rocks, are described and illustrated.
4. (and Ozawa, Yoshiaki). A monograph of the foraminiferal Family Polymorphinidae, Recent and fossil: U. S. Natl. Museum Proc., vol. 77, art. 6, 145 p., illus., 1931. Many genera and species are reported from Eocene rocks in Jenkins, Decatur, and Crawford Counties. All are illustrated and described.
5. Upper Eocene Foraminifera of the southeastern United States: U. S. Geol. Survey Prof. Paper 181, ii, 88 p., illus., 1935. Many genera and species from the Ocala Limestone and Barnwell Formation from many places on the Coastal Plain are described and illustrated.
7. A monograph of the foraminiferal Family Nonionidae; U. S. Geol. Survey Prof. Paper 191, ii, 100 p., illus., 1939. Nonion chappapense, from the Eocene Ocala Limestone in Houston Co., and N. advenum, from the Eocene of many places on the Coastal Plain, are described and illustrated.

8. (and Herrick, Stephen Marion). (The) Foraminifera of the type locality of the McBean Formation [Richmond Co.]: Cushman Lab. Foraminiferal Research Contribs., vol. 21, p. 55-73, illus., 1945. Eighty two species in 41 genera are described and illustrated. Many are new.

9. (A) foraminiferal fauna from the Twiggs Clay of [Washington Co.] Georgia: Cushman Lab. Foraminiferal Research Contribs., vol. 21, p. 1-11, illus., 1945. Thirty two species in 22 genera are described and illustrated. Most are new. They occur in exposures along Lamar Creek, near Sandersville.

10. (and Applin, Esther English Richards). Some Foraminifera of Woodbine age from Texas, Mississippi, Alabama, and Georgia: Cushman Lab. Foraminiferal Research Contribs., vol. 22, p. 71-75, illus., 1946. Ammobaculites stephensoni and A. bergquisti from marine shale in the Tuscaloosa Formation in wells in the Coastal Plain are described and illustrated; Ammobaculoides plummerae is from the same unit in Pierce County.

11. (A) supplement to the monograph of the foraminiferal Family Verneuilinidae: Cushman Foundation Foraminiferal Research Spec. Pub. 7A, 45 p., illus., 1946. Pseudoclavulina clavata from Upper Cretaceous rocks is described and illustrated. It is recorded from Georgia, but with no definite locations.


Cuvier, George Leopold Chétien Frédéric Dagobert, Baron, 1769-1832.

1. Sur des os de Megatherium trouvé dans les États Unis en Georgia, in Recherches sur les ossemens fossiles . . . 8d ed., vol. 5, part 2, p. 519, Paris, G. Dufort et E. D'Ocogne, 1825. A comment on the then-recent report by Mitchill on the finding of Megatherium fragments in Chatham Co. indicates that more material should be sought after. It is not surprising that the species should be found as far north of the equator as it is south (in Paraguay).


DALL, WILLIAM HEALEY, 1845-1927, see also Smith, Eugene Allen, 3.


2. Contributions to the Tertiary fauna of Florida: Wagner Free Inst. Science Trans., vols. 3 and 4, in six parts; 1653 p., illus., 1890-1903. Many hundreds of fossils are described and illustrated; all are mollusks, with a few Brachiopoda included. Many are from the Eocene and Miocene Series of Georgia.

3. (and Harris, Gilbert ··Dennison). Correlation papers—Neocene: U. S. Geol. Survey Bull. 84, 349 p., illus., .1892. A generalized summary of the Miocene and Pliocene rocks of the Coastal Plain of Georgia is included, along with a discussion of their correlation with similar rocks in adjacent states.

4. (and Stanley-Brown, Joseph). Cenozoic geology along with Apalachicola River [and Flint River, Decatur Co.]: Geol. Soc. America Bull., vol. 5, p; 147-170, illus., 1894. Descriptions of the [Oligocene] and Miocene formations along the Flint River in Decatur Co. are given. Fossils are listed.

5. A singular Eocene Turbinella [Richmond Co.]: Nautilus, vol. 18, p. 9-10, 1904; addition with title, Note on the genus Psilococthila Dall, vol. 20, p. 128, 1907. An unnamed species of Turbinella (Psilococthila) sp. from Eocene rocks of the Claiborne Stage is described. He later recommends the erection of genus Psilococthila.


10. On a brackish water Pliocene fauna of the southern Coastal Plain [Wayne Co.]: U. S. Natl. Museum Proc., vol. 46, p. 225-237, illus., 1913. Seven species of gastropods and pelecypods from an exposure on the Satilla River are illustrated; some are described.


DANA, EDWARD SALISBURY, 1849-1935.

1. On staurolite crystals from Fannin Co., Georgia, no. 1 of On new twins of staurolite and pyrrhotite, no. 3 of Mineralogical notes: Amer. Jour Science, 3d ser. vol. 11, p. 384-386, illus., 1876. Staurolite twins are described and illustrated. Several types of twinning occur.


DARBY, JOHN, see Glade Gold Mines, 1.

DARLING, ROBERT WILLIAM, 1923-
2. Differential thermal analysis of some Paleozoic shales, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 82-86, illus., 1953. Samples of shales from Pennsylvania, Devonian, and Silurian formations from Walker Co. are used in a test of the validity of differential thermal analyses in correlation. The results of the tests are favorable.

DARRAH, WILLIAM CULP, 1909-

DARTON, NELSON HORATIO, 1865-1948.
1. Artesian well prospects in the Atlantic Coastal Plain regions: U. S. Geol. Survey Bull. 138, 288 p., illus., 1896. An extremely cursory description of ground water conditions is given. Artesian wells from numerous places along the coast are described in tabular form. Some analyses are included.
5. Geothermal data of the United States, including many original determinations of the underground temperature: U. S. Geol. Survey Bull. 701, 97 p., illus., 1920. Temperature gradients from many wells in many places on the Coastal Plain are tabulated. No unusual circumstances are reported.


DAVIS, GEORGE HAMILTON, 1921-

DAVIS, GORDON LESLIE, 1912- see Aldrich, Lyman Thomas, 1, 2.

DAVIS, MORGAN JONES.

DAVIS, ROBERT ELLIS, 1924-
1. Georgia, in Magnesium resources of the United States—a geologic summary . . . : U. S. Geol. Survey Bull. 1019, p. 411-412, 1957. A cursory description of the occurrences of dolomite in Georgia is given. This is a review of then-known information, and no new data are included. It occurs predominantly in the Shady and Knox formations in northwestern Georgia and also in the Murphy Marble and Talladega Slate in the Piedmont and Blue Ridge.

DAVIS, ROYALL OSCAR EUGENE, 1880-
1. Soil erosion in the south: U. S. Dept. Agriculture Bull. 180, 23 p., illus., 1915. A general treatise on erosion factors, results, and solutions, includes numerous examples from the Coastal Plain of Georgia. The southern Coastal Plain, because of certain factors, has several unique types of erosion.

DAVIS, WILLIAM HARPER.

DAVIS, WILLIAM MORRIS, 1850-1934, see also Hayes, Charles Willard, 1; Jones, S. Percy, 1.
DAWSON, JOHN WILLIAM, 1820-1899.

DAY, ARTHUR LOUIS, 1869-1960.

DAY, DAVID TALBOT, 1859-1925.

DEBOW, JAMES DUNWOODY BROWNSON, 1820-1867.
1. [Georgia . . . ], in The industrial resources, etc., of the southern and western states . . . , vol. 1, p. 354-365, New Orleans, DeBow's Review, 1852. This is a cursory survey of the geology and mineral resources of Georgia, largely abstracted from other persons' work.

DEBY, JULIEN MARC, 1827-1895.
1. Canton copper mine, Cherokee Co., Georgia: Mining Mag., vol. 5, p. 395-397, illus., 1855. Chalcopyrite-bearing quartz veins in metamorphic rocks are described. Gossan occurs at the surface. Numerous other minerals are present, as is silver.

DECKER, CHARLES ELLIJAH, 1868-1958.
1. Stratigraphic significance of graptolites of Athens Shale: Amer. Assoc. Petroleum Geologists Bull., vol. 36, p. 1-145, illus., 1952. The Ordovician Athens Shale is present in Murray Co. and nearby. A section is cursorily described from near Tennga, and a graptolite fauna of eight species is listed. They are characteristic of those found in the Athens Shale elsewhere. They are illustrated. The position of the Georgia fauna is discussed as part of a world-wide correlation problem.
DELLENBAUGH, FREDERICK SAMUEL, 1853-1935.

DELYONY, EDWARD.
1. Topography and diseases of Talbot County, Ga.: Southern Medical and Surgical Jour., vol. 1, p. 601-606, 1837. A very cursory description of the general topography is included. The account of the sparsely-settled county is interesting.

DENNISON, H. E.
1. (director, and research staff). Lime prospectus: Georgia Inst. Technology, Engineering Experiment Station, [Spec. Rept. 13], 23 p. (†), 1945. Descriptions of limestone deposits throughout Georgia are included in a general discussion of the uses of lime industrially.

DENTON, NORMAN MC CLAREN, see White, Walter Stanley, 2.

DESOR, EDOUARD, 1811-1882.
1. Post Pliocene of the southern states and its relation to the Laurentian of the north and the deposits of the valley of the Mississippi: Amer. Jour. Science, 2d ser. vol. 14, p. 49-59, 1852. The post-Pliocene deposits of Georgia and Florida are paleontologically correlated with the marine Pleistocene clays of the northeastern United States. The Pleistocene deposits of the north, however, are younger and more bouldery. Also, there are some terrestrial fossils in the southern beds, whereas none are enclosed in the northern beds. Explanations are proposed.
2. Synopsis des échinides fossiles. xx, 490 p., illus. [atlas], Paris, C. Reinwald, Weisbade, Kreidel u Niedner, 1855. A review of the fossil echinoids of the times includes brief descriptions and illustrations of three from Eocene rocks in Georgia. No new data are included.

DICKSON, JAMES.

DICUS, JOSEPH MARTIN.
DIEFFENBACH, OTTO.


DIETZ, FRANK TOBIAS, 1920- see Hersey, John Brackett, 1.

DILLER, JOSEPH SILAS, 1850-1928.


DILLON, LAWRENCE SAMUEL, 1910-.

1. Wisconsin climate and life zones in North America: Science, vol. 123, p. 167-176, illus., 1956. The biota of the United States, including that of Georgia, is evaluated to determine the life zones during the maximum glaciation. Maps show proposed boundaries, which are generally compressed and shifted southward, and the distribution of individual types of organisms.

DOAK, JOHN B., see Aldrich, Lyman Thomas, 1.

dobbin, carroll edward, 1892-.


DOBSON, CHARLES M.

1. Report on the iron fields of Dahlonega [Lumpkin Co.], Ga. 29 p., illus., Atlanta, Jas. P. Harrison, 1889. Hematite and magnetite ores in schist are described. They occur in belts paralleling, in part, the gold belts. Analyses are included. They are interpreted as metamorphosed veins.

DODGE, W. R.

DOERING, JOHN A.

1. Citronelle age problem: Amer. Assoc. Petroleum Geologists Bull., vol. 42, p. 764-786, illus., 1958. The Citronelle Formation is described regionally; it occurs in Georgia on the Coastal Plain. It rests unconformably on older formations and is considered to be the terrestrial, or up-dip equivalent of marine, Lower Pleistocene rocks which are down-dip. It reflects an uplift in the interior of the United States after a time of quiet.

DOLE, RICHARD BRYANT, 1880-1917, see also Stephenson, Lloyd William, 6.


DONNAY, GABRIELLE HAMBURGER, 1920- see Hurst, Vernon James, 22.

DONNAY, JOSEPH DESIRÉ HUBERT, 1902- see Hurst, Vernon James, 22.

DONNELLY, H. F., see Nagelschmidt, Gunter, 1.

DONSKY, ELLIS, see Counts, Harlan Bryan, 1.

DORSEY, GEORGE EDWIN, 1892-1953.

1. The habitat of Belemnitella americana and mucronata: Johns Hopkins Univ. Circ., new ser. 1917, no. 3, p. 107-129, 1917. B. americana, the American species, and B. mucronata, the European species, are shown always to be found in the same lithology, yet showing no evidence of adaption. The absence of B. americana in the Ripley Formation, where it should be found, in Georgia is significant, and is explained by the Georgia Ripley being a more near-shore deposit, therefore more sandy, whereas the B. americana-bearing beds elsewhere are always chalky or glauconitic.

DOTT, ROBERT HENRY, 1896-.


DOUGLAS, HAMILTON.


DOUGLAS, JAMES, 1837-1918.

DOUVILLE, JOSEPH HENRI FERDINAND, 1846-1937.

1. Les couches à orbitoides de l’Amérique du Nord: Académie des Sciences Paris Comptes Rendus, vol. 167, p. 261-267, illus., 1918. The Eocene Jackson Stage can be distinguished from the Oligocene Vicksburg Stage by the presence of Lepidocyclina mantelli, L. superba and Orthophragmina spp. in the former and by the disappearance of Orthophragmina, greater development of L. superba, and the appearance of transition forms toward Eulepidina in the latter. Examples from the Coastal Plain are cited.

2. Revision des lépidocyclines: Société géologique de France Mém., new ser. mem. 2, 115 p., illus., Paris, 1924. Isolepidina georgiana from the Eocene Ocala Limestone in Decatur Co. is described and illustrated, as part of a general review of the group.


DRENNEN, CHARLES WILLIAM, 1926-


DRYDEN, ABRAHAM LINCOLN, JR., 1903-

1. Thorium and monazite deposits, [part 1] Southeastern Coastal Plain: U. S. Geol. Survey Trace Elements Investigations 390, p. 189-190, 1953. Heavy minerals from the Tuscaloosa Formation are radioactive. Monazite usually comprises about 1 percent of the heavy mineral suites, although it locally may be 2-3 percent, and may be up to 10 percent in some locations.


DUGGAN, J. R.

1. The mineral springs of Georgia. 56 p., Macon, J. W. Burke and Co., 1881. A general treatise on the occurrence and therapeutic value of mineral water is followed by a description and analysis of many of the leading springs of the state. Twenty eight are given, most being in the northern half of the state. Medicinal claims are cited.

DUMBLE, EDWIN THEODORE, 1852-1927.


DUNBAR, CARL OWEN, 1891-

DUNCAN, JOHN KENNETH, see Bershad, Suzanne E., 1.

DUNKLE, DAVID HOSBROOK, 1911-
1. New western hemisphere occurrences of fossil selachians: Washington Acad. Science Jour., vol. 41, p. 344-347, illus., 1951. Spines of the pristid shark *Propristis* cf. *schweinfurthi* from the Eocene Barnwell Sand of Twiggs Co. are described and illustrated. This is the first known occurrence of this genus outside of Africa. Other vertebrate fragments are also present.

DUTTON, CLARENCE EDWARD, 1841-1912.
1. (and Hayden, Edward Everett). Abstract of the results of the investigation of the Charleston earthquake: Science, vol. 9, p. 489-501, illus., 1887; discussion by Thomas Corwin Mendenhall, p. 584-587; reply by authors, vol. 10, p. 10-11; discussion by Joseph Le Conte, p. 22-24, illus.; reply by authors, p. 35-36, 1887. A description of the results of the earthquake and a review of the possible causes includes an isoseismal map which includes Georgia. The intensity ranged from VI to VIII in Georgia.
2. The Charleston [South Carolina] earthquake: U. S. Geol. Survey Ann. Rept. 9, p. 203-528, illus., 1889. The great earthquake of 1886, centered near Charleston, was felt in Georgia, along the coast mostly. Intensities in Georgia of VI to VIII are reported; the effects are described.

EARDLEY, ARMAND JOHN, 1901-

EARGLE, DOLAN HOYLE, 1905-
1. (The) outcropping Cretaceous rocks of Georgia, in Short contributions to the geology, geography, and archaeology of Georgia (No. 2): Georgia Geol. Survey Bull. 60, p.1-20, illus., 1953. The entire Cretaceous System is described in considerable detail. All rocks dip gently seaward and the geological history is evaluated. Projected cross sections are included.
2. Stratigraphy of the outcropping Cretaceous rocks of Georgia: U. S. Geol. Survey Bull. 1014, iv, 101 p., illus. incl. geol. map, 1955. Detailed descriptions of the Cretaceous rocks are given. Sections are measured; fossils are listed.

EARLE, RAYMOND BARTLETT.
1. The genesis of certain Paleozoic interbedded iron ore deposits: ScD. Thesis, New York Univ., 1914; New York Acad. Science Annals, vol. 24, p. 115-170, illus., 1914. Various theories of origin for the iron ore deposited during the Silurian Period are reviewed and rejected. The theory of artesian water (confined ground water) having deposited the iron as cement is advanced. Sections from northwestern Georgia are cited for evidence.
EATON, GORDON PRYOR, *see* Johnston, John Edward, 1.

EBAUGH, WILLIAM CLARENCE, *see* Wright, Frank James, 3.

ECKEL, EDWIN CLARENCE, 1875-1941, *see also* Hayes, Charles Willard, 20, 22.

1. Preliminary report on the Dahlonega Gold District of [Lumpkin Co.] Georgia: U. S. Geol. Survey Repts. Open File 570, 48 p. (†), illus., [?1902]. A hand-written manuscript outlines the geology of the area. The gold occurs in quartz veins in mica schist, and in placers. Folding and faulting are very obvious. This is apparently a manuscript for a publication which was never completed.

2. Dahlonega gold district of [Lumpkin Co.] Georgia: Engineering and Mining Jour., vol. 75, p. 219-220, 1903; U. S. Geol. Survey Bull. 213, p. 57-63, 1903. A survey of the geology and ore deposits is given. Mica schist and hornblende gneiss have been intruded by diorite and granite. The gold occurs in placers in the streams, in saprolite, and in quartz veins at the contacts of the metamorphic and igneous rocks. Pyrite is also common in the quartz veins.


4. Cement materials and industry of the United States: U. S. Geol. Survey Bull. 243, 395 p., illus., 1905. A detailed discussion of the technology of cement is followed by a survey of the potential of cement-making resources in each state. Several sources of limestones are described from many places in Georgia. Analyses are included.

5. Cements, limes, and plasters . . . xxxiv, 712 p., illus., New York, John Wiley, 1905; also several printings and several editions. A general discussion of these materials includes descriptions and analyses of Georgia limestones used in the manufacture of cement.


7. Building stones and clays—their origin, characters, and examination. xiv, 264 p., illus., New York, John Wiley and Sons, 1912. This is essentially a textbook, but it does contain many analyses of different rocks from Georgia.

8. Portland cement materials and industry in the United States: U. S. Geol. Survey Bull. 522, 401 p., illus., 1913. A general description of the natural resources of the cement industry is followed by a review of the occurrence of these resources in each state, including Georgia. Various limestones are described and analyzed.


ECKELMANN, FRANK DONALD, see Kulp, John Lawrence, 1; Long, Leon Eugene, 1.

EDGERTON, J. H.


EDMUNDSON, RAYMOND SMITH, 1908- see Nelson, Wilbur Armstead, 2.

EHRENBURG, KURT.


EINECKE, GUSTAV.

1. Die Eisenerzvorraete der Welt. 418 p. incl. vol. of atlas, Dusseldorf, Stahleisen, 1950. A review of the world-wide occurrences of iron ore include discussion of those deposits in northwestern Georgia. No new details are included.

EISELEY, LORIN CORRY.


ELIAS, MAXIM KONRAD, see Condra, George Evert, 1.

ELLIOTT, JOHN B.

1. The age of the Southern Appalachians: Amer. Jour. Science, 3d ser. vol. 25, p. 282-298, illus., 1883. Details of the rocks in the southern part of the Blue Ridge Province, northeast of Acworth in Cobb Co., are given. The Knox Group, from the unmetamorphosed area, is recognized by lithologic sequence in the metamorphic areas.

ELLIS, ARTHUR JACKSON, 1885-1920.

EMERSON, BENJAMIN KENDALL, 1843-1932.

EMMONS, EBENEZER, 1799-1863, see Glade Gold Mines, 1.

EMMONS, SAMUEL FRANKLIN, 1841-1911.

EMMONS, WILLIAM HARVEY, 1876-1948.
1. (and Laney, Francis Baker). Geology and ore deposits of the Ducktown Mining District, Tennessee [Fannin Co.]: U. S. Geol. Survey Prof. Paper 139, 114 p., illus. incl. geol. map, 1926. A complete, detailed geologic description of the area is given, a small portion of which is in Fannin County. The copper-bearing ore and associated minerals are found in veins and as replacements in metamorphic rocks of Paleozoic age. Details of the ore occurrence are included.

ENGLAND, CHARLES BENNETT.

EPPLEY, ROBERT ASHTON, see Heck, Nicholas Hunter, 1.

ERWIN, JAMES WALTER, 1934-

ERWIN, WALTER LAMBUTH, 1923- see Vernon, Robert Orion, 2.

ESPENSHADE, GILBERT HOWRY, 1912-
EVANS, ISABEL P., see Merrill, George Perkins, 7.

EVANS, LEWIS, 1700-1756.
1. A map of North America showing the places where metals, minerals, fossils, and medicinal waters are to be found. . . . No scale, about 12x12 inches, with discussion: Literary Mag. or Universal Review, vol. 1, p. 298-299, London, 1756. This early map shows the relationship of Georgia to the Appalachian Mountains as known at that time. This map is from that of Guettard, q.v., or vice versa.

EYERMAN, JOHN, 1867-

FAGAN, JAMES MICHAEL, 1936-

FAIRBAIRN, HAROLD WILLIAMS, 1906- see Pinson, William Hamet, Jr., 3.

FAIRBANKS, HELEN R.

FAIRCHILD, HERMAN LEROY, 1850-1948.

FAIRCLOTH, WAYNE R.
1. A summary of the geology of Georgia with particular emphasis on the Coastal Plain and Grady County. 24 p.(†), illus., [np] [nd] [?1959]. A brief, popular survey of the geology of the Coastal Plain is given. It is a summary of already known work. Cretaceous rocks to Recent sediments are described.

FALCONER, HUGH, 1808-1865.

FARQUHAR, FRANCIS S.

FARRINGTON, OLIVER CUMMINGS, 1864-1933.


5. Catalogue of the meteorites of North America to January 1, 1909: Natl. Acad. Science Mem. 13, 513 p., illus., 1915. A detailed description, analyses, and discussion of all of the known meteorites, including many from Georgia, are given. Georgia ranks seventh in the number of known meteorites; nine are described.


FATH, ARTHUR EARL, 1887-

FAUST, GEORGE TOBIAS, 1908- see Alexander, Lyle Thomas, 1; Mitchell, Lane, 3.
FEATHERSTONHAUGH, GEORGE WILLIAM, 1780-1866.

FENNEMAN, NEVIN MELANCTHON, 1865-1945.
1. Physiographic boundaries within the United States: Assoc. Amer. Geographers Annals, vol. 4, p. 84-134, illus., 1914. The philosophy of boundary problems is discussed and specific examples are shown, some of which are from Georgia. Topographic expression is the chief criterion, with geologic structure being closely related.
6. Physical divisions of the United States. Map, scale 1 inch to 7,000,000 inches, U. S. Geol. Survey, 1946. A map of the United States is divided into physiographic provinces and subprovinces; Georgia is included. Only the approximate boundaries are given.

FENNER, CLARENCE NORMAN, 1870-1949.

FIELDNER, ARNO CARL, 1881-
2. (and others). Analyses of Tennessee coals (including Georgia): U. S. Bur. Mines Tech. Paper 671, 243 p., illus., 1945. Proximate and ultimate analyses of coal from Walker and Dade Cos. are given, along with much discussion and description of various physical and chemical properties.
3. Reserves [of] solid fuels ...: Oil and Gas Jour., vol. 47, no. 46, p. 138-140, 142, 145, illus. incl. port., 1949. A general survey of the coal reserves of the United States shows that the reserves in Georgia are negligible compared to the total of the United States.

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FINCH, JOHN.

FIREMAN, EDWARD LEONARD, 1922-

FISHER, DANIEL JEROME, 1896-

FISHER, GEORGE PARK, 1827-1909.

FITCH, WILLIAM EDWARD, 1867-
1. Mineral waters of the United States and American spas. xvi, 798 p., illus., Philadelphia and New York, Lea and Febiger, 1927; 2d ed., 1930. A treatise on the joys and values of mineral-water baths and drinks includes descriptions of fifty five springs in Georgia alone. Analyses are included for many.

FLANIGAN, JAMES C.
1. Geography and geology, Chapter 3 of History of Gwinnett County, Georgia, 1818-1943, p. 19-23, Hapeville, Ga., [priv. pub.], 1943. A cursory survey of the mineral resources of the county is given. No new data are included.

FLEENER, FRANK LESLIE.

FLEISCHER, MICHAEL, 1908-

FLEMING, HENRY STUART, 1863-
1. General description of the ores used in the Chattanooga District: Amer. Inst. Mining Engineers Trans., vol. 15, p. 757-761, 1887. Analyses of several different iron ores from different sources in northwestern Georgia are included.
[FLETCHER, LAZARUS, 1854-1921].
1. An introduction to the study of meteorites, with a list of the meteorites represented in the collection [of the British Museum]. 77 p., [London?] 1886; revised, 1904; 1908. A fascinating review of the history of meteorites is followed by a catalogue of the collection. Brief remarks are made about most of the fragments. Pieces of meteorites from Whitfield, Monroe, Cherokee, Putnam, Stewart, Union and Walker Cos. are present.

FLIGHT, WALTER, 1811-1885.

FLINSCH-BUBA, MARGRET.

FLINT, RICHARD FOSTER, 1902-.
1. Pleistocene features of the Atlantic Coastal Plain: Amer. Jour. Science, vol. 238, p. 757-787, illus., 1940; discussion by Charles Wythe Cooke, with title, Two shorelines or seven, vol. 239, p. 457-458, 1941; reply by author with title, Pleistocene strandlines, a rejoinder, p. 459-462, 1941. A survey of the literature regarding the origin of the terraces along the Atlantic coast, including Georgia, is followed by detailed descriptions of features from Georgia. Ridges, stream offsets, and scarps (wave cut cliffs), are noted. Marine microfossils are listed also. A marine origin for the features is indicated.
2. Atlantic coastal “terraces”: Washington Acad. Science Jour., vol. 32, p. 235-237, 1942. The features along the east coast of the United States, including Georgia, which are called terraces, are reviewed. All are shown to be other types of marine features, and the term terrace is not applicable. Two scarps are recognized.

FLUKER, W. H.
1. Gold mining in McDuffie County, Georgia: Engineering and Mining Jour., vol. 73, p. 725-726, 1902; Amer. Inst. Mining Engineers Trans., vol. 33, p. 119-125, 1903. Gold occurs in quartz veins in mica schist. Some of the veins are described.
2. Deep veins in the Appalachian belt: Engineering and Mining Jour.-Press, vol. 114, p. 98-94, illus., 1922. Details of gold-bearing quartz veins in the Dahlonega Belt and in the Columbia Mine in McDuffie Co. show that while the quartz veins vary in thickness with depth in the latter, the value of the gold remains consistent per ton, and the veins do not “degenerate” as some have suggested.
FOERSTE, AUGUST FREDERICK, 1862-1936.


2. On the Clinton oolitic iron ores: Amer. Jour. Science, 3d ser. vol. 41, p. 28-29, 1891. Cells of Bryozoa, filled with iron salts, are cited as one of the origins of the oolites. Examples from Dade County are cited. In some cases the Bryozoa is replaced and the cells are still un replaced. All gradations are known. No concretionary origin for the oolites is evident.

3. Studies on the Chipola Miocene of Bainbridge, [Decatur Co.] Georgia, and of Alum Bluff, Florida, with an attempt to correlate certain Grand Gulf Group beds with marine Miocene beds eastward: Amer. Jour. Science, 3d ser. vol. 46, p. 244-254, 1893. In a regional facies study, comparing the marine beds with non-marine beds toward the northwest, examples are taken from Decatur County. The section in "Gastropod Gully" is described, and fossils are listed.

4. The upper Vicksburg Eocene and the Chattahoochee Miocene of [Decatur Co.] southwest Georgia and adjacent Florida: Amer. Jour. Science, 3d ser. vol. 48, p. 41-54, illus., 1894. The Vicksburg beds (Oligocene) are identified as residual chert in the Flint River Valley. A vertical section is reconstructed on the assumption that the chert, while not *in situ*, is left relatively in stratigraphic position in the residuum. A section is constructed; it is 150 feet thick. Fossils are listed. The overlying Miocene rocks are also described.


FORD, WILLIAM EBENEZER, 1878-1939.


[FORT, TOMLINSON, 1886-] *see* Little, George, 1.

FORTSON, CHARLES WELBORN, JR., 1934-

1. (and Navarre, Alfred Theodore). Limestones exposed in the lower Withlacoochee Valley of [Brooks and Lowndes Cos.] Georgia: Southeastern Geology, vol. 1, p. 73-76, illus., 1959. Two formations, the Oligocene Suwannee Limestone and the Miocene Tampa Limestone, are recognized in the river valley and in sink holes. Each is described and analyzed.
2. (and Navarre, Alfred Theodore). Monazite-bearing pegmatites in the [Crawford Co.] south Georgia Piedmont: Econ. Geology, vol. 54, p. 1309–1311, illus., 1959. Pegmatites, a few inches thick, occur in shear zones in metamorphic rocks. They contain quartz, potash feldspar and small monazite crystals. The origin is uncertain but they may be genetically related to monazite-bearing granites a few miles away.

3. Preliminary reconnaissance of the geology and mineral resources of Hancock County, Georgia. ii, 16 p. (†), illus. geol. map, Georgia Inst. Technology, Engineering Experiment Station, Project no. A-486-2, 1959. A generalized geological description of the county is included. The metamorphic and igneous rocks of the Piedmont are described, as are the Cretaceous and Eocene sedimentary rocks. Kaolin is the chief mineral resource, and granite, clay, stone, and sand and gravel are also present.

FOSBROOKE, S. H.
1. Gold in Georgia: Dixie, vol. 5, p. 423-424, 1889. Gold from near Stockbridge, in Henry Co. is reported but without detail, as is a gold vein reported from Oglethorpe Co. Other gold areas are described from throughout the Piedmont.

FRAME, JAMES.
1. Further notes on the gold deposits of the southern Appalachians: Engineering and Mining Jour., vol. 111, p. 4, 1921. Details of the occurrence of gold-bearing quartz veins in fissures in metamorphic rocks are given. Placers and mineralized zones in schist are also sources of gold. Emphasis is placed on the Dahlonega Belt.

FRANCK, MONA L., see Pinson, William Hamet, Jr., 2.

FRAZER, PERSIFOR, JR., 1844-1909.
FREEMAN, JACK.
1. Harrisburg Cave [Walker Co.]: Georgia Spelunker, vol. 1, no. 3, p. 8 (†), illus., 1957. A map of the cave in Lookout Mountain is included along with a very brief description.

FRIIS, HERMAN RALPH, 1905-

FRINK, JOHN WESTLAKE, 1916-
1. (and Murray, Grover Elmer Jr.). Elliptical "bays" or "craters" of southeastern United States: Compass, vol. 17, p. 227-233, 1937. Twenty five features of the "Carolina Bays," some of which are in Georgia, are described. A meteorite impact origin is proposed.

FRYXELL, FRITIOF MELVIN, 1900-

FULLER, GLEN LOREN, 1891-
1. Reconnaissance erosion survey of the state of Georgia. Map, scale 1 inch to 500,000 inches, U. S. Dept. Agriculture, Soil Conservation Service [n.d.]. A map of the state shows relative rates of erosion by colors, from little or none to destroyed by gullying.
2. Charting the effects of erosion in the Old-Plantation Belt of the southern Piedmont: Amer. Geophysical Union Trans., vol. 15, pt. 2, p. 495-500 (†), 1934. The rates of various types of soil erosion in different types of soils are studied. The figures are tabulated. Morgan and Jasper Cos. are used as examples for the entire region.

FULLER, MYRON LESLIE, 1873-1960.
1. (and Lines, Edwin Fuller, and Veatch, Arthur Clifford). Record of deep well drilling for 1904: U. S. Geol. Survey Bull. 264, 106 p., 1905. Five wells from 305 to 700 feet deep, were reported drilled in Georgia; three are in the Coastal Plain and two are in Walker Co. Depth to water, rise of water in well, yield, and remarks are the table headings; no lithologic logs are included.
2. Peculiar mineral waters from crystalline rocks of [Cobb Co.] Georgia: U. S. Geol. Survey Water-Supply Paper 160, p. 86-91, 1906. Water from several springs in Cobb Co. is analyzed. The chlorine and sulphate content is very high. The local geology is described, and possible origins for the mineral water are discussed. The minerals may come from deep-seated sodalite- or apatite-bearing rocks, or may be water excluded from an igneous magma.
3. (and Sanford, Samuel). Record of deep-well drilling for 1905: U. S. Geol. Survey Bull. 298, 299 p., 1906. Eight wells were drilled in 1905, varying from 180 to 918 feet deep. The data are in tables which include as headings, depth to water, rise in well, yield, and remarks. Most are in the Coastal Plain; one is in Fulton Co. Generalized lithologic logs are included for most.
4. Artesian waters of the Atlantic Coastal Plain: Amer. Water Works Assoc. Proc. 28th Ann. Convention, p. 294-322, illus., [1908]. A general review of the geology of the Coastal Plain is given, followed by a discussion of the origin of artesian water. Potential artesian source rocks are described, some of which are in Georgia.

FULTON, JOHN FARQUHAR, 1899-1960.

1. Benjamin Silliman, [Sr.] 1779-1864, pathfinder in American science. xiii, 294 p., illus., New York, Henry Schuman [1947].

FURCRON, AURELIUS SYDNEY; 1899- see also Henderson, Edward Porter, 2, 4, 5; Hootman, James Albert, 1; LeGrand, Henry Elwood, 2; Lester, James George, 7.


2. (and others). Mineral resources of Georgia, in Natural resources of Georgia, p. 121-222, illus., Atlanta, State Dept. Education, 1938; reprinted as separate, 1938. This is a summary of the various mineral resources of the state presented in popular form, and designed for the educational system of the state. No new details are given.


4. The flagstone industry of Georgia: Georgia Geol. Survey Inf. Circ. 12, 8 p. (‡), illus., 1940. A general description of the origin and use of flagstone is followed by a description of occurrences in Georgia. Most comes from the Pottsville Formation in northwestern Georgia and from several different crystalline rocks in the Piedmont and Blue Ridge.

5. Magnesium and magnesium salts in Columbia County, Georgia: Manufacturer's Record, vol. 110, no. 2, p. 18, 1941. A body of serpentine, very pure and extensive, is described as a potential source of magnesium.

6. Dolomites and magnesium limestones in Georgia; Georgia Geol. Survey Inf. Circ. 14, 29 p. (‡), illus., 1942. A general discussion of the origin and uses of dolomite and magnesium limestone is followed by descriptions of occurrences in Georgia. Most comes from the Paleozoic terrane of northwestern Georgia, and some comes from the various marble belts in the Piedmont. Analyses are included.

7. (and Teague, Kefton Harding). Mica-bearing pegmatites of Georgia: Georgia Geol. Survey Bull. 48, xii, 192 p., illus., 1943. A general discussion of the origin of mica in pegmatites is followed by a description of individual properties in many counties in the Blue Ridge and Piedmont. Small-scale sketch maps are included.

8. The crystalline basement; Southeastern Geol. Soc. [Guidebook] Field Trip 2, p. 1-2 (‡), 1944. A very cursory review of the rocks encountered on a field trip in the Macon and Bibb Co. area is given.


12. (and Teague, Kefton Harding, and others). Sillimanite and kyanite in Georgia (a preliminary report): Georgia Geol. Survey Bull. 51, x, 76 p., illus. incl. geol. map, 1945. Sillimanite-bearing schist is described from Hart, Elbert, Madison, and Towns Cos. as are massive kyanite-bearing rocks from Cherokee, Pickens, Dawson, and Gilmer Counties. Descriptions of the associated rocks are included.

13. (and Teague, Kefton Harding, and Calver, James Lewis). Talc deposits of Murray County, Georgia: Georgia Geol. Survey Bull. 53, x, p. 1-75, illus. incl. geol. map, 1947. Precambrian-Cambrian rocks are described, as are the numerous faults and folds. Talc occurs in dolomitic portions of the Cohutta Schist. Its occurrence and distribution is described and discussed. Analyses are included, as are descriptions of individual properties.


17. Meteorites in Georgia: Georgia Mineral Soc. Newsletter, [vol. 1] no. 7, p. 13-17 (†), illus., 1948. This is a popular account of some of the known meteorite falls in Georgia. A complete list is included.

18. (The) mineralogy of Indian artifacts in Georgia [abs.]: Georgia Acad. Science Bull., vol. 6, no. 1, p. 20, 1948.


20. (The) geology of Tallulah Gorge [Habersham and Rabun Cos.]: Georgia Mineral Soc. Newsletter, vol. 2, no. 2, p. 11-12 (†), illus., 1949. This is a popular account of the origin of the gorge. A tributary of the southeastward-flowing Tugaloo River beheaded and captured part of the southwestward-flowing Chattahoochee River.


25. Geological provinces of Georgia and their principal mineral resources, in Short contributions to the geology, geography, and archaeology of Georgia: Georgia Geol. Survey Bull. 58, p. 10-20, 1950. This is a short, generalized review of the chief mineral resources of Georgia. No new data are included.


27. Geology of the crystalline rocks, in Geology of the crystalline rocks and of the Paleozoic area of northwest Georgia: Southeastern Geol. Soc. [Guidebook], Field Trip 7, p. 2-8 (†), illus., 1951. A generalized description of the rocks is given along with an itemized road log of a field trip from Atlanta, Fulton Co., to Allatoona, Cobb County.

28. Radioactive garnet from Towns County: Georgia Mineral Soc. Newsletter, vol. 4, p. 130 (†), 1951. A brownish-red garnet rock which is radioactive is described. The nature and source of the radioactivity are not known.


30. Salt springs and wells of Cobb and Douglas Counties, Georgia—a groundwater enigma: Georgia Mineral Soc. Newsletter, vol. 4, p. 8-10 (†), 1951. Brines from wells in the metamorphic rocks are discussed; analyses are included. No explanation is available.
35. Georgia’s copper deposits: Georgia Mineral Soc. Newsletter, vol. 5, p. 137-139 (†), 1952. This is a popular account of the occurrence of copper in the Blue Ridge and Piedmont of Georgia.
38. Thar’s gold in them hills: Georgia Mineral Soc. Newsletter, vol. 5, p. 129-134 (†), illus., 1952. This is a popular account of the gold deposits of northern Georgia, with special consideration given to the Chamber’s Nugget from White County.
40. Bloating granites in the Cohutta Mountains of Murray County, Georgia: Georgia Mineral Soc. Newsletter, vol. 6, p. 8-11, illus., 1953. Granite, which expands when heated to make a potential aggregate, is described. The granite intrudes granite gneiss.
41. Comments on the geology of the Ellijay Quadrangle [Fannin, Gilmer, Union, Pickens, Dawson, and Lumpkin Cos.]: Georgia-North Carolina-Tennessee, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 32-40, illus., 1953. A generalized description of the stratigraphy of the quadrangle is given. There are 4 great sequences of metamorphic rocks, the youngest one, the Murphy Series, is considered to be Paleozoic in age, the others Precambrian. Very little igneous intrusion is evident.
42. Siliceous oolite and doubly-terminated quartz crystals in [Murray Co.] northwest Georgia [abs.]: Georgia Mineral Newsletter, vol. 6, p. 32, 1953.
43. (and Chancey, C. N.). (The) Minerals Processing Company Mine and other beryl deposits in Troup County, Georgia: Georgia Mineral Newsletter, vol. 7, p. 140-144, illus., 1954. Beryl occurs in kaolinized pegmatite surrounding a quartz core; the entire mass is enclosed in biotite gneiss. Some aquamarine occurs also. Other local deposits are described.
44. Silica gel at Laurel Creek corundum mine, Rabun County: Georgia Mineral Newsletter, vol. 7, p. 122, 1954. Silica gel is found at the surface near the mine; it is a weathering product of several basic silicate minerals.
46. Prospecting for uranium in Georgia, Part 1: Georgia Mineral Newsletter, vol. 8, p. 88-98, illus., 1955. A brief description of the general geology of the state is followed by a discussion of some of the known uranium locations in the state. None is very big or important.

47. (The) Georgia Highland: Georgia Mineral Newsletter, vol. 9, p. 91-104, illus., 1956; correction, vol. 10, p. 38, 1957. This is a semi-popular, abundantly illustrated, account of the geology, physiography and economics of the Blue Ridge Province.

48. Iron ores of the Clayton Formation in Stewart and Quitman Counties, Georgia: Georgia Mineral Newsletter, vol. 9, p. 116-124, illus., 1956. The ore is mostly limonite occurring as geodes or as the cement of sandstone. It occurs at the base of the Paleocene Clayton Formation. Maps show the location of known ore outcrops. Analyses are included.

49. (and Ray, Donald L.). Clayton iron ores of Webster County, Georgia: Georgia Mineral Newsletter, vol. 10, p. 73-76, illus. incl. geol. map, 1957. Iron ore, as hematite, goethite and limonite, occurs as geodes and as cement in sandstone. It is near the base of the Paleocene Clayton Formation. Several analyses are included.

50. (and Perry, Eugene Carleton, Jr.). Limestones of Lee County, Georgia: Georgia Mineral Newsletter, vol. 11, p. 111-118, illus., 1958. The distribution of the Ocala Limestone in the county is described, and analyses are given for many outcrops. Most outcrops are associated with sink holes.

51. (and Perry, Eugene Carleton, Jr.). Mineral resource survey of Crisp County, Georgia: Georgia Mineral Newsletter, vol. 11, p. 37-44, illus., 1958. Limestone and fuller's earth are the two economic products described. They are located and analyzed.

52. Mineral resource survey of Floyd County, Georgia: Georgia Mineral Newsletter, vol. 11, p. 1-15, illus., 1958. The presence and economic potential of shale, limestone, bauxite, iron, manganese, light weight aggregate, sand and gravel, chert, tripoli, barite, and mineral springs are described. Analyses are included for most.

53. Beryl in Georgia: Georgia Mineral Newsletter, vol. 12, p. 91-95, 1959. A brief description of the occurrence and properties of beryl is followed by an account of its occurrences in Georgia. It is reported from 23 counties in the Piedmont and Blue Ridge.


55. Helium and (?) helium (?argon) in Georgia: Georgia Mineral Newsletter, vol. 12, p. 60-61, 1959. Helium has been reported from natural gas wells in Decatur and Walker Counties. None is in commercial quantity, however. A trace of argon is also reported.

56. Notes of some iron ore deposits in Worth County: Georgia Mineral Newsletter, vol. 12, p. 62, 1959. Sandy ironstone pebbles, and goethite-hematite geodes are reported from near Sylvester. The origin and age of the ore are not discussed; an analysis is included.
57. (The) distribution and character of stone for aggregate in Georgia: Symposium on geology as applied to highway engineering, Proc. 10th, p. 5-25, illus., Atlanta, Georgia Inst. Technology, 1959; Georgia Mineral Newsletter, vol. 12, p. 1-8, illus., 1959; correction, p. 62. This is a review of the great variety of rocks available throughout the state. Each type is lithologically described, and its qualities as aggregate stone are discussed.

FURNISH, WILLIAM MADISON, JR., 1912- see Miller, Arthur Keith, 1.

G.—


GABB, WILLIAM MORE, 1839-1878, see also Morton, Samuel George, 1.

1. Notes on American Cretaceous fossils with descriptions of some new specimens: Acad. Natural Science Philadelphia Proc. 1876, p. 276-324, 1877. Many mollusks from the [Providence] Formation in Clay County are described. Many are new. Some pelecypods from the Ripley Formation in Stewart and Quitman Cos. are also included.

GALPIN, SIDNEY LONGMAN, 1886-1962.

1. A preliminary report on the feldspar and mica deposits of Georgia: Georgia Geol. Survey Bull. 30, xii, 190 p., illus., 1915. A general discussion of the nature and occurrence of rocks in the Piedmont and Blue Ridge is followed by details of the occurrences of feldspar and mica in pegmatites, by county. Analyses are included.

GARDNER, CHARLES HARWOOD, 1887-


GARDNER, JULIA ANNA, 1882-1960, see also Clark, William Bullock, 4; Cooke, Charles Wythe, 22.


2. The detection of the Chipola fauna in the Marks Head Marl: Washington Acad. Science Jour., vol. 15, p. 264-268, 1925. The fauna of the type area in Effingham Co. is re-evaluated and determined to be a Chipola equivalent rather than an equivalent of the Calvert or Alum Bluff Formations.

3. The molluscan fauna of the Alum Bluff Group of Florida [and Decatur Co.] [in 8 parts]: U. S. Geol. Survey Prof. Paper 142, 707 p., illus., 1926-50. Over 800 species of mollusks are described and illustrated. Fossils from the Oak Grove Sand, south of Bainbridge, are included.


GARRARD, JAMES A.

GATES, DANIEL WILLIAM, 1921- see Brown, William Robert, 1; Olson, Jerry Chipman, 1.

GEIJER, PER ADOLF, 1886-


GENTH, FREDERICK AUGUSTUS, 1820-1893, see also Jackson, Charles Thomas, 3; Pratt, Nathaniel Alpheus, Jr., 1; Shepard, Charles Upham, 5.

2. Gold, pseudomorph after aikinite, no. 1 of Contributions to mineralogy: Amer. Jour. Science, 2d ser. vol. 33, p. 190, 1862. A small specimen, probably from Georgia, is described. The gold occurs in a bismuth carbonate which has the form of the aikinite on the same specimen.


GEORGIA INSTITUTE OF TECHNOLOGY INDUSTRIAL ECONOMIC RESEARCH STAFF.

1. Economic study of northeast Georgia: Georgia Inst. Technology Engineering Exper. Sta. Spec. Rept. 21, 292 p., 1946. In an otherwise exclusively economic survey of the Blue Ridge Province, a few pages are devoted to a cursory description of the geology and mineral resources of the area. No new data are included.


GEORGIA MEDICAL SOCIETY.

1. The substance of a report read before the Georgia Medical Society by a committee of its members, February 4, 1809 . . . . 34 p., Savannah, Everitt and Evans, 1809; summary, Medical Repository, 3d hex. vol. 1, p. 153-158, 1810. A report on the medical aspects of growing rice in the low swampy areas of Chatham Co. includes a description of the physiography of the region. Yellow fever and malaria are fearsome.

GIBBES, LEWIS R., 1810-1894.


GIBBES, ROBERT WILSON, 1809-1866.

1. Monograph of the fossil Squalidae of the United States: Acad. Natural Science Philadelphia Jour., 2d ser. vol. 1, p. 139-147, 191-206, illus., 1848-1849. Teeth of Lamna cuspidata from Eocene rocks in [Washington Co.?] are described and illustrated, as are many other shark teeth from elsewhere.


4. (A) memoir on *Mososaurus* and the three allied new genera *Holcodus*, *Conosaurus*, and *Amphorosteus*: Smithsonian Contribs. Knowledge, vol. 2, art. 5, 13 p., illus., 1851. Teeth of *Mososaurus couperi* from Cretaceous rocks exposed along the Chattahoochee River are described and illustrated. Teeth from *M. minor* from Cretaceous rocks in Georgia [probably along the Chattahoochee River] are also described and illustrated.

1. The wonderful marshes of Glynn [County]: Emory Univ. Quarterly, vol. 3, p. 116-121, 1947. This is a popular account of the origin of the salt- and the fresh-water swamps in Glynn County. They are formed by poor drainage on recently-evacuated coastal flat areas.

2. Sea Islands of Georgia, their geologic history. 73 p., illus., Athens, Univ. Georgia Press, 1948. A generalized description of the geology of Georgia is followed by a detailed description of the geology of the offshore islands. They are thought to be erosional remnants from meandering streams, the whole area having been recently inundated.

GILBERT, GROVE KARL, 1843-1918.


GILDERSELEEVE, BENJAMIN, 1907- see also Butts, Charles, 4; Hunter, Charles Eugene, 4.

2. Minerals and structural materials of the Hales Bar and Chickamauga Reservoir areas: Tennessee Valley Auth. Commerce Dept. Regional Products Research Div. Rept. 4, 54 p. (†), illus., revised, 1946. Bentonite and coal from Dade and Walker Cos. are described as mineral resources in the area of the reservoirs. Coal analyses are included. Other resources are alluded to, but no specific discussion is included.

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GILES, ALBERT WILLIAM, 1885-1954.

GILL, THEODORE NICHOLAS, 1837-1914.

GILMORE, CHARLES WHITNEY, 1874-1945.

GLADE GOLD MINES.
1. Reports of Professor [Ebenezer] Emmons . . . and Professor [John] Darby . . . together with other matters relative to the Glade Gold Mines, Cass [Bartow] County, Georgia. 19 p., illus., Montgomery, Alabama, Barrett and Wimbish, 1859. A prospectus includes descriptions of the gold-bearing quartz veins near Allatoona. Ten distinct veins are present, all trending northeast-southwest. Great promise is shown.

GLASS, HERBERT DAVID, 1915-

GLEASON, F. E.

GLENN, LEONIDAS CHALMERS, 1871-1951.
1. Denudation and erosion in the southern Appalachian region . . . : U. S. Geol. Survey Prof. Paper 72, 137 p., illus., 1911. A description of erosion effects as a result of deforestation includes much of northern Georgia. The Chattahoochee, Coosa, and Savannah River basins are discussed.

GLENNIE, E. A.
1. Crustal warping in the United States: Beitraege zur Geophysics, vol. 46, p. 193-197, Leipzig, 1936. In a discussion showing the relationship between isostatic anomalies and latitude, a map of the United States shows that the Appalachian region is downwarped, and that this downwarping passes southward through Georgia all the way to the Gulf of Mexico. The Atlantic Coastal Plain area is upwarped.
2. Gravity anomalies in the United States: Jour. Geology, vol. 44, p. 765-782, illus., 1936. The theory of warp anomaly is explained, and a map of the United States shows this anomaly; Georgia is included. The Appalachian area is clearly defined by positive and negative anomalies.

GLOCK, WALDO SUMNER, 1897-

1. The development of drainage systems, a synoptic view: Geographical Review, vol. 21, p. 475-482, illus., 1931; discussion with title, Development of drainage systems and the dynamic cycle, by Douglas Wilson Johnson, vol. 23, p. 114-121, illus., 1933. The drainage pattern of the Egypt Quadrangle, Effingham and Bulloch Cos., is used as an example of initial drainage in a study involving certain factors in the development of drainage patterns. Johnson uses the same examples to suggest other factors as the cause of the current pattern.

GLOVER, LYNN.


2. Stratigraphy and uranium content of the Chattanooga Shale in northeastern Alabama, northwestern Georgia, and eastern Tennessee: U. S. Geol. Survey Bull. 1087-E, p. iv, 133-168, illus., 1959. Detailed stratigraphic correlations are made, many from northwestern Georgia. Sections are measured and pre- and post-Chattanooga Shale formation contacts are described. The uranium content is tabulated. Conodonts from Floyd, Chattooga, and Walker Cos. are listed.

GOEBEL, ADOLPH.

1. Kritische Uebersicht der im Besitze der kaiserlichen Akademie der Wissenschaften befindlichen aerolithen: L'académie Imperial des Sciences de St. Petersbourg Bull., vol. 11, col. 222-282, illus., 1867. Notice is made of the purchase of a part of the Monroe Co. meteorite by the Royal Academy. No details are included.

GOLDBERG, EDWARD D., 1921-

GOLDRING, WINIFRED, 1888-


GOODELL, HORACE GRANT.


GOODWIN, MELVIN H., JR., see Hendricks, Ernest LeRoy, 1, 2.

GORANSON, ROY WALDEMAR, 1900-1957.

1. The solubility of water in granite magmas: Amer. Jour. Science, 5th ser. vol. 22, p. 481-502, illus., 1931. The solubility of water in granite glass with the pressure effect from 500 to 4000 bars at 900°C and with the temperature effect from 600 to 1200°C at 980 bars is studied. Stone Mountain Granite, from DeKalb County, is used as one of the examples.


GORSLINE, DONN SHERRIN.


GOTT, GARLAND BAYARD.

1. (and Wyant, Donald Gray, and Beroni, Ernest Pete). Uranium in black shales, lignites, and limestones in the United States, in Selected papers on uranium deposits in the United States: U. S. Geol. Survey Circ. 220, p. 31-35, illus., 1952. The Chattanooga Shale of northwestern Georgia and elsewhere is known to contain radioactive elements, but the concentration is not very high. No specific figures are given.

GOTTLIEB, SIDNEY, 1918- see Klinefelter, Theron Albert, 1.

GOULD, JOSEPH CHARLES, 1931-


GRABAU, AMADEUS WILLIAM, 1870-1946.


2. The age and stratigraphic relation of the Chattanooga black shale [abs.]: Science, new ser. vol. 25, p. 771, 1907.

3. Physical and faunal evolution of North America during Ordovician, Silurian, and early Devonian time: Jour. Geology, vol. 17, p. 209-252, illus., 1909. A cursory comparison, in large part by maps, of the major physical features of the United States during these times includes Georgia. Rough correlations of major time-rock units and the enclosed fauna are included. No details are given.


5. Palaeozoic formations in the light of the pulsation theory. 4 vols., 680 p., 751 p., 880 p., 941 p., illus., Peking Univ. Press, 1934-1938; 2d ed. vol. 1, 1936; summary with title, Revised classification of the Palaeozoic Systems in the light of the Pulsation theory: Geol. Soc. China Bull., vol. 15, p. 22-44, discussion, p. 44-51, Nanking, 1936. The theory of universal simultaneous overlap and offlap is advocated, with some of the examples of results coming from Georgia. Rock units are related to "pulses". The Weisner to Rome formations represent one pulsation, the Taconian; the Conasauga Formation is the Cambrian Pulsation; the Knox Formation is in the Cambro-Ordovician Pulsation. Small scale paleogeographic maps are included. The work was never completed.


GRANGER, WALTER WILLIS, 1872-1941.


GRANT, LELAND FAUNTLEROY, 1913- see Kellberg, John M., 3.

GRANT, WILLARD HUNTINGTON, 1923- see also Gardner, Charles Harwood, 1.

1. Alums from Rabuni County: Georgia Mineral Soc. Newsletter, vol. 2, no. 6, p. 8-9 (†), 1949. Yellowish to white alum crystals, formed under ledges, from near Rabun Gap, are analyzed.


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3. (A) new hornblende locality in Towns County: Georgia Mineral Soc. Newsletter, vol. 2, no. 5, p. 6 (†), illus., 1949. Crystals from the Lower Bell Creek corundum mine, from behind an inglorious chicken coop, are described.


5. The petrography of three Georgia itacolumites, [Hall, Barrow, and Meriwether Cos.], in Short contributions to the geology, geography, and archaeology of Georgia: Georgia Geol. Survey Bull. 56, p. 91-96, table, 1950. All are metamorphic rocks; all are analyzed. The degree of flexibility is related to the interstitial distances. Mica decreases the friability but does not add to the flexibility.


7. Cubic-looking quartz crystals near Chickamauga, [Walker Co.] Georgia, in Mineralogical notes: Georgia Mineral Newsletter, vol. 8, p. 150, illus., 1955. Several crystals have an overdevelopment of positive rhombohedra and an underdevelopment of the negative rhombohedra and prisms, resulting in a cubic appearance.

8. (The) geology of Hart County, Georgia: Ph D. Thesis, Johns Hopkins Univ., 1955; Georgia Geol. Survey Bull. 67, viii, 75 p., illus. incl. geol. map, 1958. A complete geologic description is given. Metamorphosed sedimentary rocks and granitic igneous rocks of unspecified age are mapped, as are Triassic diabase dikes and Quaternary alluvium. The metamorphism is discussed, as are the resulting structures. Petrographic diagrams are included. Mica, sillimanite, and a few other minor economic products are discussed.


12. Ferruginous nodules occurring in the soils of some areas of the Piedmont and the Coastal Plain: Georgia Acad. Science Bull., vol. 14, p. 4-6, 1956. Nodules containing material from the underlying bedrock, cemented with magnetite, are described. The magnetite has been precipitated within the soil and nodules; it is not present in the bedrock.


GRASTY, JOHN SHARSHALL, 1880-1930, see also Watson, Thomas Leonard, 20, 21.

1. The geology and barite deposits of the Cartersville, [Bartow Co.] Georgia district, part 2 of Mineral resources of the south: Tradesman, vol. 69, no. 21, p. 35-37, illus., 1913. A generalized description of the residual-barite-bearing Cambrian rocks is given. Originally, the barite was deposited by ground water in fissures in the Weisner and [Shady] formations and was later redistributed by the same water system.

GRATACAP, LOUIS POPE, 1850-1917.


2. The state museum of minerals at Atlanta, Georgia: Mineral Collector, vol. 15, p. 129-132, 1908. A popular account of the exhibits in the cases of the State Museum in the Capitol building is given. Both minerals and rocks are on display, as are industrial exhibits.

GRATON, LOUIS CARYL, 1880-


GREAVES-WALKER, ARTHUR FREDERICK.

1. The origin, mineralogy and distribution of the refractory clays of the United States: North Carolina Univ. Engineering Exper. Sta. Bull. 19, 87 p., illus., 1939. A general discussion of the origin of fire clays is followed by a review of occurrences in all of the states, including Georgia. The kaolin and bauxite of the Coastal Plain are discussed. Analyses are included.

GREENE, C. F.

GREGORY, HERBERT ERNEST, 1869-1952.

GREGORY, JOHN WALTER, 1864-1932.

GREGORY, WILLIAM KING, 1876-

GRIFFIN, ROBERT HARRELL.

GRIFFITTS, WALLACE RUSH, 1919- see also Jahns, Richard Henry, 2.

GRIM, RALPH EARLY, 1902-

GROVER, NATHAN CLIFFORD.

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2. (and others). *Surface water supply of the United States*, 1934, Part 2, South Atlantic Slope . . . : U. S. Geol. Survey Water-Supply Paper 757, vii, 216 p., illus., 1936. The discharge of North Springs, near Warm Springs, in Meriwether Co., is recorded for a period of a year; the results are tabulated. It varies from .742 to .832 sec.-feet. Blue Spring, near Hamilton, Harris Co., is also measured.


**GRUMBLES, GEORGE ROBERT, 1933-**


**GRUNENFELDER, MARC H.**


**GUETTARD, JEAN ÉTIENNE, 1715-1786.**

1. Mémoire dans lequel on compare le Canada à la Suisse, par rapport à ses minéraux: Histoire de l'Académie Royale des Sciences Physiques, Annee 1752, p. 189-220, 524-538, illus., Paris, 1756; summary, Literary Magazine or Universal Review, vol. 1, p. 465-466, London, 1756 [1757]. There is nothing in the text regarding Georgia, but the accompanying map of North America, with Georgia as a part of Louisiane, indicates the presence of gold. The scale makes the boundaries unclear. Mountains run from the northeast corner southward to the center of the state.

**GUTTERY, THOMAS HOBSON, 1933-**

1. (and Albritton, John Allan). A study of Upper Cretaceous deposits exposed at Thiele Kaolin Company pits eight miles west of Sandersville [Washington Co.], Georgia: Georgia Acad. Science Bull., vol. 13, p. 89-93, illus., 1955. Sand lenses in and below kaolin beds are described and petrographically analyzed. A nearby provenance is interpreted; the kaolin was probably deposited in lakes.
GUYOT, ARNOLD HENRY, 1807-1884.
1. On the Appalachian Mountain system: Amer. Jour. Science, 2d ser. vol. 31, p. 157-187, illus., 1861. This is a very generalized description of the physiography of the Appalachian Mountains, including the Blue Ridge portion of Georgia. Little detail is given. Elevations of certain peaks are given, and a map of the whole chain is included.

HABERSHAM, JOSEPH CLAY, -1855.
1. Memorandum of the old fossil bones and shells, now in his possession, which were discovered in the year 1842, on the island of Skiddaway on the sea-coast of [Chatham Co.] Georgia, in Hodgson, William Brown, Memoir on the Megatherium, p. 24-30, 1846. Megatherium cuvieri and fragments of other mammals and reptiles from Pleistocene deposits are described and illustrated. Marine invertebrates were found associated with them.

HABERSHAM, S. E., see Phillips, William E., 2.

HABERSHAM, WILLIAM WARING.
1. The mineral resources of the south: Dixie, vol. 1, no. 3, p. 125-126, 1885. In a general exhortation to capitalists, the mineral potential of all of the southern states is described. Much emphasis is placed upon the gold deposits of northern Georgia. Not much geological detail is included.
2. Mining in the southern states: Dixie, vol. 4, p. 767-768, 1888. In an exhortation to capitalists, much emphasis is placed upon the gold deposits of Hall and Lumpkin Counties. No new geological details are included, however.

HABERSHAM COUNTY DEPARTMENT OF EDUCATION.
1. History and resources of the hills of Habersham County. [ii], 54 p. (†), illus., Clarkesville, Ga., 1937. Kyanite is the only mineral resource described; its distribution in individual deposits is discussed.

HAIFER, C.

HAGUE, ARNOLD, 1840-1917.

HAIDINGER, WILHELM KARL VON, 1795-1891.
HALL, BENJAMIN MORTIMER, 1853-1929, see also McCallie, Samuel Washington, 13.

1. Gold mining in Georgia: Engineering Assoc. South Trans., vol. 7, p. 110-113, 1896. The lack of interest in the gold mines of Georgia is attributed in part to their relative accessibility and therefore the lack of romance associated with them. Very little geologic information is included.

2. (and Yeates, William Smith). Measurements of large springs in northwest Georgia, in Operations at river stations, 1899, part 1: U. S. Geol. Survey Water-Supply Paper 36, p. 147-148, 1900. Many springs are measured, the discharge being recorded in second-feet. Most are from the eastern part of the Paleozoic terrane.


HALL, COURTNEY ROBERT, 1894-


HALL, JAMES, 1811-1898.

1. Report upon the property of the Empire State Iron and Coal Company of [Dade Co.] Georgia. 24 p., illus., Albany, 1866. [not seen]

2. Geological history of the North American continent. 24 p., Albany, The Argus Co., 1869. An extremely cursory review of the geology of the continent includes allusions to Georgia, the emphasis being upon the similarity of terrane along the eastern United States and Canada.


HALL, M. R., see also Hall, Benjamin Mortimer, 3.

1. (and Hoyt, John Clayton). Report of progress of stream measurements for the calendar year 1904, part IV, Santee, Savannah, Ogeechee, and Altamaha Rivers and the eastern Gulf of Mexico drainages: U. S. Geol. Survey Water-Supply Paper 127, 192 p., illus., 1904. The discharges of Blue Spring, in Dougherty Co. and of Cave Spring, in Floyd Co., are recorded.

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HAMITON, S. HARBERT.


HAMLIN, AUGUSTUS CHOATE, 1825-1905.

1. The gems of the United States: Amer. Assoc. Advancement Science Proc., vol. 18, p. 210-216, 1870. An association of diamonds with itacolumite in Hall County is noted as is amethyst from [Piedmont?] Georgia. No details are included.

1. The mining of paint—yellow ochre deposits of the Cartersville

HAMLIN, HOWARD P.


HAMNER, EDWARD JOHN.


HAND, BRYCE M., see Richards, Horace Gardiner, 20.

HANEY, MARSHALL.

District, [Bartow Co.] Georgia: Engineering and Mining Jour., vol. 110, p. 859-860, illus., 1920. Ochre occurs impregnating shattered Weiser Quartzite; its occurrence is described, but its origin is not discussed.

HANNA, GEORGE BYRON.


2. The fineness of native gold in the Carolinas and Georgia: Engineering and Mining Jour., vol. 42, p. 201, 1886. The grade in Georgia placers is uniformly above 900. Specific examples are cited from many locations in the gold belt.

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HANSON, HIRAM STANLEY, 1923-


HARDEN, JOHN M. B.

1. Observations on the soil, climate, and diseases of Liberty [and Long] County, Georgia: Southern Medical and Surgical Jour. new ser. vol. 1, p. 545-569, 1845. The eastern portion of the counties (only one in 1845) is swampy; the western portion is higher and sandy; the terrace step is described, as is the sea-coast origin of the sand features on the terrace. Some subsurface information is given, and soil analyses are included.

HARDER, EDMUND CECIL


2. Manganese deposits of the United States: U. S. Geol. Survey Bull. 427, 298 p., illus., 1910. The manganese deposits in the Cartersville District of Bartow Co. are cursorily described as are the deposits near Cave Spring in Floyd and Polk Counties. Analyses are included.


HARLAN, RICHARD, 1796-1843.


1. Notes on the Lafayette and Columbia Formations and some of their botanical features: Science, new ser. vol. 16, p. 68-70, 1902. The Coastal Plain formations are shown to be identifiable by the plants which grow on them. Certain plants are confined to each.

2. *Taxodium distichum* and related species, with notes on some geological factors influencing their distribution: Torrey Bot. Club Bull., vol. 29, p. 383-399, 1902. Descriptions and discussions of several species of cypress trees are given. The distribution of the different species on the Coastal Plain, Georgia included, is influenced by the underlying formations, the Lafayette Gravel, Pliocene, and the Columbia Formation [Pleistocene]. The relative imperviousness of the two formations is taken as one of the important factors.


5. (The) fern flora of Georgia: Fern Bull., vol. 13, p. 1-17, 1905. The living fern flora of the state is listed with much added information about the rocks on which they are located.


8. Some hitherto undescribed outcrops of Altamaha Grit and their vegetation [Coffee, Johnson, and Washington Cos.]: Torreya, vol. 6, p. 241-246, illus., 1906. Much is made of the flora of this particular rock type. While the emphasis is placed upon the plant communities, a little data about the rocks is also listed.


10. A new method of mapping complex geographical features, illustrated by some maps of Georgia: School Science and Mathematics, vol. 18, p. 699-708, illus., 1918. In order to make maps showing many geographical variables, what is called the quantitative regional method is explained. Little geology is included, but the influence of the physiographic provinces on other geographical variables is very evident.
11. Some vanishing scenic features of the southeastern United States: Natural History, vol. 19, p. 192-204, illus., 1919. Okefenokee Swamp, Tallulah Falls, and Stone Mountain are cited, along with other features from elsewhere, as natural regions worthy of preservation. They are popularly described.

12. The natural resources of Georgia: Georgia Univ. Bull., vol. 30, no. 3, xii, 105 p., illus., 1930. A generalized review of the resources of the state includes, among other things, a cursory description of the geology and topography. No new details are included.

13. Lowering of ground water in the Coastal Plain of Georgia: Assoc. Amer. Geographers Southeast Div. Memorandum Folio, vol. 8, p. 33-34 (+), 1957; privately reprinted with additions [1957]. The disappearance of certain plants in the "Pine Barrens" of the Altamaha Grit terrane is attributed to a lowering of the ground water table due to increased usage of water.

HARR, LUTHER.


HARRIS, ELIJAH PADDOCK, 1832-1920.

1. The chemical constitution and chronological arrangement of meteorites . . . . Ph. D. Thesis, Georgia Augusta Univ., Gottingen, 1859. Brief descriptions and analyses of meteorites include those from Union and Putnam Cos.; the latter was seen to fall in 1829 and is the first one known from Georgia.

HARRIS, GILBERT DENNISON, 1864-1952, see also Dall, William Healey, 3.


3. The Lignitic Stage, Part 1, Stratigraphy and Pelecypoda: Bulls. Amer. Paleontology, vol. 2, no. 9, p. 193-294, illus., 1897; Part 2, Scaphopoda, Gastropoda, Pteropoda and Cephalopoda, vol. 3, no. 11, p. 1-128, illus., 1899. Lower Eocene beds are described. They occur in Clay Co. and a little toward the east. A section is measured. Pelecypods and gastropods, rare at that, are described and illustrated.

5. Age flow and ebb of the Eocene seas: Science, new ser. vol. 48, p. 646-647, 1918. The Eocene [and Paleocene] Series are shown to be related to overlap and offlap conditions. The following stages are from overlap: Midway, St. Maurice, Jackson; the following stages are from offlap: Sabine and Claiborne. Georgia is implied.

6. Pelecypods of the St. Maurice and Claiborne Stages: Bulls. Amer. Paleontology, vol. 6, no. 81, 268 p., illus., 1919. Numerous pelecypods are described from Middle and Upper Eocene deposits throughout the Coastal Plain.

7. Preliminary notes on Ocala bivalves: Bulls. Amer. Paleontology, vol. 33, no. 188, p. 219-272, illus., 1951. Numerous pelecypods from the Georgia Coastal Plain are included. All are illustrated and described.

HARRIS, HUNTER L.

1. History of the Atlantic shore line: Elisha Mitchell Scientific Soc. Jour., vol. 11, pt. 2, p. 33-49, illus., 1894. This is an extremely generalized account of the geology of the Coastal Plain in which Georgia is included. No details are given, however.

HARRIS, R. MERRILL.


HARRISON, ALFRED C.


HARSHBERGER, JOHN WILLIAM, 1869-1929.

1. Phytogeographic survey of North America. lxiii, 790 p., illus., New York, G. E. Stechert, 1911. A general description of the floral provinces of the United States includes a discussion of the paleobotanical background which in turn includes paleofloristic maps of the United States. Georgia is included.

HASELTINE, RAYMOND HOLDEN, 1898-

1. Iron ore deposits of Georgia: Georgia Geol. Survey Bull. 41, vi, 222 p., illus., 1924. A general review of iron ores in the state includes detailed descriptions of limonite deposits from the lower Paleozoic residuum of northwestern Georgia, the metamorphic terrane of the adjacent Piedmont and Blue Ridge, and from the Coastal Plain in Cretaceous and/or Eocene sedimentary rocks. The hematite in Silurian rocks of northwestern Georgia is described also. Some magnetite is known from the metamorphic terrane. Numerous analyses are included.
HASH, LEWIS J.


HAWKINS, ALFRED CARY, 1887-1954.
1. We collected minerals in Georgia: Rocks and Minerals, vol. 12, p. 227-228, 1937. This is a popular, extremely cursory description of the minerals to be found in Georgia. No details are given.

HAY, OLIVER PERRY, 1846-1930.
2. The fossil turtles of North America: Carnegie Inst. Washington Pub. 75, iv, 568 p., illus., 1908. Peritresius ornatus and Taphrophys davae, from the Ripley Formation in Stewart Co. are described. Agomphus ozysternum, from the Paleocene Midway Formation in Macon Co., is described and illustrated. Terrapene canaliculata, from Pleistocene rocks in Chatham Co., is also described and illustrated.
3. The Pleistocene of North America and its vertebrated animals from the states east of the Mississippi River and from the Canadian Provinces east of longitude 95°: Carnegie Inst. Washington Pub. 322, viii, 499 p., illus., 1923. An account of the occurrence, along with a complete list, of the mammals found in the Pleistocene deposits of Glynn and Chatham Cos. is given. Small-scale maps are included showing the distribution of each of the types in eastern North America.

HAYDEN, EDWARD EVERETT, 1858-1982, see Dutton, Clarence Edward, 1.

HAYES, CHARLES WILLARD, 1859-1916.
1. The overthrust faults of the southern Appalachians: Geol. Soc. America Bull., vol. 2, p. 141-152, illus., 1891; discussion by Charles Doolittle Walcott, p. 153; discussion by William Morris Davis, p. 153-154. The Paleozoic stratigraphy of northwestern Georgia is outlined. The Rome Thrust Fault and the Cartersville Thrust Fault are identified and described from numerous places. Both are low-angled with great horizontal displacement. The thrusting followed the folding of the beds, as an erosion surface under the fault planes is evident; they are possibly post-Triassic.
2. Report on the geology of north-eastern Alabama and adjacent portions of [northwestern] Georgia and Tennessee: Alabama Geol. Survey Bull. 4, 89 p., illus. incl. geol. map, 1892. A discussion of the topography and its origin as being associated with the structures of the rocks is followed by a description of the stratigraphy. Cambrian to Pennsylvanian rocks are described. Folds and faults are the main structures.

3. Bauxite: U. S. Geol. Survey Mineral Resources 1893, p. 159-167, 1894. A very generalized summary of the bauxite which occurs in northwestern Georgia is given. Some of the largest deposits are described. The ore comes from the precipitation, near the surface, of aluminum compounds derived from underlying shale.

4. Geology of a portion of the Coosa Valley in [northwestern] Georgia and Alabama: Geol. Soc. America Bull., vol. 5, p. 465-480, illus., 1894. Paleozoic rocks southwest of Rome are described as are the folds and faults. The Coosa Thrust Fault and minor thrust faults are recognized. The Paleozoic and post-Paleozoic geological history is outlined. A sketch map is included.

5. (and Campbell, Marius Robinson). Geomorphology of the southern Appalachians: Natl. Geographic Mag., vol. 6, p. 63-126, illus., 1894; discussion by Charles Henry White with title, The Appalachian River versus a Tertiary trans-Appalachian River in eastern Tennessee: Jour. Geology, vol. 12, p. 34-39, 1904. Northwestern and Piedmont Georgia are included. The oldest feature in the area is the deformed Cretaceuos peneplain. The various features are described. Post-Cretaceous tilting and subsequent Tertiary peneplanation are recognized and the evidence described. The two surfaces are coincident. The drainage modifications are described, with the southwestward-flowing Appalachian River the main drainage. This was later captured by the westward flowing, eastward-cutting Tennessee River, and the beheaded portion is now the Coosa River. White claims the original streams flowed northwestward on the peneplain.


7. Ringgold Atlas Sheet [Catoosa, Dade, Chattooga, Walker, Whitfield, Floyd, and Gordon Cos.]: U. S. Geol. Survey Geol. Atlas U. S. Folio 2, 3 p., illus. incl. geol. map, 1894. A complete geologic description of the area is given. Cambrian to [Pennsylvanian] rocks are described and mapped. Large folds and thrust faults comprise the major structural features. Coal and iron are the chief mineral resources; manganese, paint ore and stone are also described.
8. Description of the Stevenson sheet [Quad.] [Chattanooga, Dade and Walker Cos.]: U. S. Geol. Survey Geol. Atlas U. S. Folio 19, [4 p.] illus. incl. geol. map, 1895. A complete geologic description of the area is given. [Ordovician to Pennsylvanian] rocks are mapped and described. Broad folds make up the predominant structures. Bituminous coal and iron are the chief mineral resources; stone and clay are also present.

9. (The) geological relations of the southern Appalachian bauxite deposits: Amer. Inst. Mining Engineers Trans., vol. 24, p. 243-254; discussions, p. 855-861, illus., 1895. The ore is irregularly distributed in a narrow belt in Floyd County. A survey of the stratigraphy and structure of the area is followed by a discussion of the occurrence of the bauxite. It occurs in the residuum at fault contacts of the Knox dolomite with overlying formations. The ore was precipitated by thermal solutions which rose along the fault planes.

10. Geology of the bauxite region of Georgia and Alabama, in Bauxite: U. S. Geol. Survey Ann. Rept. 16, pt. 3, p. 561-597, illus., 1895. Details of the occurrence of bauxite in Floyd, Bartow, and Polk Cos. are included. Its origin both as a residual and as a replacement deposit is discussed. A geological sketch map is included. Individual deposits are described.


15. (and Campbell, Marius Robinson). The relation of biology to physiography: Science, new ser. vol. 12, p. 131-133, illus., 1900. The authors are elated that their earlier opinions, regarding the capture of the headwaters of the Coosa, Etowah, and Chattahoochee Rivers, are substantiated by biological data also. The clam fauna in these rivers and in their captors are similar.
16. Geological relations of the iron ores in the Cartersville District, [Bartow Co.] Georgia: Amer. Inst. Mining Engineers Trans., vol. 30, p. 403-419, illus., 1901. A stratigraphical summary of the Cambrian and Precambrian rocks includes a sketch map. Folds and faults are common. Specular hematite occurs as bands in the Weisner Quartzite. Hematite and limonite occur as residual concentrates in the residuum of what is called the Beaver [Shady] Limestone. The presence of ocher and manganese is also mentioned.


18. Description of the Rome Quadrangle [Chattooga, Floyd, Gordon, Polk, and Bartow Cos.]: U. S. Geol. Survey Geol. Atlas U. S. Folio 78, 6 p., illus. incl. geol. maps, 1902. A complete geologic description of the area is given. Cambrian to Pennsylvanian and Neocene (?) rocks are mapped and described. Folds and faults constitute the major structural features. Iron ore is the chief mineral resource; bauxite, slate, and limestone are also present.


20. (and Eckel, Edwin Clarence). Iron ores in the Cartersville District [Bartow Co.] Georgia: U. S. Geol. Survey Bull. 213, p. 233-242, 1903. A generalized description of the geology of the area is followed by a description of the ore occurrences. Specular hematite occurs as bands in quartzite. Limonite is the most important ore and occurs as residual concentrate in the limestone's weathered zone.


25. (The) mineral wealth of the south: Official proceedings at the 1st session of the Southern Commercial Cong., p. 84-98, 1908. A generalized review of the mineral wealth and potential of the South includes Georgia. Few details are included.

26. The state geological surveys of the United States: U. S. Geol. Survey Bull. 465, 177 p., illus., 1911. This includes an historical account of the Georgia Geological Surveys from their inception to 1910.

HAYES, RICHARD.

HAYS, LOUISE FREDERICK, 1881- see Stephenson, Lloyd William, 14.

HECK, NICHOLAS HUNTER, 1882-1953.
1. Earthquake history of the United States: U. S. Coast and Geod. Survey Spec. Pub. 149, 61 p., illus., 1928; [2d edition] ... Ser. 609, part 1, 83 p., illus., 1939; revised, 1947; 3d edition by Robert Ashton Eppley, 1958. A map gives the locations of epicenters, four of which are in Piedmont Georgia and one in the Chattanooga area. Earthquakes in nearby areas have also been felt in Georgia. Brief descriptions of them are given.

2. (and Bodle, Ralph Robinson). United States earthquakes 1928: U. S. Coast and Geod. Survey Ser. 483, 29 p., illus., 1930. A very brief record of a possible earthquake in Valdosta, Lowndes Co., on May 28, is given. The big quake of Nov. 2, centered in the Appalachian Mountains to the north was felt in north Georgia.

3. A new map of earthquake distribution: Geographical Review, vol. 25, p. 125-130, illus., 1935. A small-scale map of the world shows Georgia to have been in the area of the Charleston earthquake of 1886 only.

4. Earthquake problems of the Atlantic Coastal Plain: Seismol. Soc. America Bull., vol. 30, p. 109-143, illus., 1940. A general discussion of the relation of earthquakes to the physiographic provinces includes maps showing the distribution of the epicenters. Eight are reported from Georgia, five on the Coastal Plain, three in the Piedmont.

HEILPRIN, ANGELO, 1853-1907, see also White, Charles Abiathar, 2.
1. The Tertiary geology of the eastern and southern United States: Acad. Natural Science Philadelphia Jour., 2d ser. vol. 9, p. 115-144, illus., 1884; reprinted in Contributions to the Tertiary geology and paleontology of the United States, p. 1-40, illus., [priv. pub.], Philadelphia, 1884. A general description of the distribution of Tertiary rocks on the Coastal Plain from New Jersey to Texas is followed by detailed analyses of each of the states. Little is known of the Tertiary of Georgia. Only Eocene and Miocene are recognized; the Oligocene should be present, but has not yet been determined. A small-scale map is included.
HEINRICH, EBERHARDT WILLIAM, 1918- see also Jahns, Richard Henry, 2.

HENBEST, LLOYD GEORGE, 1900-

HENDERSON, EDWARD PORTER.
4. (and Furcron, Aurelius Sydney). Meteorites in Georgia, Part 1: Georgia Mineral Newsletter, vol. 9, p. 126-135, illus., 1956; Part 2, Descriptions of falls, vol. 10, p. 113-142, illus., 1957. A general discussion of meteor types and features is followed by descriptions of those from Georgia. Twenty one are known, of which two, from Pulaski and Emmanuel Cos., are described for the first time.
5. (and Furcron, Aurelius Sydney). A forged meteorite from Cave Spring, [Chattooga Co.] Georgia: Georgia Mineral Newsletter, vol. 11, p. 86-91, illus., 1958. A piece of forged meteorite is described and compared with known Georgia meteorites. It is tentatively considered to be a part of the Holland's Store meteorite from Chattooga County.
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HENDERSON, E. T., see Standard Gold Mining Co., 1.

HENDERSON, JOHN T.

1. The Commonwealth of Georgia . . . viii, 379 p., illus., Atlanta, J. P. Harrison and Co., 1885. A general review of the entire state includes chapters on topography, geology, and mineral resources. No new data are given.

HENDRICKS, ERNEST LEROY.

1. (and Goodwin, Melvin H., Jr.). Observations on surface-water temperatures in lime sink ponds and evaporation pans in [Baker Co.] southwestern Georgia: Ecology, vol. 33, p. 385-397, illus., 1952. Maximum water temperatures are higher than maximum air temperatures in the summer, and are lower in the winter. The minimum water temperature is always lower than the minimum air temperature. Size, surface exposure, and other factors are the cause of the variations.

2. (and Goodwin, Melvin H., Jr.). Water-level fluctuations in limestone sinks in [Baker and Early Cos.] southwestern Georgia: U. S. Geol. Survey Water-Supply Paper 1110-E, vii, p. 157-243, illus., 1952. General ground water conditions in the area are described. The relation of the ground water table to the ponded water in the sinks and to general hydrologic conditions is described. The ground water table has little effect on the level of the water in the sinks.

3. Some notes on the relation of ground-water levels to pond levels in limestone sinks of southwestern Georgia: Amer. Geophysical Union Trans., vol. 35, p. 796-804, illus., 1954. Pond-water levels were compared with ground-water levels nearby. The pond levels were higher than ground water levels most of the time. The relations between the two levels depend upon the permeability of the bottom of the pond unless the ground-water level is at or above pond water level at which time there is hydrologic continuity.

HENDRICKS, STERLING BROWN, 1902- see Alexander, Lyle Thomas, 1; Mitchell, Lane, 3.

HENDRY, CHARLES WALTER, JR., see also Jordan, Louise, 4.

1. (and Yon, J. William, Jr.). Geology of the area in and around the Jim Woodruff reservoir [Decatur and Seminole Cos.]: Florida Geol. Survey Rept. Inv. 16, p. 1-52, illus.incl. geol. map, 1958. A detailed geologic report of the area is given. Eocene to Miocene rocks are mapped. Sections are measured, and an insoluble residue study is included.

HENIN, STEPHANE, see Caillère, Simonne, 1.
HENRY, ARTHUR VAN, 1892-1937.

1. (and Vaughan, William Harry). Geologic and technologic aspects of the sedimentary kaolins of Georgia: Amer. Inst. Mining and Metallurgical Engineers Tech. Pub. 774, 11 p., illus., 1937. A generalized discussion of the origin and occurrence of kaolin in the Coastal Plain is given. Various kinds of kaolin are present, reflecting varying conditions of origin, though all are sedimentary. Many analyses are included.

HENRY, EDWARD CARLETON, 1905- see Mitchell, Lane, 4.

HERRICK, STEPHEN MARION, 1904- see also Carter, Roland W., 1; Cole, William Storrs, 2; Cushman, Joseph Augustine, 8; Thomson, Medford Theodore, 2; Warren, Moultrie Alfred, 7.


2. (and Thomson, Medford Theodore). Water resources [of the Fort Benning area, Chattahoochee, Muscogee, and Marion Cos.]. Map, scale 1 inch to about 1 mile, text on back, U. S. Geol. Survey for U. S. Army Chief of Engineers [1946]. A lithologic map, based on water-bearing properties of rocks, is shown. The rocks are Cretaceous and Quaternary in age. The ground water potential of the area is included in the discussion.


4. (and Le Grand, Harry Elwood). Geology and ground water resources of the Atlanta area, [Piedmont] Georgia: Georgia Geol. Survey Bull. 55, viii, 124 p., illus. incl. geol. map, 1949. Those counties adjacent to Fulton Co. are included, as well as are Rockdale and Gwinnett Counties. Precambrian and early Paleozoic metamorphosed sedimentary rocks are mapped and described, as are late Paleozoic metamorphosed igneous rocks. The water-bearing properties of each are discussed. Well records and analyses are included.


8. Ground water for irrigation in Georgia: Agricultural Engineering, vol. 27, p. 521-522, illus., 1946; Georgia Mineral Newsletter, vol. 8, p. 14-17, illus., 1955. This is an exhortation for the use of ground water for irrigation. Some of the problems associated with gathering data are outlined. Only small areas could be serviced north of the Fall Line. In the Coastal Plain, however, large quantities of water are available.

HERRING, BARBARA F., see Kaiser, Edward Pick, 1.

HERMANN, LEO ANTHONY.
1. Geology of the Stone Mountain-Lithonia District, [DeKalb, Rockdale, and Gwinnett Cos.] Georgia: Ph. D. Thesis, Johns Hopkins Univ., 1951; Georgia Geol. Survey Bull. 61, xvi, 139 p., illus. incl. geol. map, 1954. Stone Mountain Granite of Permian (?) age has intruded a variety of Precambrian (?) metamorphic rocks. Triassic diabase dikes are also present. All are described in detail and mapped. Much detail of the structures is included. Stone is the chief mineral resource.

HERRON, EDWARD A.

HERSEY, JOHN BRACKETT, 1913-
1. (and others), Geophysical investigation of the continental margin between Cape Henry, Virginia and Jacksonville, Florida: Geol. Soc. America Bull., vol. 70, p. 437-466, illus., 1959. Seismic reflection and refraction profiles from the Continental Shelf of Georgia are included. Interpretations, based upon known surface geology, are made. Depths to various units are calculated. The basement is easily identified.

HERZOG, LEONARD FREDERICK, 2d, 1926- see also Aldrich, Lyman Thomas, 1, 2; Pinson, William Hamet, Jr., 3.

HEWETT, DONNEL FOSTER, 1881-
1. (and Crickmay, Geoffrey William). The warm springs of Georgia [Meriwether, Talbot, Harris, Upson, and Pike Cos.] — their geologic relations and origin, a summary report: U. S. Geol. Survey Water-Supply Paper 819, iv, 40 p., illus. incl. geol. map, 1937. A geological map of the Warm Springs Quadrangle is given. Precambrian, Triassic, and Cenozoic rocks are described and mapped. The springs are described in detail and the waters are analyzed. The source of the heat is from the geothermal gradient at the depth to which the ground water is forced to descend before it ascends back to the surface.
HEY, MAX HUTCHINSON, see Prior, George Thorland, 1.

HIDDEN, WILLIAM EARL, 1853-1918.
1. On the Whitfield County, Georgia, meteoric iron: Amer. Jour. Science, 3d ser. vol. 21, p. 286-287, illus., 1881. A 13 pound iron meteorite is described and illustrated. No detailed analyses are included.

HILGARD, EUGENE WOLDEMAR, 1833-1916.
2. The later Tertiary of the Gulf of Mexico: Amer. Jour. Science, 3d ser. vol. 22, p. 58-65, illus., 1881. Evidence is discussed to support the hypothesis that the Gulf of Mexico was temporarily partially separated from the Atlantic Ocean during the Upper Tertiary Epoch. The [Central Georgia Uplift] is discussed as an extension of the Florida Arch. A generalized geological map includes Georgia.

HILLYER, EBEN.

HINTON, JOHN HOWARD, 1791-1873.

HITCHCOCK, CHARLES HENRY, 1836-1919, see also New England Company, 1.
1. Description of the geological map: U. S. Census 9th, vol. 3, p. 754-756, illus. geol. map, 1872. A brief description accompanies a small-scale colored map of the United States; Georgia is included.
5. Gray's geological map of the United States, in The National Atlas . . . special edition, p. 204-205, no scale, about 1 inch to 300 miles, Philadelphia, O. W. Gray, 1886; originally published 1876.


7. Geological map of the United States and part of Canada . . . Scale 1 inch to about 200 miles, Amer. Inst. Mining Engineers, 1886.

8. The geological map of the United States: Amer. Inst. Mining Engineers Trans., vol. 15, p. 465-488, illus. geol. map, 1887. A review of the various maps of the United States is followed by a description of the one accompanying this report. Georgia is included.


[HITCHCOCK, DONALD].


HITCHCOCK, EDWARD, 1793-1864, see also Hitchcock, Charles Henry, 6.

1. Outline of the geology of the globe, and of the United States in particular . . . . 136 p., illus. incl. geol. map, Boston, Phillips, Sampson, and Co., 1853; 2d ed., Boston, 1854; 3d ed., Boston, 1856. A brief summary of the geology of the world, as known at that time, includes a small-scale geological map of the world and one of the United States, which includes Georgia. No new data are included.


HOBBS, WILLIAM HERBERT, 1864-1923.


HOCOTT, CLAUDE RICHARD, 1909- see Buckley, Stuart Edward, 1.

HODGE, JAMES THACHER, 1816-1871, see also Southern Gold Co., 1.


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HODGSON, WILLIAM BROWN, 1800-
2. Memoir on the Megatherium and other extinct gigantic quadrupeds of the coast of [Chatham Co.] Georgia . . . 47 p., illus., New York, Bartlett and Welford, 1846. A complete description of the near-shore Atlantic Coastal Plain and the offshore islands is given. Bone deposits of mammals including Megatherium, from [Pleistocene] deposits on Skidaway Island, are described.

HOFF, KARL ERNEST ADOLOF VON, 1771-1837.

HOFFMAN, JOHN NATHAN, 1923-
1. Manganese, its minerals, deposits and uses: Pennsylvania State Univ. Mineral Industries Exper. Sta. Circ. 49, vi, 116 p., illus., 1957; revised, 1958. A general review of the manganese occurrences of the world includes those from the Paleozoic terrane in northwestern Georgia and also those from the Piedmont. Not much detail is given.

HOLDEN, FREDERICK THOMPSON, 1915-

HOLDEN, ROY JAY, 1870-1945.
1. The "Punch" Jones and other Appalachian diamonds: Virginia Polytechnic Inst. Bull. 37, no. 4, (Engineering Exper. Sta. ser. no. 56), 32 p., illus., 1944. Six finds of diamonds in Georgia are given in a brief list. One is from Hall Co.; three are from White Co.; one is from Clayton Co., and one is from Fulton Co., near Atlanta. References are cited.

HOLDER, CHARLES FREDERICK, 1851-1915.

HOLLAND, THOMAS HENRY, 1888-

HOLLAND, WILLIS A., JR., 1931- see also Hurst, Vernon James, 35.
3. (A) study of sorting in several small streams in Decatur, DeKalb County, Georgia: Georgia Acad. Science Bull., vol. 12, p. 69-73, illus., 1954. The deposits of four small streams are studied. The sorting results are shown to be associated with the provenance of the material, the nature of the tributary junctions, bedrock in the stream bed, and time.


HOLMES, FRANCIS SIMMONS, 1815-1882, see Leidy, Joseph, 4.

HOLMES, JOSEPH AUSTIN, 1859-1915.


2. Notes on the underground supplies of potable waters in the South Atlantic Piedmont Plateau: Amer. Inst. Mining Engineers Trans., vol. 25, p. 936-942, 1896. This is a general description of the ground water occurrence and potential in the Piedmont Province. Reference is made to a well in Fulton Co., Georgia.

HOLSTEAD, J. B., see Stevens, Ray E.; 1.

HOOTMAN, JAMES ALBERT.


HOPKINS, MARY SUZANNE.

1. The inexpensive mountain [Stone Mountain, DeKalb Co.]: Nature Mag., vol. 48, p. 77-78, 108, illus., 1955. This is a popular account of the origin of Stone Mountain.

HOPKINS, OLIVER BAKER, 1886-

2. (A) report on the asbestos, talc, and soapstone deposits of Georgia: Georgia Geol. Survey Bull. 29, 319 p., illus. incl. geol. map, 1914. A general discussion of the origin of these materials is followed by descriptions of individual deposits. They are found throughout the Blue Ridge and Piedmont. Included is a discussion of the occurrence in Georgia of basic igneous rocks. Analyses and photomicrographs are included.

HOPKINS, T. S.

HOPSON, CLIFFORD AMDRAE, 1928-
1. Exfoliation and weathering at Stone Mountain, [DeKalb Co.] Georgia, and their bearing on disfigurement of the Confederate Memorial: Georgia Mineral Newsletter, vol. 11, p. 65-79, illus., 1958. Exfoliation due to sheeting is common. The sheeting continues into the mass of the mountain for an unknown distance. Weathering, because of Georgia's warm humid climate, is proceeding at a faster-than-average rate.

HOSTETTER, JOHN CLYDE, 1886- see Day, Arthur Louis., 1.

HOVEY, HORACE CARTER, 1833-1914.

HOWARD, ARTHUR DAVID, 1906-
1. Terrace studies in the United States and Hawaii, 1934-1937: Committee pour L'étude des Terrasses Pliocènes et Pleistocènes, Rept. 5, p. 27-63, Paris, Bur. de Sec. Gén., Union Géog. International, 1938. This is a review of the work done during the years cited on problems relating to sea-level changes. The terraces of Georgia are discussed. The various terraces are correlated with glacial action.

HOWE, HENRY VAN WAGENEN, 1896-
1. Large oysters from the Gulf Coast Tertiary: Jour. Paleontology, vol. 11, p. 355-366, illus., 1937; Georgia Mineral Newsletter, vol. 10, no. 1, p. 25-32, illus., 1957. A taxonomic discussion of Ostrea gigantissima from Burke Co. shows that other large oysters have been confounded with this one. A detailed history of the confusion, with solutions, is included. O. gigantissima, from Eocene beds, is described and illustrated.
2. Neglected Gulf Coast Tertiary microfossils: Amer. Assoc. Petroleum Geologists Bull., vol. 26, p. 1188-1199, illus., 1942. In a general description of the variety of microfossils, aside from Foraminifera and Ostracoda which are to be found, reference is made to Eocene collecting grounds in Burke and Worth Counties; echinoderm parts are abundant.

4. (and Laurencich, Laura). Introduction to the study of Cretaceous Ostracoda. 536 p., illus., Louisiana State Univ. Press, 1958. A survey and a taxonomic review of the Cretaceous Ostracoda include many genera and species from Georgia. All are described and illustrated.

HOWELL, BENJAMIN FRANKLIN, SR. 1890-


HOWELL, EDWIN EUGENE, 1845-1911.

HOWELL, THOMAS J., 1842-1912.
1. The geological distribution of North American forests: Popular Science Monthly, vol. 23, p. 517-524, 1883. The correspondence between the distribution of forest types and geological provinces is pointed out. The various provinces in Georgia are mentioned. No details are included, however.

HOYT, JOHN CLAYTON, 1874- see Hall, M. R., 1, 2.

HSU, GIUN-TZE.

HUBBS, CARL LEAVITT, 1894- see Blair, William Franklin, 1.

HUDSON, WALLER CHENAULT.
1. Sillimanite find in south proves important: Engineering and Mining Jour., vol. 145, no. 9, p. 81, 1944. A cursory description of the occurrence of sillimanite schists in the Piedmont of Georgia is given. They occur in a belt 90 miles wide from Talbotton northeastward into South Carolina.

3. Investigation of the McLeod glass-sand pits, Wheeler County, Ga.: U. S. Bur. Mines Rept. Inv. 3859, 3 p (†), illus., 1946. The deposit, along the Little Ocmulgee River, is described and delineated. Analyses are included.

HUFFMAN, GEORGE GARRETT, 1916–

HULL, EDWARD, 1829-1917, see Spencer, Joseph William Winthrop, 7.

HULL, JOSEPH POYER DEYO, 1889- see also Shearer, Harold Kurtz, 2.
1. (and Teas, Livingston Pierson). (A) preliminary report on the oil prospect near Scotland, Telfair County, Georgia. ix, 23 p., illus., Georgia Geol. Survey, 1919. An oil seepage is investigated and described. The geology of the region is outlined. Some sort of potential structural deformation is indicated by the elevation of a recognizable limestone bed in artesian wells, and further investigation is recommended.
2. (and LaForge, Laurence, and Crane, Walter Richard). Report on the manganese deposits of Georgia (second report on manganese): Georgia Geol. Survey Bull. 35, xvi, 295 p., illus., 1919. A general discussion of the origin and occurrence of manganese includes detailed descriptions of occurrences in Georgia. Most occurs as residual concentrate in Lower-Paleozoic-formation-residuum in Bartow Co. and in small amounts in Polk, Floyd, and other counties in northwestern Georgia. It occurs in cavity fillings on a small scale in some of the Piedmont and Blue Ridge counties. Analyses are included.
3. Report on the barytes deposits of Georgia: Georgia Geol. Survey Bull. 36, xiii, 146 p., illus., 1920. Barite occurs: in veins in lower Paleozoic limestone, as replacements, in breccias, as a residual deposit in the clays from the limestones, as colluvial deposits, and also as alluvial material. Only the residual and colluvial deposits are commercially important. Most comes from Bartow Co. and a little from nearby. Individual occurrences are described; analyses are included.

HUMPHREYS, WILLIAM JACKSON, 1862–
2. (The) southern Appalachian earthquake of February 21, 1916: Monthly Weather Review, vol. 44, p. 154-155, illus., 1916. An earthquake, centered in western North Carolina, was felt throughout northern Georgia. An isoseismal map shows its extent. Its intensity at Atlanta was III.
HUNT, THOMAS STERRY, 1826-1899; see also Whitney, Josiah Dwight, 1.
2. Mineral physiology and physiography . . . . xvii, 710 p., illus., Boston, Samuel E. Cassino, 1886. A detailed review of mineralogy, petrography, and metamorphism is followed by a discussion of the historical geology of the eastern United States, from the Precambrian through the Lower Paleozoic. Numerous references to Georgia are included. The depth of weathering is discussed extensively.

HUNTER, CHARLES EUGENE, 1911.
3. (and Rankin, Hiram S.). Forsterite olivine deposits of North Carolina and Georgia: Georgia Geol. Survey Bull. 47, 117 p., illus., 1941; North Carolina Div. Mineral Resources Bull. 41, 117 p., illus., 1941. Dunites and saxonites (olivine rocks), are known from Rabun and Towns Cos., having intruded into hornblende gneiss and schist. Some have been serpentinized. Analyses are included, as are small geological sketch maps of each of the individual deposits.
5. Vermiculite of the southeastern states, in Snyder, Frank G., ed., Symposium on mineral resources of the southeastern United States, p. 120-127, illus., 1950. A general discussion of the origin and occurrence of vermiculite includes those deposits in the Piedmont and Blue Ridge of Georgia. Few details are included.

HUNTINGTON, OLIVER WHIPPLE, 1858.
2. The crystalline structure of the Coahuila irons: Amer. Acad. Arts and Science Proc., vol. 24, (new ser. vol. 16), p. 30-35, illus., 1889. The Chattooga Co. meteorite is shown to have a similar chemical and crystalline structure to the numerous Coahuila iron meteorites from Mexico. These and others could be from the same original mass which broke into many fragments upon entering the atmosphere.

HURLEY, PATRICK MASON, 1912- see Pinson, William Hamet, Jr., 3.

HURST, VERNON JAMES, 1923- see also Holland, Willis A., Jr., 4; Kelly, Arthur Randolph, 1.


3. Chertification in the Fort Payne Formation, Georgia, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 215-238, illus., 1953. Petrographic descriptions of the chert and its accompanying Lavender Shale Member are given. Siliceous limestone is also described. Possible origins of the chert are discussed. No positive solution is available yet, as several modes of origin are possible. Samples from Floyd and Walker Cos. are used.

4. Heavy minerals in saprolite differentiation, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 244-264, illus., 1953. Much data come from Clarke Co., the rest from elsewhere in the Piedmont. The heavy mineral variation and concentration in various saprolites, which otherwise resemble one another, are significantly different so that the saprolites can be distinguished and the parent rock identified.


7. Epistilbite and laumontite near Columbus, [Muskogee Co.] Georgia, in Mineralogical notes: Georgia Mineral Newsletter, vol. 8, p. 149-150, 1955. Both rare zeolites occur in veinlets up to ¼ inch thick traversing amphibolite and biotite gneiss. Both result from the alteration of feldspar.


10. (A) sample of heavy sand from St. Simon's Island [Glynn Co.] in Mineralogical notes: Georgia Mineral Newsletter, vol. 8, p. 21, 1955. A sedimentary analysis of sand samples from the island is given. The sand contains 73 per cent opaque grains, which are mainly ilmenite and rutile.

11. Singing sands from Satilla River, [Ware Co.] south Georgia: Georgia Mineral Newsletter, vol. 8, p. 65-66, 1955. A sample of the sand is analyzed, and the size distribution is shown in a histogram. The sonorousness is due to the rubbing together of the rough, angular surfaces of the sand.


15. Stratigraphy, structure, and mineral resources of the Mineral Bluff Quadrangle [Fannin Co.], Georgia. Ph. D. Thesis, Johns Hopkins Univ., 1955; Georgia Geol. Survey Bull. 68, xii, 137 p., illus. incl. geol. map, 1955. Igneous-intruded, metamorphosed sedimentary rocks of Cambrian and possibly Precambrian age are mapped and described. Primary sedimentary structures, folds, faults, and other structures are described and mapped. Petrofabric diagrams are included. Iron, kyanite, marble, stone, staurolite, and talc are the mineral resources described.


18. Apatite [Jasper and Lamar Cos.], in Mineralogical notes: Georgia Mineral Newsletter, vol. 9, p. 90, illus., 1956. Colorless crystals to 1 cm. long are described and illustrated from near Monticello; larger crystals come from the uranium-bearing pegmatite near Barnesville.


26. Polymorphism of micas in the Mineral Bluff and Epworth Quadrangles [Fannin Co.]: Geol. Soc. America Bull., vol. 68, p. 1581-1584, illus., 1957. Micas are analyzed by x-ray, and all of the muscovites are of the 2M variety; the biotites are 1M or 3T. Temperature was probably the chief factor in the creation of the different kinds of mica. Post metamorphic alteration environment is also evident, indicated by the varying amounts of water which were available.

27. Prehistoric vertebrates of the Georgia Coastal Plain: Georgia Mineral Newsletter, vol. 10, p. 77-93, illus., 1957. This is a popular account, including drawings of restorations, of the large Pleistocene vertebrate fauna which is known from the Atlantic Coastal Plain area; most are from near Brunswick and Savannah.


32. (and Larson, Lewis H., Jr.). On the source of copper at the Etowah site, [Bartow Co.] Georgia: Amer. Antiquity, vol. 24, p. 177-181, illus., 1958. Spectrographic analyses for trace elements of Etowah Indian copper artifacts and native copper from many sources in the United States show that the copper from Fannin Co. is the most likely Indian source, and not that from Michigan, as had been previously suspected.
33. Rare-earth-bearing apatite [Lamar Co.], in Mineralogical notes: Georgia Mineral Newsletter, vol. 11, p. 31, 1958. The apatite occurs as fractured, irregularly shaped crystals in pegmatite. The crystals, several millimeters in size, are generally enclosed by feldspar, less often in quartz.

34. Stibnite and beryl at Consolidated Quarries [Dawson Co.], in Mineralogical notes: Georgia Mineral Newsletter, vol. 11, p. 48, 1958. Gray crystals associated with black tourmaline occur in pegmatite. Some are over one inch long.


36. (The) geology and mineralogy of Graves Mountain, [Lincoln Co.] Georgia: Georgia Geol. Survey Bull. 68, v, 33 p., illus. incl. geol. map, 1959. Kyanite bearing quartz-sericite rock and quartz schist are described and mapped. Quartz conglomerate and quartz veins are also present. The kyanite and many other minerals were introduced into the metamorphic rocks at different intervals, each of which is described and evaluated.


IDDINGS, JOSEPH PAXSON, 1857-1920.

IMBEAUX, CHARLES-ÉDOUARD AUGUSTIN, 1861-

IMLAY, RALPH WILLARD, 1908-

INGALLS, WALTER RENTON, 1865-

INGOLS, ROBERT SMALLEY, 1911-
2. (and Navarre, Alfred Theodore). "Polluted" water from the leaching of igneous rock: Science, vol. 116, p. 595-597, 1952. Evidence is presented to show that inorganic nitrogen can be introduced into surface water and therefore the nitrogen content alone cannot be used as a test of pollution in an area of rapidly-weathering granite.


INGRAM, FRANK THOMPSON, 1930-
1. Oolites from the St. Genevieve and Gasper Limestones of [Catoosa and Walker Cos.] northwest Georgia, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 264-270, illus., 1953. Thin sections of oolites are evaluated. Calcite rhombs are common in the nuclei and small fossils, largely Foraminifera, are also present. The oolites were formed in shallow, agitated water.

INGRAM, WILLIAM FRANKLIN, 1916-
1. The kyanite, staurolite, and garnet association in Upson County, Georgia, in Short contributions to the geology, geography, and archaeology of Georgia: Georgia Geol. Survey Bull. 56, p. 85-91, 1950. These minerals occur individually and in various combinations. Each is described petrographically as are other associated minerals. A metamorphic origin is proposed.

IRELAND, HUBERT ANDREW, 1904-
1. "Lyell" Gully, a record of a century of erosion [Baldwin Co.]: Jour. Geology, vol. 47, p. 47-63, illus., 1939. A gully, formed in conglomerate-capped granite saprolite, is described. The rate and nature of its growth are discussed. Data come from Lyell's early report (1841) and others, since his time, and show the rate of gully formation.

JACKSON, CHARLES FREEMAN, 1886-1945.

JACKSON, CHARLES THOMAS, 1805-1880, see also Blake, William Phipps, 3; Lincoln Gold Mining Co., 1; Lumpkin Chestatee Fluming and Mining Co., 1; Southern Gold Co., 1.


JACKSON, LAWSON ERWIN, JR., 1926-


JACOB, KENNETH DONALD, 1896-

JAHNS, RICHARD HENRY, 1915- see also Heinrich, Eberhardt William, 1, 2.

JANES, THOMAS P., see also Little, George, 2.
1. A manual of Georgia, for the use of immigrants and capitalists. ii, 110 p., illus., Atlanta, Georgia Dept. Agriculture, J. P. Harrison, printer, 1878 [includes much geological information prepared by George Little]. A review of the mineral resources, physiography, and other related topics is given. The whole is very general.

JENNY, WILLIAM PAUL, 1899-
1. Geological interpretation of regional magnetic anomalies in central and southern United States: Oil Weekly, vol. 103, no. 3, p. 17-19, 22, illus., 1941; geophysical map issued as separate supplement. An exhortation for the use of magnetic anomaly-interpretation includes a discussion of large regional anomalies in the eastern United States, Georgia included. The basement-surface configuration below the Georgia Coastal Plain is discussed. The map shows areas of high intensity and some flexures.

JEWELL, WILLARD BROWNELL, 1899-

JOERG, WOLFGANG LOUIS GOTTFRID, 1885-1952.
1. The subdivision of North America into natural regions—a preliminary inquiry: Assoc. Amer. Geographers Annals, vol. 4, p. 55-83, illus., 1914. A discussion of the principles of a natural region (any portion of the surface whose physical conditions are homogeneous) concludes with a map of North America, including Georgia, divided into regions. They conform with well known physiographic provinces here in Georgia.

JOFFE, JACOB SAMUEL, 1887-
1. (and Conybeare, Adrienne B.). Analyses of United States soils Sec. II, South Atlantic states, New Brunswick, New Jersey, Agricultural Experiment Sta., Rutgers Univ., 1943. Numerous analyses from Georgia and other states are given in tabular form. The various elements are reported in percentages.
JOHNS, WILLIAM DAVIS, 1925-

JOHNS HOPKINS UNIVERSITY.
1. George Huntington Williams [1856-1894]. The minutes of a commemorative meeting held in Johns Hopkins University, October 14, 1894. 19 p., port., Baltimore, J. Murphy and Co., 1894.

JOHNSON, DOUGLAS WILSON, 1878-1944, see also Glock, Waldo Sumner, 1; Schalie, Henry van der, 1;
1. (The) distribution of fresh-water faunas as evidence of drainage modifications: Science, new ser. vol. 21, p. 588-592, 1905. The evidence of similar molluscan faunas in the Tennessee and Coosa Rivers to support the diversion of the Tennessee River by stream capture from the west is questioned. Molluscan fauna can be dispersed by other than direct water migration.
2. (The) Tertiary history of the Tennessee River: Jour. Geology, vol. 13, p. 194-231, illus., 1905. The evidence, pro and con, regarding the course of Tennessee River through the Appalachian Plateau, as to whether the Tennessee River ever flowed out the Coosa River valley, is reviewed. Some evidence comes from northwestern Georgia. The river did not flow through Georgia.
3. Drainage modifications in the Tallulah District [Blue Ridge]: Boston Soc. Natural Hist. Proc., vol. 33, p. 211-248, illus., 1907. Geomorphologic evidence is presented to show that the Chattahoochee River has been beheaded, the diverted portion, the Chattooga River, being captured by the westward-eroding Tugaloo River, and diverted to the Savannah River.
4. River capture in the Tallulah District, [Rabun Co.] Georgia: Science, new ser. vol. 25, p. 428-432, 1907. Evidence is reviewed and more offered, particularly physiographic, to support the hypothesis of the capture of the upper Chattahoochee River by a Savannah River tributary, the Tugaloo River.
5. Fixité de la côte Atlantique de l'Amérique du Nord: Annales de Géographie, vol. 21, p. 193-212, illus., Paris, 1912. A case is made for the lack of very recent coastal submergence, shown in part by elevated stumps which were from trees destroyed by previous submergence. The phenomena can come about other than by sea-level changes. Georgia is cited in some of the examples.
7. The correlation of ancient marine levels: Internatl. Geog. Cong. [18th], Paris 1931, Comptes Rendus sec. 2, vol. 2, part 1, p. 42-54, illus., 1933. A review of the terraces along the Atlantic Coast is given. The causes of the divergent views respecting their origin are given, and are followed by a review of the principles of marine-level correlations. No specific results are discussed, but some of the examples come from Georgia.

8. Scenery of the Atlantic shoreline: Rice Inst. Pamphlet 22, p. 47-82, illus., 1935. This is a generalized, popular description of shoreline phenomena. The coasts of Georgia and its neighbors are described as examples of emergent shorelines. Examples of more recent sea encroachment are also included.

JOHNSON, HENRY STANLEY, JR.


JOHNSON, LAURENCE CLEMENT, see Smith, Eugene Allen, 2.

JOHNSON, ROBERT WILLIAM, JR., see Moxham, Robert Morgan, 2.

JOHNSON, THOMAS CARY, JR.


JOHNSON, VARD HAYES, 1909-


JOHNSON, W. RAY, JR., 1913-1952.

1. (and Straley, H. W., 3d, and Straley, H. W., 4th). Depth to anomaly source for Carolina Bays, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 125-130, table, 1953; summary by H. W. Straley, 3d, and W. F. Straley, Meteoritics, vol. 1, p. 207, 1954. Calculations based upon data gathered from elsewhere, and gravimeter data from the location, suggest that the meteoric source of the gravity anomaly near the Shell Bluff Carolina Bay in Burke Co. is between 1400 and 2400 feet deep.

JOHNSTON, ALEXANDER KEITH, 1804-1871, see Boué, Ami, 2.
JOHNSTON, JOHN EDWARD, 1919-
1. (and Trumbull, John, and Eaton, Gordon Pryor). The petroleum potential of the emerged and submerged Atlantic Coastal Plain of the United States: World Petroleum Cong. 5th, New York 1959, Proc. sec. 1, p. 435-445, illus., 1959; revised with title, Will we find natural gas near northeast markets?: Gas age, vol. 124, no. 4, p. 25, 28-31, illus., 1959. A general review of stratigraphic and structural phenomena related to petroleum accumulation is given. Potential sources in the area, including Georgia, are discussed. The Southeast Georgia Basin is described.

JOHNSTON, WILLIAM DRUMM, JR., 1899-

JONAS, ANNA ISABEL, see also Stose, Anna Isabel Jonas, 1881-
1. Structure of the metamorphic belt of the southern Appalachians: Amer. Jour. Science, 5th ser. vol. 24, p. 228-243, illus., 1932. The Piedmont and Blue Ridge Provinces of Georgia are included. Metamorphic rocks, largely schists, predominate. A second metamorphic period resulted in a retrogressive effect on previously-formed high rank metamorphic rocks. The age of the second metamorphism and the accompanying giant overthrusts is late Paleozoic. The rocks were originally Precambrian in age.

JONES, JOSEPH, 1833-1896.
1. Chemical examination of the marls of Burke Co., Chapter 2 of First report to the Cotton Planters' Convention of Georgia . . . , p. 7-23, Augusta, Steam Press of Chronicle and Sentinel, 1860. Limestone from Eocene exposures throughout the county is analyzed. Emphasis is placed upon its use as a potential fertilizer.
2. Chemical examination of the shell limestone [Eocène] of Washington County, Ga., Chapter 3 of First report to the Cotton Planters' Convention of Georgia . . . , p. 24-30, Augusta, Steam Press of Chronicle and Sentinel, 1860. The [Sandersville Limestone], near Tennille, is analyzed chemically with a view to its potential as a source of fertilizer.
3. Comparison of the [Eocene] shell-limestone and marls of Georgia with the limestones and marls of Europe . . . [and elsewhere in the U. S.], Chapter 4 of First report to the Cotton Planters' Convention of Georgia . . . , p. 31-53, Augusta, Steam Press of the Chronicle and Sentinel, 1860. Chemical analyses of Eocene limestone in Georgia are given and compared with limestone analyses from elsewhere. The emphasis is placed upon the fertilizing potential of the rocks. Most of the samples are from Burke and Washington Counties.
Comparison of the shell limestone and marls of Georgia with various commercial manures, Chapter 5 of First report to the Cotton Planters' Convention of Georgia . . ., p. 54-91, Augusta, Steam Press of the Chronicle and Sentinel, 1860. Chemical analyses of limestones and marls from Georgia are given in tables, the emphasis being placed upon the fertilizing potential.

First report to the Cotton Planters' Convention of Georgia, on the agricultural resources of Georgia. xv, 312 p., Augusta, Steam Press of the Chronicle and Sentinel, 1860; reprinted in part with title, On the shell-limestone and marls of Georgia: Southern Medical and Surgical Jour., new ser. vol. 16, p. 721-752, 801-832, 881-912, 1860, and in part with title, On the Tertiary formation of Georgia . . . vol. 17, p. 1-31, 1861. Analyses of limestones from many places throughout Georgia, but mostly the Coastal Plain, are given. The emphasis is upon the fertilizer potential.

Geological position and extent of the Tertiary lime formation of Georgia, Chapter 1 of First report to the Cotton Planters' Convention of Georgia . . ., p. 3-4, Augusta, Steam Press of the Chronicle and Sentinel, 1860. A cursory description of the distribution of the Eocene rocks in Georgia is given. Special emphasis is placed upon their value as potential fertilizers.

Other sources of fertility in Georgia, Chapter 13 of First report to the Cotton Planters' Convention of Georgia . . ., p. 243-312, Augusta, Steam Press of the Chronicle and Sentinel, 1860. Water from wells and springs from many places in Georgia is analysed with the intent to show their general purity.

Other sources of lime in Georgia [beside the Coastal Plain], Chapter 9 of First report to the Cotton Planters' Convention of Georgia . . ., p. 169-174, Augusta, Steam Press of the Chronicle and Sentinel, 1860. Limestones from other parts of Georgia than the Coastal Plain are potential sources of lime also. An analysis of limestone from Cass [Bartow] Co. is included as an example. Its value as fertilizer is stressed.

Other sources of phosphate of lime in Georgia; joint clay of the Eocene formation. Kaolin clay of Georgia and South Carolina, Chapter 11 of First report to the Cotton Planters' Convention of Georgia . . ., p. 197-209, Augusta, Steam Press of the Chronicle and Sentinel, 1860. Analyses of fuller's earth and kaolin from numerous places throughout the upper Coastal Plain are given with a view to their potential use as sources of phosphate for fertilizer. Most of the material is from Burke County.

Relations of the marls and shell limestone of Georgia to soils, Chapter 6 of First report to the Cotton Planters' Convention of Georgia . . ., p. 93-132, Augusta, Steam Press of the Chronicle and Sentinel, 1860. Many analyses of Eocene limestones and their resulting soils are given. The emphasis is upon the retention by the soil of the phosphate from the limestone. The various factors resulting in variation are discussed.
11. General view of the medical topography and climate of Camp Sumpter, Andersonville, [Sumter Co.] Georgia, and of the country in the immediate vicinity, in Sanitary memoirs of the War of the Rebellion, vol. 1 [Medical], p. 483-500, Cambridge, Riverside Press, U. S. Sanitary Commission, 1867. A general description of the areal geology of the Confederate Andersonville Prison site is given. Eocene rocks are recognized at the site. A fascinating review of the geology of the whole state is given. Well water is analyzed. "No blame can be attached to the Confederate authorities for the collection of the Federal prisoners at this elevated and healthy locality, which was more salubrious than one half of the territory of South Carolina, Georgia, Alabama, Mississippi, and Louisiana."

JONES, OWEN THOMAS.


JONES, S. PERCY.

1. The geology of the Tallulah Gorge, [Rabun Co.] Georgia: Amer. Geologist, vol. 27, p. 67-75, illus., 1901; discussion [In review] by William Morris Davis: Science, new ser. vol. 13, p. 871, illus., 1901. The valley of the Tallulah River, including the gorge, is described. The metamorphic rocks through which the river flows are described. The gorge is in a quartz schist, trending across the strike. Various theories of the origin of the gorge are outlined. Some problems relating to a capture origin are discussed.

2. Second report on the gold deposits of Georgia: Georgia Geol. Survey Bull. 19, 283 p., illus., 1909. A general discussion of the origin and occurrence of gold is followed by detailed descriptions of the occurrences in the Piedmont and Blue Ridge of Georgia. The gold originates from quartz veins in metamorphic rocks and in placers and in the residual deposits derived therefrom. Nine areas, or belts, are recognized, each of which is discussed in detail.

JONES, WALDO.

1. The monazite bearing sands of the Atlantic beaches: Mineralogist, vol. 17, p. 457-458, illus., 1949. This is a popular account of the occurrence of monazite as a heavy mineral in beach sands. No details are included.

JONES, WALTER BRYAN, 1895-


JORDAN, LOUISE, see also Applin, Esther English Richards, 1, 2; Toulmin, Lyman Dorgan, Jr., 2.

1. (chairman, and others). Mesozoic cross-section, B-B', Beaufort County, S. C. to Highlands County, Fla. Scale, 1 in. to 10 miles, Southeastern Geol. Soc. Mesozoic Committee, 1949. Electric log and lithologic columnar sections are used to correlate the subsurface Lower and Upper Cretaceous rocks of the southeastern Coastal Plain of Georgia.

2. (chairman, and others). Mesozoic cross section, C-C', Toombs County, Ga. to Volusia County, Fla. Scale, 1 in. to 10 miles, Southeastern Geol. Soc. Mesozoic Committee, 1949. Electric log and lithologic column cross sections suggest correlations of Lower and Upper Cretaceous rocks in the subsurface of southeastern Georgia.


4. (and Hendry, Charles Walter, Jr.). [Map of] oil and gas test wells in Florida and adjacent counties of Alabama and Georgia. Scale, 1 in. to 10 miles, Tallahassee, Florida Geol. Survey, 1952. The location and names of wells in many of the Coastal Plain counties are given. No other data are included.

5. Preliminary notes on the Mesozoic rocks of Florida, in A summary of the geology of Florida and a guidebook to the Cenozoic exposures of a portion of the state. Prepared for the field trip of the 44th annual meeting of the Association of American State Geologists, p. 39-45 (‡), illus., 1952. Structure contour maps on the top of the Upper Cretaceous System, include parts of southern Georgia. They are very generalized.

JUHAN, CHARLES DODGE, 1927- see Pruitt, Robert Grady, Jr., 2.

KAISER, EDWARD PECK, 1912-


KAY, GEORGE MARSHALL, 1904-

1. Distribution of Ordovician altered volcanic materials and related clays: Geol. Soc. America Bull., vol. 46, p. 225-244, illus., 1935. Correlation of Appalachian-area Ordovician formations is made on the basis of bentonite layers. Some exposures from northwestern Georgia from the Chickamauga and Little Oak Limestones are described and interpreted. The age of the volcanism is Middle Ordovician.
KEENEY, J. C.

KEARNS, MARGARET M., see Ahrens, Louis Herman, 1.

KEITH, ARTHUR, 1864-1944, see also LaForge, Laurence, 3.
1. Topography and geology of the southern Appalachians: U. S. Cong. 57th, 1st Sess., Sen. Doc. 84, p. 111-122, illus., 1902. A general review of topographic features and their geologic control is given. No new data are included, but the illustrations are spectacular. The Blue Ridge portion of Georgia is included.
4. Outlines of Appalachian structure: Geol. Soc. America Bull., vol. 34, p. 309-380, illus., 1923. The entire Appalachian System is discussed, including that part in Georgia. The nature of the folding, faulting, metamorphism, intrusions, and other physical events are described. The deforming forces have come from the southeastward direction. The physics of the folding and faulting is discussed.
5. Structural symmetry in North America: Geol. Soc. America Bull., vol. 39, p. 321-386, illus., 1928. A generalized discussion of the structural geology of North America includes the Appalachian Mountains and that part of them which is in Georgia. The relationships of the various structural features of the Appalachian Mountains are described. No new data are included.

KELLBERG, JOHN M.
3. (and Grant, Leland Fauntleroy). Coarse conglomerates of the Middle Ordovician in the southern Appalachian Valley: Geol. Soc. America Bull., vol. 67, p. 697-716, illus., 1956. A section near Cisco, Murray Co., is measured and described. It is about 25 feet thick and occurs within the Tellico Formation. The lithology of the pebbles is interpreted. The unit is part of a southward-thinning wedge of conglomerate which is very thick in Virginia. Pebbles range from ¾ to 4 inches in diameter and make up 50-70 percent of the rock which is otherwise red sandstone.
KELLOGG, ARTHUR REMINGTON, 1893-

1. A review of the Archaeoceti: Carnegie Inst. Washington Pub. 482, xv, 366 p., illus., 1936. A complete discussion of the toothed whales includes descriptions, illustrations, and discussions of parts of Basilosaurus cetoides from the Ocala Limestone in Houston County and parts of Zygorhiza kochii and an unknown form from the Ocala Limestone of Crisp County.

KELLY, ARTHUR RANDOLPH, 1900-

1. (and Hurst, Vernon James). Patination and age relationship in south Georgia flint: Amer. Antiquity, vol. 22, p. 193-194, illus., 1957. Some of the Indian artifacts collected from along the lower Chattahoochee River are made from Oligocene Flint River Formation chert. The amount of patination, from the concentration by weathering of iron at the surface, reflects the age of the artifact.

KELLY, JUNEA W., see Eckel, Edwin Clarence, 10.

KEMP, JAMES FURMAN, 1859-1926.

1. Granites of southern Rhode Island and Connecticut, with observations on the Atlantic coast granites in general: Geol. Soc. America Bull., vol. 10, p. 361-382, illus., 1899. Granites of the Atlantic seaboard area, including those of Stone Mountain and Lithonia, despite the great varieties of age, are predominantly biotite-granites and related types. Basic rocks are also present throughout. Might there be some genetic relationship?

KEMPER, C. GERALD, JR., 1936-

1. Kingston Saltpeter [cave] [Bartow Co.]: Georgia Spelunker, vol. 1, no. 3, p. 9, 12 (†), illus., 1957. A brief description of the cave includes a map.

KERR, PAUL FRANCIS, 1897-


2. Attapulagus clay [Decatur Co.]: Amer. Mineralogist, vol. 22, p. 534-550, illus., 1937. The clay mineral is an accumulation of weathered montmorillonite, deposited in shallow water after erosion from the Piedmont during the Miocene Epoch. Clay analyses are included.

3. (and Kulp, John Laurence). Preliminary reports, reference clay minerals: Amer. Petroleum Inst. Proj. 49, 101 p. (‡), illus. incl. geol. map, 1949; revised, 103 p. (‡), 1951. Kaolin from Twiggs Co. and attapulgite from Decatur Co. are used as standard references for various physical and chemical tests used in clay mineralogy. Location sketch maps are included. The various tests are recorded, to be used as reference curves, etc.
KESLER, THOMAS LINGLE, 1908-

1. Sienna ("ocher") deposits of the Cartersville District, [Bartow Co.] Georgia: Econ. Geology, vol. 34, p. 324-341, illus., 1939. Hydrothermal iron-bearing solutions filled fissures which were formed in folded, Lower Paleozoic carbonate rocks. Later, meteoric water deposited the iron as hydrous oxides near and below the contact of the carbonates and the underlying quartzite, and also in the overlying residuum.

2. Structure and ore deposition at Cartersville, [Bartow Co.] Georgia: Amer. Inst. Mining and Metallurgical Engineers Tech. Pub. 1226, 18 p., illus., 1940; ... Trans., vol. 144, p. 276-293, illus., 1941. Examples are given to show that the Shady Formation was replaced in part by iron-ore-bearing solutions and that the solutions were introduced to the carbonates through definite faults and fracture zones in the rocks. Later weathering has resulted in the accumulation of residual ores.


4. Geology and mineral resources of the Cartersville District [Bartow and Cherokee Cos.] Georgia: U. S. Geol. Survey Prof. Paper 224, 97 p., illus. incl. geol. map, 1950; summary in part, with title, Occurrence and exploration of barite deposits at Cartersville, Georgia: Amer. Inst. Mining and Metallurgical Engineers Trans., vol. 184, p. 371-375, illus., 1949. A complete geological description of the area is given. Cambrian metasedimentary rocks and late Carboniferous gneisses are mapped and described. The complex structure is analyzed; folds and faults are common. The Cartersville Overthrust is questioned. Many economic minerals are present, of which barite, manganese, and limonite are the most common.

5. Occurrence and exploration of Georgia's kaolin deposits: Mining Engineering, vol. 8, p. 879-885, illus., 1951; Amer. Inst. Mining and Metallurgical Engineers Trans., vol. 190, illus., 1951; in Problems of clay and laterite genesis, p. 162-177, illus., New York, Amer. Inst. Mining and Metallurgical Engineers, 1952. Kaolin occurs as lenses in Cretaceous deposits near the Fall Line, and is overlain by Eocene deposits. The problems of its origin are reviewed, with its origin as the result of the in situ weathering of feldspar, which had been deposited in alluvial or deltaic conditions, being emphasized.

6. Environment and origin of the Cretaceous kaolin deposits of [central] Georgia and South Carolina: Econ. Geology, vol. 51, p. 541-554, illus., 1956; Georgia Mineral Newsletter, vol. 10, p. 1-7, illus., 1957. The kaolin has resulted from the deltaic, rapid deposition of detrital feldspar from the Piedmont and Blue Ridge areas which then was decomposed to kaolinite, to be deposited in fresh, quiet water in ponds formed by distributaries on the deltas. These ponds were later covered with Cretaceous and younger sediments.

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KEYES, CHARLES ROLLIN, 1864-1942.


KEYES, MARY G.


KIDWELL, ALBERT LAWS, 1919-

1. Mesozoic igneous activity in the northern Gulf Coastal Plain: Gulf-Coast Assoc. Geol. Soes. 1st Ann. Mtg., p. 182-199, illus., 1951. Igneous activity under and around the Coastal Plain is described. Georgia is in the diabase petrographic province. No details are given.
KING, FRANCIS PLAISTED, 1867- see also Yeates, William Smith, 1.

1. A preliminary report on the corundum deposits of Georgia: Georgia Geol. Survey Bull. 2, 133 p., illus. incl. geol. map, 1894; summary by William Marten Brewer, Dixie, vol. 11, no. 4, p. 44-45, 1895. A general discussion of the varieties of corundum and associated minerals is followed by descriptions of occurrences in Georgia. Corundum occurs in basic rocks which have intruded into the metamorphic rocks in a belt from Rabun Co. southwestward to Alabama. Individual occurrences are described. An additional discussion of abrasives in general, including descriptions of those found in Georgia, is added.


KING, HELENA DEAN, 1869-


KING, JAMES A., 5th, 1934-


KING, PHILIP BURKE, 1903-

1. An outline of the structural geology of the United States: Internatl. Geol. Cong. 16th, Washington 1933, Guidebook 28, 57 p., illus., 1932. The major structural features of the Appalachian Mountains, including those in Georgia, are described. No new details are given.

2. (and others). Tectonic map of the United States, 1944. Scale, 1 inch to 2,500,000 inches, 2 sheets, with text, Tulsa, Amer. Assoc. Petroleum Geologists, 1944; summary, Science, vol. 101, p. 577, 1945; Washington Acad. Science Jour., vol. 30, p. 135, 1946. Northwestern Georgia is shown in relation to its structural and tectonic aspects. All the rocks are in the Precambrian and Paleozoic metamorphic belt and the folded Paleozoic belt. Paleozoic intrusive bodies are also noted. Schematic structure contours on top of the Cretaceous of the Coastal Plain are also included.

3. The base of the Cambrian in the southern Appalachians: Amer. Jour. Science, vol. 247, p. 513-530, 622-645, illus., 1949. The Chilhowee Group is composed largely of clastic miogeosynclinal rocks and the underlying Ocoee Group is composed of largely clastic non-volcanic eugeosynclinal rocks. The base of the Cambrian is placed at the contact of the two groups. Many exposures of the Ocoee Group from the Blue Ridge Province in Georgia are described.

5. Tectonic framework of the southeastern United States: Amer. Assoc. Petroleum Geologists Bull., vol. 34, p. 635-671, illus., 1950; in part in Snyder, Frank G., ed., Symposium on mineral resources of the southeastern United States, p. 9-25, illus., 1950. The major tectonic framework of the Appalachian Mountain System, including that part in Georgia, is reviewed and interpreted. Thrust faults and folds are the major features. The Piedmont and Blue Ridge Provinces are composed of igneous-rock intruded metamorphosed eugeosynclinal deposits, whereas the Valley and Ridge Province is made up of miogeosynclinal rocks. The nature of “Appalchia” is discussed, as is the geosynclinal history.


KING, WILLIAM NEPHEW.


KINGMAN, OWEN, see Simmons, Woodrow Wilson, 1.

KINGSLEY, JOHN STERLING, 1854-1929.


KIRKPATRICK, SAMUEL ROGER, 1936-.


2. The geology of a portion of Stewart County, Georgia [Lumpkin SW Quad.]. M. S. Thesis, Emory Univ., 1959.

KLEPPER, MONTIS RUHL, 1915- see Heinrich, Eberhardt William, 2.
KLINE, MITCHELL HEENEY.

KLINEFELTER, THERON ALBERT, 1886-
1. (and others). Hard and soft kaolins of Georgia: U. S. Bur. Mines Rept. Inv. 3682, 21 p. (†), illus., 1943. Chemical, x-ray, spectrographic, D. T. and base exchange analyses, and other tests on kaolins from the Coastal Plain are given. Many tables are included.

KNAEBEL, JOHN BALLENTINE, see Jackson, Charles Freeman, 1.

KNAPPEN, RUSSELL STAFFORD, 1882-


KNOWLTON, FRANK HALL, 1860-1926.

KOENIG, GEORGE AUGUSTUS.

KOLLOCK, PHINEAS MILLER, 1804-1882.
1. Topography of the first congressional district [eastern coastal area] . . . : Medical Soc. State of Georgia Ann. Mtg., Trans., vol. 4, p. 22-27, 1853. An early, cursory description of the topography of southeastern Georgia is given. The sea islands, pine barrens, and [Tifton Upland] are described, as are the common diseases associated with them.

KRUSEKOPF, HENRY HERMAN.

KUEMMEL, HENRY BARNARD, 1867-1945.
KULP, JOHN LAURENCE, *see also* Broecker, W. S., 1; Kerr, Paul Francis, 3; Long, Leon Eugene, 1; Turekian, Karl K., 1.

KUNZ, GEORGE FREDERICK, 1856-1932.
1. *Is the East Tennessee meteorite from Whitfield Co., Georgia?, no. 3 of On some American meteorites*: *Amer. Jour. Science*, 3d ser. vol. 34, p. 473-475, illus., 1887. Speculation is offered that the East Tennessee meteorite may be one which fell in Whitfield Co., was sent to Tennessee, and then "lost sight of."
3. *Gems and precious stones of North America*. 336 p., illus., New York, Scientific Press, 1890. A popular treatise on gem types and occurrences includes those from Georgia. Minerals are classed by groups, and occurrences described. All those in Georgia are from the crystalline rocks in the Piedmont and Blue Ridge.

LADD, GEORGE EDGAR, 1864-
1. A preliminary report on a part of the clays of Georgia: *Georgia Geol. Survey Bull. 6-A*, 204 p., illus., 1898. A general discussion of the nature, composition, and origin of clays is followed by descriptions of specific types of deposits in the state and of specific locations. Sections are measured; analyses are included. All of the deposits described are on the Coastal Plain, and most are in the Fall Line Hills.
2. Notes on the Cretaceous and associated clays of middle Georgia: *Amer. Geologist*, vol. 23, p. 240-249, 1899. The Cretaceous rocks are recognized all along the Fall Line; they are described, as is the enclosed kaolin. Analyses are included.

LADD, HARRY STEPHEN, 1899-

LA FLAMME, JOSEPH CLOVIS KEMNER, 1849-1910.
1. Le docteur Thomas Sterry Hunt [1826-1899]. *Univ. Laval Annuaire* 1892-93, Quebec, 1892.
LA FORGE, LAURENCE, see also Hull, Joseph Poyer Deyo, 2.
1. The structure of the marble belt of Fannin County, Georgia [abs.]: Science, new ser. vol. 27, p. 537, 1908.
2. (and Phalen, William Clifton). Description of the Ellijay Quadrangle [Fannin, Lumpkin, Pickens, Union, Gilmer Cos.]: U. S. Geol. Survey Geol. Atlas U. S., Folio 187, 18 p., illus. incl. geol. map, 1918; also a field edition, 126 p., illus. incl. geol. map, 1913. A complete geologic description of the area is given. Precambrian to Cambrian and “post Cambrian” rocks are mapped and described. Metamorphism, folding, and faulting characterize the area. Much economic material is present, of which gold, copper, iron, and marble are the chief representatives.
3. (and others). Physical geography of Georgia: Georgia Geol. Survey Bull. 42, ix, 189 p., illus., 1925. Extremely detailed descriptions of the various physiographic provinces of Georgia are given.

LAMAR, WILLIAM LUTHER, 1905- see also Collins, William Dennis, 1.
1. Chemical character of the larger public water supplies in Georgia: Amer. Water Works Assoc. Jour., vol. 34, p. 505-512, illus., 1942. Chemical analyses of ground water being used by many large cities in the state are given in tabular form.
2. Industrial quality of public water supplies in Georgia 1940: U. S. Geol. Survey Water-Supply Paper 912, 83 p., illus., 1942. Analyses of ground water from many parts of the state, mostly the Coastal Plain, are included.

LAMB, GEORGE MARION, 1928-
2. Penecontemporaneous deformation in the Silurian Red Mountain Formation [Whitfield Co.]: Georgia Acad. Science Bull., vol. 12, p. 73-75, 1954. Inter- and intra-stratal flow of clastic material is described. It is interpreted as having been moved by gravity before consolidation into rock.

LAMBERT, GUILLIAME, 1818-

LA MOREAUX, PHILIP ELMER, 1920- see also Herrick, Stephen Marion, 1.
1. Geology and ground-water resources of the Coastal Plain of east-central Georgia: Georgia Geol. Survey Bull. 52, xi, 178 p., illus. incl. geol. map, 1946. A general physiographic description is followed by a discussion of the principles of ground water occurrence. Cretaceous to Recent rocks and their water-bearing properties are described. Baldwin, Hancock, Jones, Twiggs, Washington and Wilkinson Cos. are included. Well records and water analyses are given also.
2. Geology of the Coastal Plain of east-central Georgia: Georgia Geol. Survey Bull. 50 — Part 1, p. vi, 1-26, illus., 1946. Cretaceous to Miocene sedimentary rocks along the Fall Line from Twiggs Co. to Washington Co. are described. Sections are measured; fossils are listed.

LANCASTER, FORREST W., see Jahns, Richard Henry, 1.

LAND, WILLIAM J.

LANE, ALFRED CHURCH, 1863-1948.

LANEY, FRANCIS BAKER, 1875-1938, see Emmons, William Harvey, 1.

LANGDON, DANIEL W., JR., 1864-1909, see also Smith, Eugene Allen, 2.
1. Geological section along the Chattahoochee River from Columbus [Muscogee Co.] to Alum Bluff [Fla.]: Georgia Geol. Survey Prog. Rept. 1, 1890-91, p. 90-97, illus., 1891. A very detailed section from the Cretaceous System to the Miocene Series is given. Fossils are listed.

LANGLEY, SAMUEL PIERPONT, 1834-1906.

LA PAZ, LINCOLN, 1897-
1. The distribution of the recognized meteorites of North America: Popular Astronomy, vol. 48, p. 157-165, 205-212, illus., 1940; Soc. for Research on Meteorites Contrib. 2, p. 172-188, illus., 1940. An unusually high concentration of meteorites in the southern Appalachians includes Georgia. A mathematical treatment of the distribution of meteorites in the United States is also given. The finding of meteorites in the search for placer gold in the southeastern region is given as the explanation for the high meteorite concentration, rather than non-random infall, as had been proposed.
LAPPARENT, JACQUES DE, 1883-1948.
1. Sur un constituent essentiel des terres à foulon: Académie des Sciences de Paris Comptes Rendus, vol. 201, p. 481-483, 1935. The mineral name attapulgite is proposed for the clay mineral constituent of the fuller's earth from Decatur County. It is analyzed and shown to be different from montmorillonite, which the clay was thought to be.
3. Défense de l'attapulgite: Société Française de Minéralogie Bull., vol. 61, p. 253-283, illus., Paris, 1938. Detailed analyses, both chemical and x-ray, are given to demonstrate the validity of the mineral attapulgite from Decatur County.

LARSEN, ESPER SIGNIUS, JR., 1876-1961.

LARSEN, ESPER SIGNIUS, 3d, 1912-1961.

LARSON, LEWIS H., JR., see Hurst, Vernon James, 32.

LASAULX, ARNOLD CONSTANTIN PETER FRANZ VON, 1839-1886.

LAUNER, PHILIP JULES, 1922-
1. Regularities in the infrared absorption spectra of silicate minerals: Amer. Mineralogist, vol. 37, p. 764-784, illus., 1952. Internal structures of various silicates are observed to have predictable effects upon absorption of infrared light. Kyanite from Clarksville, Habersham Co., is one of the standards used to check the technique.

LAURENCE, ROBERT ABRAHAM, 1908- see also Simmons, Woodrow Wilson, 1; Spain, Ernest Lynwood, Jr., 1.
2. Geologic features of the southeastern states: Symposium on geology as applied to highway engineering Proc. 7th, p. 45-47 (1), North Carolina State College [1956]. An extremely brief survey of the types of construction materials and problems to be encountered in the various physiographic provinces is given. No specific locations in Georgia are included, however.

LAURENCICH, LAURA, see Howe, Henry van Wagenen, 4.

LE CONTE, JOSEPH, 1823-1901, see Dutton, Clarence Edward, 1.

LE GRAND, HARRY ELWOOD, 1917- see also Herrick, Stephen Marion, 3, 4.

1. Sheet structure, a major factor in the occurrence of ground water in the granites of Georgia: Econ. Geology, vol. 44, p. 110-118, illus., 1949. Sheeting joints, generally subparallel with the surface, control the circulation of ground water. Valleys, where the sheeting forms pseudosynclinal basins, are better ground water sources than are hills or slopes.

2. (and Furcron, Aurelius Sydney). Geology and ground-water resources of central-east Georgia: Georgia Geol. Survey Bull. 64, ix, 174 p., illus. incl. geol. map, 1956. A general description of the occurrence of ground water in crystalline and sedimentary rocks is followed by detailed descriptions of well-occurrences in those counties which lie athwart the Fall Line and which lie eastward from the Savannah River. Crystalline, Cretaceous, and Cenozoic rocks are described and mapped; analyses are included.

LE GRAND, JOHN R., see Teague, Kefton Harding, 1.

LEHMANN, ULRICH, see Beurlen, Karl, 1.

LEIDY, JOSEPH, 1823-1891, see also Harlan, Richard, 1; Owen, Richard, 2.


3. A memoir on the extinct sloth tribe of North America: Smithsonian Contribs. Knowledge, vol. 7, art. 5, 68 p., illus., 1855. Megatherium mirabile from Skidaway Island in Chatham Co. is illustrated and described in great detail.

4. Description of vertebrate fossils, in Post-Pleistocene fossils of South Carolina, by Francis Simmons Holmes, p. 98-122, illus., Charleston, South Carolina, Russell and Jones, 1860. Teeth of Equus are described and illustrated. Some are from the [Pleistocene] of Chatham County.


LEIGHTON, MORRIS MORGAN, 1887-


LEITH, CHARLES KENNETH, 1875-1956, see also Van Hise, Charles Richard, 3.


LEMOYNE DE MORGUES, JACQUES.


1. (and Slanin, Boris). A statistical study of the meteoric falls of the world as of date 1941 January 1: Popular Astronomy, vol. 49, p. 151-159, 206-214, 551-560, 1941. Tables present much statistical data on falls of the world, Georgia included. For instance, 4 aerolites and 13 siderites are known, 4 having been observed to fall. The siderite concentration in Georgia is very high (4th in the nation).

2. (and others). Catalog of provisional co-ordinate numbers for the meteoric falls of the world: Univ. New Mexico Pub. Meteoritics, vol. 1, xiv, 54 p., 1946. Meteoritic falls of the world are catalogued by a seven digit number. The first four are the longitude and the last three the latitude. Italicized numbers are used for east longitude and south latitude. Sixteen meteorites from Georgia are included.


6. (and Rowland, Gerald Lee). (An) index catalog of the multiple meteoritic falls of the world: Meteoritics, vol. 1, p. 440-450, 1956. The Dalton, Whitfield Co., and the Pitts, Wilcox Co. meteorites are included. The latter was observed to fall. Each had a "few" or "several" members.

LESHER, CARL EUGENE, 1885-
1. [Map of] State of Alabama and part of Georgia [showing] coal fields and producing districts. Scale, 1 inch to 1,000,000 inches, U. S. Geol. Survey, 1919. The map shows the areas in Dade, Chattooga, and Walker Cos. which are underlain by coal-bearing strata; a small area in Walker Co. is the only coal-producing region.

LESLEY, J. PETER, 1819-1903.

LESQUEREUX, LEO, 1806-1889.

LESTER, JAMES GEORGE, 1897- see also Allen, Arthur Thomas, Jr., 2, 3, 5, 7; Cofer, Harland Elbert, Jr., 6; Rogers, Wiley Samuel, 2.
2. Garnet segregations in granite gneiss of DeKalb County, Georgia: Jour. Geology, vol. 47, p. 841-847, illus., 1939. Almandine garnet segregations in granite gneiss are described. They are a result of convection currents in the magma and were broken and offset by tangential forces acting on the mass before final consolidation was effected. Most are on Mount Arabia and Little Stone Mountain.
3. Inclusions in muscovite from Mitchell Creek Mine, Upson County, Georgia: Amer. Mineralogist, vol. 31, p. 77-81, illus., 1946. Muscovite, in a pegmatite in augen gneiss, contains biotite crystals within it. Fluor-apatite is often found embedded in the muscovite, as is pyrite. Milky and clear quartz and microcline are also found as inclusions in the muscovite.


5. (The): Geiger-Mueller counter in geologic work, in Short contributions to the geology, geography, and archaeology of Georgia: Georgia Geol. Survey Bull. 56, p. 112-117, illus., 1950. Examples of the detection of geologic contacts by differential radio-activity are taken from Georgia. Faults and shear zones were examined as were the boundaries of monazite-bearing sands.


LEUCHS, KURT.


LEVORSEN, ARVILLE IRVING, 1894-1965.


LEVY, LOUIS EDWARD, 1846-.

LEWIECKI, WALTER T., see also Peyton, Alexander L., 1.

1. Georgia iron deposits, Cherokee, Bartow, Floyd, and Polk Counties, Part 1: U. S. Bur. Mines Rept. Inv. 4178, 28 p. (†), illus., 1948. Limonite occurs in residual clay deposits of Cambrian limestones. Occurrences of the ore in various properties are described, and analyses of numerous drill holes are included. Some specular hematite is also known to occur at the contact of the limestone and the underlying Weisner Sandstone.


LEWIS, GEORGE EDWARD, 1908-


LEWIS, HENRY CARVILL, 1853-1888.


LEWIS, JOSEPH VOLNEY, 1869- see also Pratt, Joseph Hyde, 2.

1. Origin of the peridotites of the southern Appalachians: Elisha Mitchell Scientific Soc. Jour., vol. 12, pt. 2, p. 24-37, illus., 1895. Ultrabasic intrusive rocks of several varieties occur in lenticular-shaped masses, concordant with the planes of foliation in the gneissic country rock. They are plutonic. Much detail is given from the peridotite belt in general, north Georgia included.

2. Corundum of the Appalachian crystalline belt: Amer. Inst. Mining Engineers Trans., vol. 25, p. 852-896, 1896. Corundum occurrences from Rabun and Union Cos. are described. The corundum occurs in basic igneous rocks, such as peridotite and amphibolite, which have intruded the metamorphic rocks of the area. It is also reported from other counties in the Blue Ridge and Piedmont.


LIBBY, WILLARD FRANK, 1908-

1. Chicago radiocarbon dates V [Hall Co.]: Science, vol. 120, p. 733-742, 1954. Charcoal from an Indian site at Booger Bottom is 2104±140 years old.

LIEBER, OSCAR MONTGOMERY, 1830-1862.

1. The copper veins of the south: Mining Mag., vol. 7, p. 367-371, 1856. The sulphide vein at the Waltruss Mine in Polk Co. is used as an example, along with others from elsewhere, of the intrusive nature of veins. Gamble's Mine is cited as a place where secondary enrichment of copper and iron may be present. An exhortation for deeper exploration is made.
LINCOLN GOLD MINING COMPANY.
1. The Lincoln Gold Mining Company [Lincoln Co.], capital, ... $1,000,000. [Prospectus]. 15 p., illus., New York, George F. Neshitt, 1854 [includes a geological report by Charles Thomas Jackson].

Gold-bearing quartz veins occur in the schists of the area. Their occurrence and distribution are described. Barite is a common mineral in the veins also.

LINDGREN, WALDEMAR, 1860-1939.
1. The gold deposits of Dahlonega, [Lumpkin Co.] Georgia: U. S. Geol. Survey Bull. 293, p. 119-128, illus., 1906. The general geology of the region is discussed. The gold occurs in quartz veins near the contact of granite with mica schist.

LINES, EDWIN FULLER, 1875- see Fuller, Myron Leslie, 1.

LINTON, EDWARD.
1. On the formation of new ravines [Baldwin Co.]: Amer. Geologist, vol. 21, p. 329-330, 1898. The ravine described by Lyell in 1846 was, at that time, large and only 20 years old. This same ravine is described in 1898, 52 years later. It has grown proportionately less, due to the growth of trees along the rim.

LIPPS, EMMA LEWIS, 1919-

LITTLE, GEORGE, 1838-1924, see also Janes, Thomas P., 1; New England Company, 1; Whitney, Josiah Dwight, 1.
1. [First] Report of progress of the mineralogical, geological and physical survey of the State of Georgia. 30 p., Atlanta, J. H. Estill, 1874. In what otherwise is a report of work completed or in progress are analyses of various mineral resources of the state. Most are from the Paleozoic terrane in northwestern Georgia or from the Piedmont.

4. What makes Georgia an independent state? Atlanta, December 28, 1877 [not seen].

5. Catalogue of ores, rocks, and woods, selected from the Geological Survey collection of the State of Georgia, U. S. A., with a description of the geological formations. 16 p., Atlanta, James P. Harrison, 1878. This catalog accompanied the Georgia exhibit in the Paris Exposition. A cursory review of the geology of the state is included. No details are given.


LLOYD, A. M.

2. Georgia bauxite: Dixie, vol. 9, no. 4, p. 51-52, illus., 1893. Bauxite from Floyd, Cobb, Polk, and Bartow Cos. is discussed. Very little new data are included.

LLOYD, STEWART JOSEPH, 1881-1959.


3. Geology of the Coosa River dams [Floyd Co.]: Alabama Acad. Science Jour., vol. 28, p. 35-38, 1958. The area in Georgia which will be inundated by backwaters from dams on the river lies along the Coosa River in Conasauga Shale. No leakage is anticipated.

LOBECK, ARMIN KOHL, 1886-1958.
1. A physiographic diagram [map] of the United States. Scale, 1 inch to 3,000,000 inches, Chicago, A. J. Nystrom, 1921.

2. Physiographic diagram of the United States. Scale, 1 inch to about 150 miles, 2 broadside sheets, with map and text, New York, Geographical Press, 1922; also 1957 revised edition. A generalized physiographic map of the United States includes Georgia.


4. Atlas of American geology: 92 sheets, 8 ½ x 11 inches (‡), New York, Geographic Press, 1932. A series of illustrations of the relationships between geology and topography are given. Several are from Georgia, particularly illustrating the Coastal Plain, Piedmont, and Blue Ridge.
5. Geologic map of the United States, with text on the reverse side. Scale, 1 inch to 5,000,000 inches, New York, Geographic Press, 1941.


8. Physiographic provinces of North America. Physiographic map and diagram of North America, with brief notes. Scale 1 inch to about 12,000,000 inches, New York, Geographic Press, 1948.

LOEBLICH, ALFRED RICHARD, JR., 1914-
1. (and Tappan, Helen Niña). Correlation of the Gulf and Atlantic Coastal Plain Paleocene and Lower Eocene formations by means of planktonic Foraminifera: Jour. Paleontology, vol. 31, p. 1109-1137, illus., 1957. No details from Georgia are included, but the formations from Georgia are correlated with those from elsewhere on a time-rock chart.

LOHR, EDWIN WALLACE, 1897- see also Collins, William Dennis, 1.
1. (and others). The industrial utility of public water supplies in the south Atlantic states, 1952: U. S. Geol. Survey Circ. 289, iv, 162 p., illus., 1953. In an otherwise engineering report are included analyses of ground water from many areas in Georgia.


LOMBARD, AUGUSTIN E.

LONG, LEON EUGENE, see also Kulp, John Laurence, 1; 2.
1. (and Kulp, John Laurence, and Eckelmann, Frank Donald). Chronology of major metamorphic events in the southeastern United States: Amer. Jour. Science, vol. 257, p. 585-603, illus., 1959. Potassium-argon dating of mica from many places in the southeastern United States, including Georgia, reveal that large portions appear to have been metamorphosed about 1,000 million years ago, with a great deal occurring later, at 350 million years ago, and some younger, about 230-310 million years ago. Samples come from Fannin, Elbert, DeKalb and Gwinnett Counties.

LONGWELL, CHESTER RAY, 1887-

LONSDALE, WILLIAM.


LOOMIS, FREDERICK BREWSTER, 1873-1937.

1. Physiography of the United States. viii, 350 p., illus., Garden City, Doubleday, Doran and Co., 1937. A textbook includes brief descriptions of the general physiography of Georgia. Little detail is included.

LORD, NATHANIEL WRIGHT.


LOUGHLIN, GERALD FRANCIS, 1880-1946.


LOUGHRIDGE, ROBERT HILLS, 1843-1917.


LOVE, SAMUEL KENNETH, 1903- see Lohr, Edwin Wallace, 2.

LOVERING, THOMAS SEWARD, 1896-


LUCAS, FREDERICK AUGUSTUS, 1852-1929.


LUDLUM, ALBERT CLAUDE, 1867-1928.

LULL, RICHARD SWANN, 1867-1957.


LUMPKIN CHESTATEE FLUMING AND MINING COMPANY.

1. The gold placers of northern Georgia. Prospectus of the Lumpkin Chestatee Mining Company. 14 p., Washington, D. C., Joseph L. Pearson, 1867. A cursory description of the gold placers and of the gold in the saprolite is included. Extracts from reports of William Phipps Blake and Charles Thomas Jackson are included. The plans to divert Chestatee River water and mine the dry stream bottom are outlined.

LUND, ERNEST HOWARD, 1915- see Cazeau, Charles J., 2.

LUSK, TRACY WALLACE, see St. John, F. B., Jr., 1.

LYDEKKER, RICHARD, 1849-1915.

1. Catalogue of the fossil Mammalia in the British Museum ... Part 4 . . . . vii, 233 p., illus., London, British Museum Natural History, 1886. Remains of Elephas columbi, the type specimen, from Glynn Co., are described along with fragments from other places. All are from Pleistocene rocks.

LYELL, SIR CHARLES, JR., 1797-1875.

1. On the Tertiary formations and their connexion with the chalk in Virginia and other parts of the United States: Geol. Soc. London Proc., vol. 3, p. 735-742, 1842; Geologist 1842, p. 213-218, London, 1842. Various Tertiary exposures along the Atlantic Coastal Plain are visited and described. The Eocene formations at Shell Bluff and vicinity, along the Savannah River, are included. Fossils are listed. Subdivisions of the Eocene are suggested.

3. Notes on the Cretaceous strata of New Jersey and other parts of
the United States bordering the Atlantic: Geol. Soc. London Quart.
Jour., vol. 1, p. 55-60, 1845. The strata at Shell Bluff, Burke Co.,
are considered to be Eocene rather than Cretaceous, although
Cretaceous fossils are noted from somewhere in Georgia [probably
from along the Chattahoochee River].

4. Observations on the white limestones and other Eocene or older
Jour., vol. 1, p. 429-442, illus., 1845. The recognition of Eocene
strata between Miocene and Cretaceous beds is made on the basis
of the fossil contents of each. Sections on the Savannah River are
described; fossils are listed and some are illustrated and described
by Edward Forbes.

5. Travels in North America with geological observations on the
United States, Canada, and Nova Scotia. 2 vols., 316, 272 p., illus.
incl. geol. map, London, John Murray, 1845; 2d ed. 1855; also a
German edition, Halle, 1846; also New York, Wiley and Putnam,
1845; another ed, New York, J. Wiley, 1842; 2d ed., New York,
Wiley and Halsted 1856; also numerous other editions. Many
aspects of Georgia geology are cursorily described. Tertiary strata
of the Coastal Plain, Pleistocene mammals, and general Tertiary
paleontology and stratigraphy of the Atlantic Coastal area are
included. A geological map of the United States includes Georgia.

6. [On the Eocene of Georgia and Alabama] [abs.]: Amer. Jour.
Science, 2d ser. vol. 1, p. 313-315, 1846.

7. On the newer deposits of the southern states of North America:
Brief descriptions of various Cenozoic formations from several
places on the Georgia Coastal Plain are given. The fossiliferous,
terrestrial Pleistocene beds are mentioned, as are the underlying
Pleistocene marine beds. No Miocene rocks are noted; the Eocene
rocks are extensive.

8. A second visit to the United States of America. 2 vols., 273, 288 p.,
New York, Harper and Bros., London, Murray, 1849. A description,
both geological and paleontological, of the area around Glynn Co.
is included, as is a geological description of the route along the
Fall Line from Savannah to Columbus.

LYONS, PAUL LIGHTNER, 1911-

18, p. 33-43, illus., 1950. A small-scale Bouguer gravity anomaly
map of the United States includes Georgia. The Appalachian trends
are clearly defined, whereas the pattern of the southern part of the
state resembles that of Florida. Few details are recognizable
because of the scale.

MC CAIN, LUCILE.

MC CALLEY, HENRY, 1852-1904.

1. Bauxite mining: Science, vol. 23, p. 29-30, 1894. A cursory description of the bauxite ore in Floyd Co. is included. It is residual, and it decreases in quality with depth.

2. Report on the valley regions of Alabama (Paleozoic strata) Part 1, the Tennessee Valley region. xvii, 436 p., illus., Alabama Geol. Survey, 1896; Part 2, xxii, 862 p., illus., 1897. A detailed description of the geology of northeastern Alabama includes references to a few measured sections in nearby northwestern Georgia.

MC CALLIE, SAMUEL WASHINGTON, 1856-1933, see also LaForge, Laurence, 3; Swartz, Joel Howard, 1; Torbert, John B., 1; Yeates, William Smith, 1.

1. A preliminary report on the marbles of Georgia: Georgia Geol. Survey Bull. 1, 87 p., illus., 1894; 2d ed., revised and enlarged, 126 p., illus., 1907. A general discussion of the marble industry, the origin of marble and limestone, and geology of the northern part of Georgia is followed by descriptions of individual deposits in counties. Sections are measured; analyses are made.

2. A preliminary report on a part of the phosphates and marls of Georgia: Georgia Geol. Survey Bull. 5-A, 98 p., illus., 1896. A review of the nature of the occurrence of phosphate-bearing deposits, especially those in South Carolina and Florida, is followed by a description of occurrences in the counties bordering Florida and the Atlantic Ocean. Not much phosphate is present. It is sedimentary and has an organic origin. Most occurs in limestones, and some is residual.

3. Gold deposits of Georgia. 17 p., illus., Atlanta; George W. Harrison, 1897. A complete description of the history, distribution, occurrence, and technology of the gold deposits in the Blue Ridge and Piedmont areas of Georgia includes a small-scale map.

4. A preliminary report on the artesian-well system of Georgia: Georgia Geol. Survey Bull. 7, 214 p., illus., 1898. Artesian systems, the word being used in the broadest sense, are described. A brief review of the stratigraphy of the Coastal Plain is followed by tabular and other descriptive data of artesian (or deep) wells. Analyses are included as are the logs of some of the wells.

5. A preliminary report on a part of the iron ores of Georgia—Polk, Bartow, and Floyd Counties: Georgia Geol. Survey Bull. 10-A, 190 p., illus., 1900. Limonite and hematite occur as residual concentrates in pockets and irregular geodes in the residuum of the Cambrian and Cambro-Ordovician limestones. Individual occurrences are described; analyses are included.

6. Notes on fossil iron ores of [northwestern] Georgia: Engineering and Mining Jour., vol. 70, p. 757-759, illus., 1900. A general discussion of the occurrence of the iron-bearing beds in the Silurian rocks of Dade, Walker, and Chattooga Cos., is given. The westward increase in volume of these beds is noted as is their stratigraphic position.
7. Some notes on the brown iron-ores of Georgia: Engineering and Mining Jour., vol. 69, p. 255-256, illus., 1900. The deposits of residual limonite in northwestern Georgia are cursorily described. No new data are included. Most come from Polk and Bartow Counties.


9. (A) preliminary report on roads and road-building materials of Georgia: Georgia Geol. Survey Bull. 8, 264 p., illus., 1901. A general discussion regarding road construction is followed by a description of various kinds of rock which can be used. Occurrences of different kinds in each county are then described.

10. Some notes on the trap dikes of Georgia: Amer. Geologist, vol. 27, p. 133-134, illus., 1901. Diabase dikes from the Piedmont area are described petrographically and geographically. They are thought to be Jurassic or Triassic in age.

11. The Ducktown copper mining district: Engineering and Mining Jour., vol. 74, p. 439-440, illus., 1902. A portion of Fannin Co. is included. A general description of the geology and the mineral resources of the area is given. The ore occurs in veins in igneous-intruded metamorphosed sedimentary rocks. Chalcopyrite is the chief mineral.


14. (A) preliminary report on the coal deposits of Georgia: Georgia Geol. Survey Bull. 12, 121 p., illus. incl. geol. map, 1904. Coal occurs in the Pennsylvanian rocks of Dade, Chattooga, and Walker Counties. It occurs preserved in the troughs of synclines. Individual deposits are described; many analyses are included, and sections are measured.

15. Experiment relating to problems of well contamination at Quitman, [Brooks Co.] Ga.: U. S. Geol. Survey Water-Supply Paper 110, p. 45-54, illus., 1905. The general geology of the area, as well as a description of the occurrence of ground water, is included in the discussion of an engineering experiment.

17. Stretched pebbles from the Ocoee Conglomerate [Gilmer Co.]: Jour. Geology, vol. 14, p. 55-59, illus., 1906. A narrow belt of stretched pebble-bearing conglomerate interbedded with mica schist is described. Both quartz and feldspar make up the pebbles. Each type is described and analyzed.

18. Blowing springs and wells of Georgia, with an explanation of the phenomena: Science, new ser. vol. 25, p. 226-229, 1907. Air is drawn in or exhaled from springs and wells. The Grant Blowing Spring, in Catoosa Co., is a cave responding to differences in barometric pressure. Others, in Thomas Co., draw air inward only. The inflow of the air is related to air friction on fast-moving water flowing through the wells.

19. Some notes on schist-conglomerate occurring in [Lumpkin Co.] Georgia: Jour. Geology, vol. 15, p. 474-478, illus., 1907. Boulders and pebbles of various sizes, composed mostly of quartz with a little mica, occur in a ground mass of quartz-biotite schist. The schist conglomerate is enclosed in biotite schist and diorite schist.

20. (A) preliminary report on the underground waters of Georgia: Georgia Geol. Survey Bull. 15, 370 p., illus. incl. geol. map, 1908. A general discussion of the occurrence of ground water is followed by a brief description of the physiography and general geology of Georgia. A discussion of wells throughout the state includes many analyses. Fossil lists from numerous places on the Coastal Plain are included in the appendix.

21. Report on the fossil iron ores of Georgia: Georgia Geol. Survey Bull. 17, 199 p., illus., 1908. A general discussion of Silurian iron-bearing rocks includes those from northwestern Georgia. Details of stratigraphy and distribution of the ore in Georgia are included. Individual deposits in various counties are described. The replacement and sedimentary theories of ore origin are discussed, with evidence drawn from Georgia; the replacement theory seems better. Analyses are included.


23. (The) Pickens County meteorite: Science, new ser. vol. 30, p. 772-773, 1909. A detailed microscopic description and a chemical analysis of this 14-ounce stony meteorite are given.

24. (and Veatch, Jethro Otto). (A) preliminary geological map of Georgia. No scale, [about 15 miles per inch], Georgia Geol. Survey, 1908; in Georgia Geol. Survey Bull. 18, 1909.

25. Georgia ocher mining and treatment: Mining World, vol. 33, p. 1225-1226, illus., 1910. This is a very generalized summary of the ocher deposits of the Cartersville area, Bartow County. The ocher occurs within cracks of the shattered Weisner Quartzite and in the residual clays derived therefrom. Analyses are included.

26. (A) preliminary report on the mineral resources of Georgia: Georgia Geol. Survey Bull. 23, 208 p., illus., 1910; revised, 164 p., illus., 1926. Each of the mineral resources of Georgia is discussed in a cursory way. Analyses are included.
27. (A) second report on the public roads of Georgia: Georgia Geol. Survey Bull. 24, 36 p., illus., 1910. Statistical data are followed by brief descriptions of some of the rock units around the state which are or could be used for road construction.

28. Bauxite deposits of southern Georgia: Engineering and Mining Jour., vol. 91, p. 1050, illus., 1911. Pisolitic bauxite, widely but sparsely scattered in Upper Cretaceous rocks, associated with kaolin, from Wilkinson and nearby counties, is described and analyzed.

29. Handbook of mineral resources of Georgia. 37 p., illus., Atlanta, Georgia Geol. Survey, 1911; revised, 48 p., illus., 1918; third edition, 48 p., illus., 1923. This is a small, pocket-sized book reviewing, in a popular manner, the mineral resources of the state.

30. (A) preliminary report on drainage investigations in Georgia: Georgia Geol. Survey Bull. 25, 123 p., illus., 1911. Descriptions of swamps in Georgia are included. The area of swamps in Georgia is exceeded only by that of Florida of all the Atlantic and Gulf states. The geological conditions leading to swamps are described.

31. The ocher deposits of [Bartow Co.] Georgia: Mines and Minerals, vol. 33, no. 1, p. 46-47, illus., 1912. A cursory description of the ocher deposits of the area is given, along with a discussion of the mining techniques and economics. It occurs in the fractures of the Weisner Formation and in the overlying residual clay. No new data are included.

32. A preliminary report on the mineral springs in Georgia: Georgia Geol. Survey Bull. 20, 190 p., illus., 1913. A general discussion of the nature and origin of mineral water from springs is followed by an account of their occurrence in Georgia. Analyses are included. Most of the springs are in the northwestern part of the state.

33. Outlook for the gold-mining industry of Georgia: Mining and Engineering World, vol. 38, p. 22-23, illus., 1913. A cursory description of the occurrence of gold in the Piedmont and Blue Ridge of Georgia is given. No new large bodies are likely to be discovered, but property purchasing is recommended as the prices are low.

34. High potash-bearing slates in [Bartow Co.] Georgia: Engineering and Mining Jour., vol. 104, p. 643, 1917. A slate body in a belt six miles long and three hundred feet thick, near Whites Station, is shown to contain an abnormally high potash content and is recommended as a source of ore. It is analyzed.

35. Notes on the geology of Georgia: Jour. Geology, vol. 27, p. 165-179, illus., 1919; Georgia Geol. Survey Bull. 39, p. 72-85, illus., 1922. A cursory description, with generalized columnar sections and a geological map, of Precambrian to Recent rocks is given.


38. The mineral resources of Georgia: Manufacturer's Record, vol. 86, no. 24, pt. 2, The south's development, p. 369-373, illus. incl. port., 1924. This is a cursory review of the various mineral products of the state and some of the highlights of their occurrence. No new data are included.


MC CLAIN, DONALD SCOFIELD, JR., 1925-


2. Oil tests in [Coastal Plain] Georgia: Georgia Geol. Survey Circ. 3, map, no scale, and text, 1953. A small-scale map shows the locations of many wells drilled in the Coastal Plain along with the total depth of each. The text gives pertinent data in tabular form.

3. Gravity exploration in Baker County, Georgia: Georgia Mineral Newsletter, vol. 7, p. 20-23, illus., 1954. A gradual decrease, from north to south, in the isogal contours is interpreted as being due to the increasing depth to the basement complex. The local anomaly super-imposed upon this pattern is due to water-filled limestone. Small-scale maps are included.


MC CUTCHEON, AUGUST R.

MC DONALD, P. B.
1. Kaolin mining operations in the south: Mining and Engineering World, vol. 40, p. 281-282, illus., 1914. An extremely cursory description of the occurrences of kaolin in the Coastal Plain of the United States includes those of Georgia. No new information is included.

[MC ELRATH, THOMAS, 1807-1888].

MC FALL, RUSSELL P.
1. Gem hunter's guide. (Revised ed.) 187 p., illus., Chicago, Illinois, Science and Mechanics Pub. Co., 1951; 2d revised ed., 188 p., illus., 1958; originally published 1946. Tables of locations of gem minerals follow a general discussion of the origin and occurrence of gems in general. Many gems are reported from Georgia, though specific locations are very nebulous.

MAC FARLANE, JAMES, 1819-1885.
1. An American geological railway guide .... 216 p., illus., New York, D. Appleton and Co., 1879; 2d ed., 426 p., illus., 1890. An account is given of the type of rocks at each railroad station in the nation, those in Georgia included. Few details are included, however.

MC GEE, EMMA R., 1865-

MC GEE, W J, 1853-1912.
1. Carte géologique des États-Unis d'Amérique donnant la distribution actuellement connue des groupes géologiques. Scale, 1:7,000,000, [n.d.] [n.p.].
4. The southern extension of the Appomattox Formation: Amer. Jour. Science, 3d ser. vol. 40, p. 15-41, 1890. This formation [post-Miocene, pre-Pleistocene] is described from many locations on the Coastal Plain of Georgia and elsewhere. It overlaps onto the Piedmont area in places. It is largely an orange, pebbly, clayey sand, composed of the immediately underlying rocks. It underlies Pleistocene material and overlies many units, including Miocene. Its relations to the overlying and underlying material in different parts of the state are discussed. It is a littoral or sub-littoral deposit.
5. The Lafayette Formation: U. S. Geol. Survey Ann. Rept. 12, pt. 1, p. 347-521, illus., 1891. A generalized description of the topography and geology of the Coastal Plain includes that part in Georgia. The Lafayette Formation is upper Tertiary in age as it lies on most of the other Coastal Plain formations but is often hard to distinguish. Many exposures in Georgia are described.


MC GILL, JOHN THOMAS, 1921-
1. Map of coastal landforms of the world: Geographical Review, vol. 48, p. 402-405, illus., 1958. A large map of the world shows the Georgia coast to be part of that which has recently emerged due to isostatic rebound. Coastal dunes are at the seaward edge.

MC GILL, WILLIAM MAHONE, 1897-

MC GLAMERY, WINIFRED.
1. Middle Oligocene coral reefs in the Gulf Coastal Plain [Decatur Co.] [abs.]: Alabama Acad. Science Jour., vol. 6, p. 23, [1935].

MC INTOSCH, FRANK KENYON, see Ballard, Thomas Jamey, 2.

MC KEE, EDWIN DINWIDDIE, 1906-
1. (and others). Paleotectonic maps of the Triassic System: U. S. Geol. Survey Misc. Geol. Investigations Map I-800, 33 p., illus. incl. geol. maps, 1959. An atlas of maps with text shows the nature of the Triassic rocks below the Coastal Plain. Clastic rocks occur in the southwestern area; they are over 1000 feet thick.

MC KELVEY, VINCENT ELLIS, 1916-
1. (and Balsley, James Robinson, Jr.). Distribution of coastal black-sands in North Carolina, South Carolina, and Georgia as mapped from an airplane: Econ. Geology, vol. 43, p. 518-524, illus., 1948. Black sands diminish in abundance northward, and their distribution is in part related to the configuration of the shoreline. They are on beaches facing the open sea only.

MC KENNEY, J. WILSON.

MC KINLEY, WILLIAM C.
1. The gems of Georgia: Mineralogist, vol. 3, no. 1, p. 44-45, 1935. This is a popular account of the various types of gem minerals which are known from Georgia. No details are included.

MAC LAREN, JAMES MALCOLM.
1. Gold, its geological occurrence and geographical distribution. xxiii, 687 p., illus., London, The Mining Journal, 1908. A brief, cursory description of the Georgia gold fields, as a part of the whole Appalachian district, is given.

MC LAUGHLIN, DONALD HAMILTON, 1891-

MC LAUGHLIN, R. J. W.
1. The geochemistry of some kaolinitic clays: Geochemica et Cosmochimica Acta, vol. 17, p. 11-16, illus., London, 1959. Numerous clays, including kaolinite from Twiggs Co., are examined chemically for various cations in the sand and silt fractions. Titanium and zirconium seem to be the most persistent elements regardless of grain size.

MC LEAN, JAMES DOUGLAS, JR.
1. A summary of the guide fossil Foraminifera of the Atlantic Coastal Plains between New Jersey and Georgia. 3 sheets, Alexandria, Va., [priv. pub.] 1949; revised, McLean Foram. Lab. Rept. 1, 6 p., 1953; correction with title, Cibicides or Eponides cocoaensis: Jour. Paleontology, vol. 25, p. 534-535, 1951. A chart lists the Foraminifera characteristic of the various stratigraphic units on the Atlantic Coastal Plain. Eocene rocks only are correlated in Georgia.
2. Later Tertiary foraminiferal zones of the Gulf Coast. 20 p. (†), [priv. pub.] [1950]. A catalogue of the foraminiferal zones and the species known from them includes those from Georgia. The Oligocene Flint River Formation is in the Lepidocyclina (Eulepidina) and L. mantelli zones.
MACLURE, WILLIAM, 1763-1840, see also Marcou, Jules, 3.


MAC NEILL, FRANCIS STEARNS, 1909-

1. (The) Coastal Plain of Georgia: Southeastern Geol. Soc. [Guidebook] Field Trip 2, p. 3-5 (†), illus., 1944. An extremely cursory review of the geology of the Coastal Plain, preliminary to a field trip, is given.


5. Correlation chart for the outcropping Tertiary formations of the eastern Gulf region: U. S. Geol. Survey Oil and Gas Investigations Prelim. Chart 29, 1947. A time-rock chart shows the formations in the Coastal Plain of Georgia correlated with those of adjacent and nearby states. A brief text is included.


MC VAUGH, ROGERS, 1909-

1. The vegetation of the granitic flat-rocks of the southeastern United States: Ecol. Monographs, vol. 13, p. 119-166, illus., 1943. The topography of great areas of granitic rocks in the Piedmont is described. Special emphasis is placed upon the flora which is present. Most of the flora has affinities with more western flora, in the Ozarks and Texas, suggesting that the migration was eastward after the Cretaceous Period.

MALLORY, J. M., see also Maynard, Thomas Poole, 7.

1. (and Maynard, Thomas Poole). Geological map showing mineral resources along Central of Georgia Railway. Scale, 1 inch to 10 miles, Central of Georgia Railway, Industrial Dept., 1923.

MANSFIELD, WENDELL CLAY, 1874-1939.

1. Stratigraphic significance of Miocene, Pliocene, and Pleistocene Pectinidae in the southeastern United States: Jour. Paleontology, vol. 10, p. 168-192, illus., 1936. A brief resume of the stratigraphy of these deposits, with the distribution of Pecten within them, is given. Only Pecten-bearing Miocene beds are present along the Atlantic coast of Georgia. These beds are correlated with those of the neighboring states. Three species of Pecten are present in the Georgia beds.

MARBUT, CURTIS FLETCHER, 1863-1935.

1. (and others). Soils of the United States (edition, 1913): U.S. Dept. Agriculture Bur. Soils Bull. 96, 791 p., 1913; revision of Bulls. 55 and 76. The soils of the various physiographic provinces of the United States, including those in Georgia, are described, with considerable emphasis upon the relation of the soil to the parent rock.

MARCOU, JOHN BELKNAP,? -1912.


MARCOU, JULES, 1824-1898.

1. Geological map of the United States and British Provinces of North America, with an explanatory text . . . . 92 p., illus. incl. geol. map, Boston, Gould and Lincoln, 1858. A geological map of the United States includes Georgia. A little description is included; some fossils are listed and illustrated.

3. Geology of North America. 144 p., illus. incl. geol. map [by William Maclure], Zurich, Zurcher and Furrer, 1858; New York, Wiley and Halsted, 1858. A cursory description of the geology of the United States includes Georgia. A geological map of the United States is included.

4. Geological map of the world. Carte géologique de la terre. Scale, 1 inch to 23 million inches, eight sheets. Zurich, J. Wurster, 1861 [not seen]; 2d ed., 1875; reduced and in Vor der Suesidflutth, by Oskar F. Fraas, Stuttgart, 1865 [not seen]; also in La Terre, by Elisée Reclus, vol. 1, pl. 2, p. 30, Paris, 1868; 2d ed. 1870; also in numerous other English and German editions.


MARLIN, LLOYD GARRISON.

1. Minerals and mining, Chapter 13 of The history of Cherokee County, p. 143-150, Atlanta, Walter W. Brown, [1932]. The occurrences of gold and copper minerals in the county are described; the emphasis is upon the historical development of the mines.

MARQUIS, URBAN CLYDE, 1925-


MARR, JOHN EDWARD, 1857-1933.

MARTENS, JAMES HART CURRY, 1901-
1. Beach deposits of ilmenite, zircon, and rutile in Florida: Florida Geol. Survey Ann. Rept. 19, p. 124-154, illus., 1928. The ilmenite, occurring as heavy minerals in beach sand, from Sapelo Island (McIntosh Co.) and St. Simons Island (Glynn Co.) is described. No details are given.
2. Beach sands between Charleston, South Carolina and Miami, Florida: Geol. Soc. America Bull., vol. 46, p. 1563-1596, illus., 1935. Many samples from along the Georgia coast are included. Many graphs, histograms, and other data are recorded to show the mineral composition, color, etc. of the sand. The geologic factors which influence the various characteristics are discussed.

MARTIN, PAUL SCHULTZ.

MARTONNE, EMMANUEL DE.

MARVIN, J. B., see Smith, John Lawrence, 4.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY.
1. Age study of some crystalline rocks of the Georgia Piedmont, in Variations in isotopic abundances of strontium, calcium, and argon and related topics: U. S. Atomic Energy Commission Rept. NYO-3938, p. 58-60 (‡), illus., 1958. Biotite from Stone Mountain Granite, Lithonia Gneiss, and Panola Granite from DeKalb Co., and from Carolina Gneiss and Ben Hill Granite in Fulton Co., and Elberton Granite in Elbert Co., is analyzed for Sr/Rb age. The average age, excluding Carolina Gneiss (342 m.y.) is 288 million years; the rocks are considered Devonian, except for the Elberton Granite, which is younger.

MATHER, KIRTLEY FLETCHER, 1888-

MATHEWS, EDWARD BENNETT, 1869-1944.

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MATTHES, FRANÇOIS ÉMILE, 1874-1948.
1. The country around Camp Gordon [DeKalb Co.] Map, scale 1 inch to 125,000 inches, text on back. U. S. Geol. Survey, 1918. A general description of the topography and geology of the area is given. Camp Gordon was an army camp near Chamblee.

MATTHEW, WILLIAM DILLER, 1871-1930.

MATTOCKS, PHILIP WARD, see Hunter, Charles Eugene, 1.

MAUCHER, ALBERT.

MAURY, CARLOTTA JOAQUINA, 1874-1938.
1. A comparison of the Oligocene of western Europe and the southern United States: Bull. Amer. Paleontology, vol. 3, no. 15, p. 311-404 [3-94], illus., 1902. Descriptions of [Eocene], Oligocene, [and Miocene] rocks from different places in the Coastal Plain are included. The faunas are listed and compared with the similar fauna of Europe. There are few species in common.

MAURY, MATTHEW FONTAINE, 1806-1873, see Gibbes, Robert Wilson, 2.

MAYNARD, THOMAS POOLE, 1883-1953, see also Mallory, J. M.; 1.
1. Report on Georgia's ceramic resources. [11 p.], Atlanta, The Industrial Bureau of Atlanta [n. d.]. An extremely cursory review of the various types of clay to be found in Georgia is given. No new data are included.
2. A report on the limestones and cement materials of north Georgia: Georgia Geol. Survey Bull. 27, xix, 295 p., illus., 1912. The occurrence and nature of the limestone, sandstone, and shale in northwestern Georgia and adjacent portions of the Blue Ridge and Piedmont are discussed. Descriptions of individual deposits and analyses are included, and some sections are measured.
3. The green slates of [Bartow and Gordon Cos.] Georgia: Stone, vol. 34, no. 4, p. 198-200, illus., 1913; Science Record, vol. 1, no. 3, p. 76-85, illus., 1913. The slate in the Cambrian formations is described.
4. Pottery possibilities in the vicinity of Macon, [Bibb Co.] Georgia, 51 p., illus., Macon, Georgia, Macon Chamber of Commerce, Central of Georgia Railway, [1917]. This is a prospectus designed to attract clay-product manufacturers. Kaolin deposits in Twiggs and Wilkinson Cos. are described and analyzed. Feldspar is also described, as is sand.

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5. The potash-bearing slates of [Bartow Co.] Georgia: Manufacturer's Record, vol. 74, no. 12, p. 78, illus., 1918. Sericite slate in Bartow Co. is described as a source of potassium. It is described physically and chemically; it comes from the Conasauga Shale of Cambrian age.


7. (and Mallory, J. M., and Stull, Ray Thomas). Directory of commercial minerals in Georgia and Alabama along the Central of Georgia Railway. 154 p., illus. incl. geol. map, Savannah, Central of Georgia Railway, [1923]. This is an account, by county, of the mineral resources of the area traversed by the railroad. A geological map shows a sketch of the geology along the routes as well as mineral resources.

8. How Stone Mountain [DeKalb Co.] was created. 20 p., illus., Atlanta, [priv. pub.?] 1929; also 29 p., Baltimore, Waverly Press, 1929. This is a popular account of the geology of the Stone Mountain area.


10. Bentonite deposits and uses [Crisp Co.]: Manufacturer's Record, vol. 104, no. 11, p. 27, 1935. Bentonite, containing about 17 percent sand, and overlain by 15 to 25 feet of overburden, is reported from near Musselwhite in Crisp County.

11. An outline of kaolin and china clay resources of Georgia and Alabama along Central of Georgia Railway. 6 p., illus., Savannah, Industrial Dept. Central of Georgia Railway, [192-]. A prospectus cursorily describes clay occurrences in several of the Coastal Plain counties through which the railroad passes. No new details are included.

MEADE, RICHARD KIDDER, 1874-

1. Economics and mineral resources of the south of interest to chemical manufacturers: Amer. Inst. Chemical Engineers Trans., vol. 12, pt. 2, p. 39-70, 1920. A list of known mineral resources of the south, including Georgia, is given. No geological data are included. Active, inactive, and abandoned resources are listed.

MEADOWS, PAUL.


MEANS, ALEXANDER, 1801-1883.


MEIGS, CHARLES DELUCENA, 1792-1869.

MEIGS, JOSIAH, 1757-1822.
1. [The first?] earthquake in [east central] Georgia [abs.]: Medical Repository, 3d hex. vol. 2 [vol. 14], p. 393-394, 1811; addition by—Jackson, p. 394.

MEINZER, OSCAR EDWARD, 1876-1948.
1. The occurrence of ground water in the United States: U. S. Geol. Survey Water-Supply Paper 489, 321 p., illus., 1923. A discussion of the principles of the occurrence of ground water is followed by a generalized review of the main sources in the United States; Georgia is included, although little detail is given;
2. Large springs in the United States: U. S. Geol. Survey Water-Supply Paper 557, 94 p., illus., 1927. Several springs issuing from the limestone in the southern counties are considered "large." They are cursorily described. Blue Spring in Decatur Co. is the largest in Georgia. The flow is over 20 million gallons per day.

MELL, PATRICK HUES, JR., 1850-1918.
1. Gold mining in [Paulding Co.] Georgia: Engineering and Mining Jour., vol. 24, p. 258-259, 275, illus., 1877. Gold-bearing quartz veins in metamorphic rock are described. Copper minerals are present also, but in different veins. Details from the Burnt Hickory gold region are cited.
3. The southern soapstones, kaolins and fire clays and their uses: Amer. Inst. Mining Engineers Trans., vol. 10, p. 318-322, 1882. Steatite, or soapstone, from Whitfield-Co. is analyzed.

MELLEN, JAMES VEDREY.
1. Pre-Cambrian sedimentation in the northeast part of the Cohutta Mountain Quadrangle, [Fannin Co.] Georgia: Georgia Mineral Newsletter, vol. 9, p. 46-61, illus., 1956; M. S. Thesis, Cornell Univ., 1956. Abundant illustrations indicate a great variety of sedimentary features which are used in evaluating the Precambrian sedimentary rocks. Graywacke predominates; some sandstone, siltstones, slates and phyllites are present. The rocks, 15,000 feet thick, are part of the Great Smoky Group.

MENDENHALL, THOMAS CORWIN, 1841-1924, see also Dutton, Clarence Edward, 1.
MENDENHALL, WALTER CURRAN, 1871-1957.

MERIWETHER, DAVID.
1. Particulars of a remarkable body of sea shells, now existing in the [Effingham Co.] interior part of the state of Georgia . . . [abs.]: Medical Repository, vol. 6, p. 329, 1808.
2. Extensive layers of marine shells found in Georgia and the Mississippi territory [abs.]: Medical Repository, 2d hex. vol. 3, [vol. 9], p. 436, 1806.

MERRIAM, CLINTON HART, 1855-

MERRIAM, JOHN CAMPBELL, 1869-1945.

MERRILL, FREDERICK JAMES HAMILTON, JR., 1861-1916.
1. Barrier beaches of the Atlantic coast: Popular Science Monthly, vol. 37, p. 736-745, 1890. This is a very generalized description of the physiography and origin of the barrier beaches. Very little is said about those of Georgia.

MERRILL, GEORGE PERKINS, 1854-1929.


8. (editor and compiler). Contributions to a history of American state geological and natural history surveys: U. S. Natl. Museum Bull. 109, 547 p., illus. incl. ports., 1920. One chapter of nine pages is devoted to the history of the several geological surveys of Georgia. The first, by John Ruggles Cotting, is described; as is the second, by George White, and the following ones by Joseph William Winthrop Spencer in 1890, William Smith Yeates, in 1920.

MERTIE, JOHN BEAVER, JR., 1888-
1. Heavy minerals in the Pleistocene terrace deposits of South Carolina and Georgia: U. S. Geol. Survey Trace Elements Memorandum Rept. 23, 27 p. (†), illus., 1950. Minor amounts of heavy minerals occur in the sands of the terraces, the mean percentage in Georgia being 0.37. Larger percentages of monazite occur in those samples which have small amounts of total heavy minerals. Most of the data is from the southeastern area of the state.

2. Monazite deposits of the southeastern Atlantic states: U. S. Geol. Survey Circ. 237, 31 p., illus., 1958. Monazite occurs in granitic intrusive rocks in the Piedmont of Georgia, in the saprolite resulting therefrom, and as placer concentrations in the Piedmont and Coastal Plain. Its geology and occurrences are described, and locations of deposits are given. Analyses are included.


MERWIN, HERBERT EUGENE, 1878-1963, see also Piggott, Charles Snowden, 2.


MEUNIER, STANISLAUS, 1843-1925.

1. Revision des fers météoritiques de la collection du museum d'histoire naturelle de Paris: Société d'Histoire Naturelle d'Autun Bull 6, p. 217-292, illus., 1893. A new classification of iron meteorites is described. The meteorites from Union, Cherokee, and Whitfield Cos. are described within the classification.

MEYER, ROBERT PAUL, see also Woollard, George Prior, 5.

MIDDLETON, GEORGE.
1 Notes on Georgia’s geology: Mineral Collector, vol. 13, p. 101-104, 115-118, 137-141, 1906. This is a popular review of the mineral resources of the state. Much emphasis is placed upon the iron ores found in the northwestern Paleozoic terrane. The granite intrusions, the basic-rock intrusions, and the Coastal Plain sedimentary rocks are also discussed.

MIERS, HENRY ALEXANDER, 1858-

MILLER, ARTHUR KEITH, 1902-1963.
2. Tertiary nautiloids of the Americas: Geol. Soc. America Mem. 23, viii, 234 p., illus., 1947. Aturia alabamensis is described and illustrated. It is reported from an unknown level and location in Georgia; it is Eocene in age and therefore no doubt from the Coastal Plain.

MILLER, EDWARD, 1760-1812, see Mitchill, Samuel Latham, 2.

MILLER, RALPH LE ROY, 1909-


MILTON, CHARLES, 1896-
MINOT, CHARLES SEDGWICK, 1852-1914.

MISER, HUGH DINSMORE, 1884-
5. Manganese deposits of the southeastern states, in Snyder, Frank G., ed., Symposium on mineral resources of the southeastern United States, p. 152-169, illus., 1950. A general review of the occurrences of this material includes those deposits of the Cartersville District in Bartow County. No new data are included.

MISSISSIPPI OIL SCOUTS ASSOCIATION.

MITCHELL, LANE, 1907- see also Crickmay, Geoffrey William, 18.
3. (and others). (The) mineralogy and genesis of hydroxylapatite: Amer. Mineralogist, vol. 28, p. 356-371, illus., 1943. The mineral is analyzed chemically and optically. It comes from Cherokee County near Holly Springs and is a product of metamorphism in the presence of much water.

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5. (A) new classification of the clays of Georgia, in Short contributions to the geology, geography, and archaeology of Georgia: Georgia Geol. Survey Bull. 50, p. 96-98, 1950. Clay is divided into the groups kaolinite, montmorillonite, and illite on the basis of chemical composition. The places in Georgia where the various types can be located are listed.

6. Thermal analysis of Georgia minerals, in Short contributions to the geology, geography, and archaeology of Georgia: Georgia Geol. Survey Bull. 50, p. 99-105, illus., 1950. The principles of differential thermal analysis are explained with examples of curves from Georgia clays.


8. (and Poulos, Nick E.). The relationship of structure of Georgia kaolin to its viscosity: Georgia Inst. Technology Engineering Exper. Sta. Bull. 23, 41 p., illus., 1959. In an otherwise technical discussion of the properties of kaolin, chemical and x-ray analyses and electron photomicrographs of kaolin are given. Kaolinite is the common clay mineral, although halloysite and dickite are also present.

MITCHELL, WILLIAM LOUIS, 1819-


MITCHELL, SAMUEL LATHAM, 1764-1831.

1. Uncommon petrifactions from Georgia and Kentucky: Medical Repository, 2d hex. vol. 5 [vol. 11], p. 415-416, illus., 1808. An echinoid of some sort, from somewhere on the Coastal Plain is described. It appears to be a sand-dollar type, and is probably Eocene.

2. (and Miller, Edward). Maclure's geological inquiries [in Georgia]: Medical Repository, 2d hex. vol. 6 [vol. 12], p. 295-296, 1809. This is a report of William Maclure's being in Georgia gathering information for a map to be published.

3. A detailed narrative of the earthquakes which occurred on the 16th day of December, 1811 . . . : Literary and Philos. Soc. New York Trans., vol. 1, p. 281-307, 1815. A general description of the New Madrid, Missouri, earthquake includes an account of its activity in Savannah. Another shock on Dec. 23d, 1812, is described from a place of uncertain origin, but appears to be the Savannah River area.

4. Observations on the geology of North America, in Essay on the theory of the earth, by G. Cuvier, p. 319-424, illus., New York, Kirk and Mercein, 1818. In this edition only, a description of the marine rocks along the Savannah River is given, as is a mention of echinoids from somewhere nearby. The origin of the Coastal Plain sediments is thought have been from the west side of the Blue Ridge Province and the Valley and Ridge Province, where great marine lakes were present, to eventually escape out of breaches (what are now known as watergaps) and deposit the sediments on the Coastal Plain.
5. Observations on the teeth of the *Megatherium* recently discovered in the United States [Chatham Co.]: Lyceum Natural Hist. New York Annals, vol. 1, p. 58-61, illus., 1823. An account of the first finding of the giant sloth from Skidaway Island is given. The teeth are described and illustrated. [They are Pleistocene.]

MONEYMAKER, BERLEN CLIFFORD, 1904-

3. Some broad aspects of limestone solution in the Tennessee [River] Valley: Amer. Geophysical Union Trans., vol. 29, p. 93-96, illus., 1948. The limestone regions of northwestern Georgia are implied. Geological structure plays an important part in the amount of solution which has taken place. Some of the larger caves and channels may date back to Mesozoic time.
5. Earthquakes in Tennessee and nearby sections of neighboring states—1851-1900: Tennessee Acad. Science Jour., vol. 30; p. 222-233, 1955. Many were felt in Georgia. One was centered in "northern Georgia" and was felt over an extensive area.
6. Earthquakes in Tennessee and nearby sections of neighboring states—1901-1925: Tennessee Acad. Science Jour., vol. 32, p. 91-105, 1957. Many quakes were felt in Georgia but only one epicenter was located here. It occurred in the Piedmont, southeast of Atlanta.

MONNETT, VICTOR ELVERT, 1889-


MONROE, WATSON HINER, 1907-

1. Mesozoic igneous rocks of northern Gulf Coastal Plain: Amer. Assoc. Petroleum Geologists Bull., vol. 33, p. 1410-1428, illus., 1949. Surface exposures of Mesozoic igneous rocks around the edges of the Coastal Plain are discussed; some Triassic dikes are in Georgia. An index map indicates igneous rocks present in the subsurface of southwestern Georgia, but no data are given.


MOORE, JOHN BYRON, JR., 1924-.
1. Some structural features of Ordovician red beds in [Whitfield Co.] northwest Georgia: Georgia Acad. Science Bull., vol. 12, p. 64-68, illus., 1954. Axial plane and flow cleavage, a-lineation and b-lineation in incompetent strata are described and used to determine the complex structural deformation of a local exposure and to determine its relationship to the regional structure.

MOORE, JOSEPH.
1. Description of a new species of gigantic beaver-like rodent: Cincinatti Soc. Natural Hist. Jour., vol. 13, p. 26-30, illus., 1890; correction, p. 103. A large tooth from the “gold working area” in northern Georgia is described and illustrated. It was initially thought to be from a beaver, but corrected to be from a hippopotamus, and possibly not even fossil.

MOORE, RAYMOND CECIL, 1892-.

MOORE, WILLIAM HALSELL, JR., 1930-.
1. MOORMAN, JOHN JENNINGS, 1802-1885.

   1. The Virginia springs, and springs of the south and west. ix, 408 p., illus., Philadelphia, J. B. Lippincott and Co., 1859. Brief, riotous descriptions of five mineral springs in Georgia are included. No details are given.

   2. The mineral waters of the United States and Canada . . . 507 p., illus., Baltimore, Kelly and Piet, 1867. In a general treatise on the joys and delights of the use of spring water for all sorts of ailments, is a discussion of many individual springs. Indian, in Butts Co., Madison, in Madison Co., Warm Springs in Meriwether Co., Rowlands Spring in Bartow Co., Gordon Springs in Murray Co., and Catoosa Springs in Catoosa Co. are exhorted. No analyses are given.


MORAN, H. E. see Fieldner, Arno Carl, 1; Harr, Luther, 1.

MORCOM, A. J., see Nagelschmidt, Gunter, 1.

MOREHEAD, MARCUS BILLY, 1933-


MORGAN, CECIL L. see Alexander, Clyde Wayne, 1.

MORRIS, CHARLES E.

   1. (and Taylor, Frank Hamilton). Piedmont line, and illustrated guide to western North Carolina, South Carolina, and Georgia. 80 p., illus., Piedmont Air-line Railroad, Philadelphia [188-]. Colorful descriptions of Piedmont Georgia are included, some being topographic and others economic. The gold fields and mineral springs are given special attention.

MORRIS, F. GRAVE.


MORTON, PAUL C.

   1. Mineral resources of Georgia: Amer. Jour. Mining, vol. 1, p. 265-266, 1866. A general review of the mineral resources of the state is given; no new data are included. Most of the emphasis is placed upon the metal ore resources.
MORTON, SAMUEL GEORGE, 1799-1851, see also Vanuxem, Lardner, 1.


2. Synopsis of the organic remains of the Cretaceous group of the United States. 88 p., illus., Philadelphia, Key and Biddle, 1834; appendix, Catalog of the fossil shells of the Tertiary Formations of the United States . . . . 8 p. Allusion is made to the Cretaceous rocks in Georgia also, but the text suggests that the Eocene was also included. He has reported Belemnitella americanus from near Sandersville, Washington County.


MOSIER, MC HENRY, 1885-1952.


MOSS, RYCROFT GLEASON, 1904-.


MOXHAM, ROBERT MORGAN.

1. Airborne radio-activity survey in the Folkston area, Charlton County, Georgia, . . . : U. S. Geol. Survey Geophysical Investigation Map GP 119, with text, scale, 1 inch to 1 mile, 1954. Several areas of slightly higher-than-average radioactivity are outlined. No analysis is offered.

2. (and Johnson, Robert William, Jr.). Airborne radioactivity survey of parts of the Atlantic Ocean beach, Virginia to Florida: U. S. Geol. Survey Trace Elements Memorandum Rept. 644, map, scale, 1 inch to 10 miles, with text, 1953. The actual line of survey is along the coast of Georgia, and anomalies are reported from numerous places along the offshore islands. The radioactive anomalies are related to heavy mineral concentrations in the beach sands.

MOXON, CHARLES.

1. On the geology of the United States: Geologist 1843, p. 56-64, illus., London, 1843. An extremely cursory review of the geology of the eastern United States is given. A small-scale geological map is included.
MUEGGE, OTTO, 1858-


3. Rutil mit Absonderung nach (902), no. 17 of Mineralogisches Notizen: Neues Jahrbuch fuer Mineralogie ... 1897, vol. 2, p. 82-84, illus., Stuttgart, 1897. Some aspects of the crystal structure of rutile from Graves Mountain in Lincoln Co. are discussed.

MUMPTON, FRED ALBERT.


MUNYAN, ARTHUR CLAUDE, 1908- see also Bay, Harry X., 1; Cooke, Charles Wythe, 18; Furcron, Aurelius Sydney, 2, 3; Stringfield, Victor Timothy, 1; Warren, Moultrie Alfred, 1, 2.

1. Recent petroleum activities in Coastal Plain of Georgia: Amer. Assoc. Petroleum Geologists Bull., vol. 22, p. 794-798, 1938; Oil and Gas Jour., vol. 36, no. 55, p. 65, 1938. An extremely cursory description of the structures in the Coastal Plain is included. Few wells have been drilled; no petroleum is now being produced.

2. Supplement to sedimentary kaolins of Georgia: Georgia, Geol. Survey Bull. 44-A, 42 p., illus., 1938. A general discussion of the nature and occurrence of kaolin is followed by a description of individual deposits in the Cretaceous rocks of the Coastal Plain. Sections are measured. Some bauxite deposits in Sumter and Meriwether Cos. are also discussed.

3. Oil search in Georgia covers wide front: Oil and Gas Jour., vol. 38, no. 44, p. 24-26, 59-100, illus. incl. port., 1940. A generalized review of the geology of the Coastal Plain includes a summary of the various Mesozoic and Cenozoic formations and their petroleum potential. Selected logs are included, and a cursory description of some of the structures is given. Brief mention of the petroleum potential of the Paleozoic terrane is included also.

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4. (and others). [Economic study of the Macon, Bibb Co. area]: Georgia Inst. Technology, Engineering Exper. Sta. Spec. Rept. 1, [185 p. (†)], illus., 1943. A prospectus type survey of the region includes descriptions of the mineral resources of the area of the 26 counties surrounding Macon. Bauxite, kaolin, sand, feldspar, fuller's earth, limestone, mica, clay and abrasives are present, and a generalized description of the geology is included. Maps of each county, showing kaolin and bauxite deposits are also included.

5. Subsurface stratigraphy and lithology of the Tuscaloosa Formation in the southeastern Gulf Coastal Plain: Amer. Assoc. Petroleum Geologists Bull., vol. 27, p. 596-607, illus., 1943. A general discussion of the Cretaceous formations in the region includes the log of a deep well in Pierce County. The Tuscaloosa Formation here is 380 feet thick. The lower part is marine; the upper part is terrestrial.

6. Geology of the Augusta area, in Economic study of Augusta [Richmond Co.] area: Georgia Inst. Technology, Engineering Exper. Sta. Spec. Rept. 2, p. 222-248 (†), illus., 1944. A cursory description of the geology of the 31-county Augusta area is given. Clay and granite are the chief mineral resources discussed. Sand is also present in great quantities. Maps of each county, showing kaolin deposits, are also included.


9. Geology and geography, in Economic study of the Macon area Georgia, by the Industrial Economic Research Staff, Engineering Exper. Sta., p. 76-90 (†), Atlanta, Georgia Inst Technology, 1945. A cursory review of the geology of the 26 counties around Macon is given. No new data are included.


11. Industrial mineral planning in Georgia: Emory Univ. Quarterly, vol. 1, p. 90-100, illus., 1945. This is a popular account of some of the more valuable industrial mineral deposits of the state. No new data are included.


14. (The) geology of the northeast Georgia area, in Economic study of northeast Georgia: Georgia Inst. Technology Engineering Exper. Sta. Spec. Rept. 21, p. 66-72, illus., 1946. A cursory, general description of the geology of the area is given. All the rocks are metamorphic and igneous. Gold and stone are the only mineral resources described, although others are mentioned throughout the text of the whole bulletin.


17. Geology and mineral resources of the Dalton [15'] Quadrangle, [Murray, Whitfield, Catoosa Cos.]: Georgia—Tennessee: Ph. D. Thesis, Univ. Cincinnati, 1951; Georgia Geol. Survey Bull. 57, vi, 128 p., illus. incl. geol. map, 1951. A complete geological description of the area is given. Cambrian to Ordovician, and Cenozoic rocks are mapped and described. Sections are measured. Folds and thrust faults are the dominant structures. Barite, clay, carbonate rocks, manganese, iron, and tripoli are the mineral resources discussed.


MURCHISON, CHARLES, see Falconer, Hugh, 1, 2.

MURCHISON, RODERICK IMPEY, 1792-1871.

1. Secondary and Tertiary rocks and superficial deposits of North America, in Anniversary address of the President [of the Geol. Soc. London]: Geol. Soc. London Proc., vol. 4, p. 127-133, 1846. In a review of the recently accumulated knowledge of the geology of the United States, reference to the presence of Tertiary rocks in Georgia is made; they are cursorily described, mostly abstracting from data already published by Lyell upon his return to Europe from his North American travels.
MURPHY, LEONARD MAURICE.

1. United States earthquakes 1947: U. S. Coast and Geod. Survey Ser. 730, iv, 62 p., illus., 1950. The earthquake of Dec. 27, 1947, is described. It was in the Chattanooga area and was felt in Walker and Whitfield Counties.

MURPHY, ROBERT EDWARD, JR., 1927-


MURRAY, DAVID, 1830-1905.


MURRAY, GROVER ELMER, JR., 1916- see also Frink, John Westlake, 1.


4. Sedimentary volumes in Gulf Coastal Plain of United States and Mexico. Foreword and summary: Geol. Soc. America Bull., vol. 63, p. 1157-1158, table, 1952. The volume of the Cenozoic rocks in Georgia are included with those in Florida. The data are in tables. The total is from 48-52,000 cubic miles for Cenozoic rocks, 50-60,000 cubic miles for Cretaceous rocks and 10-15,000 cubic miles for those of pre-Cretaceous Mesozoic rocks.

5. Relationships of Paleozoic structures to large anomalies of coastal element of eastern North America: Gulf Coast Assoc. Geol. Socs. Trans., vol. 6, p. 13-24, illus., [1956]. Areas of Paleozoic structural deformation are outlined. Positive and negative areas are identified, and the geographic and geometric orientation and association of these features with Coastal Plain structural features are pointed out. The Rome Recess is aligned with the Central Georgia Arch; the Savannah Basin is aligned with the Knoxville, Tennessee, salient.
MURRAY, HAYDEN HERBERT, 1924- see also Johns, William Davis, 1.


MUSSET, R.

1. La production de la bauxite aux Etats-Unis: Société géologique et minéralogique de Bretagne Bull., vol. 2, p. 264-273, illus., Rennes, 1922. The deposits of the eastern United States, including those of northwestern Georgia, and the Coastal Plain, are described. A climatic control is suggested, indicating tropical conditions at the time of formation.

MYERS, GEORGE SPRAGE.


MYERS, WILLIAM MARSH, 1892-1951.


NACOOCHEE HYDRAULIC MINING COMPANY.

1. Nacoochee Hydraulic Mining Company [White Co.] [prospectus]. 32 p., illus., [n.p.] [n.d.] [Boston, 1861] [includes reports by William Phipps Blake and Carl David Smith]. The occurrence of gold in veins, as placers, and in saprolite is described. Much emphasis is placed on the hydraulic engineering potential for mining.

NAGELSCHMIDT, GUNTER.

1. (and Donnelly, H. F., and Morcom, A. J.). On the occurrence of anatase in sedimentary kaolin [Coastal Plain]: Mineralogical Mag., vol. 28, p. 492-495, illus., London, 1949. Anatase is shown to be present in clay-sized particles. Electron micrographs, chemical, and x-ray studies are used. The kaolin is from Georgia, but is not further identified.

NAVARRE, ALFRED THEODORE, 1894-1962, see also Fortson, Charles Welborn, Jr., 1; Ingols, Robert Smalley, 2.


2. The utilization of Lithonia [DeKalb Co.] migmatite in agriculture, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 92-100, illus., 1953. Numerous analyses are included in an otherwise purely agricultural discussion of the use of such material for fertilizer.

NEEDHAM, J. G.
1. Between the hills and the sea—erosion’s processes in Georgia’s gullies and Florida’s swamps: Amer. Forests, vol. 39, p. 198-199, illus., 1933 [not seen]. A cursory description of erosion on the Coastal Plain is given, with illustrations. The influence of forests, or lack of them, is cited.

NELMS, WILLIAM STOCKTON, 1883-1952, see Hootman, James Albert, 1.

NELSON, WILBUR ARMISTEAD, 1889-
1. Topography of the former continent of Appalachia (from geologic evidence): Amer. Geophysical Union Trans., vol. 21, p. 786-796, illus., 1940. Sedimentary evidence, some from Georgia, is used to evaluate the nature of the landmass Appalachia during Paleozoic, Mesozoic, and Cenozoic times.

NESBITT, R. T.
1. Georgia—her resources and possibilities. 468 p., illus., Atlanta, Franklin Printing Co., 1895. In a statistical review of the state, in a Chamber-of-Commerce type work, the economic mineral resources and the geology of Georgia are reviewed. No new data are given, however. A small-scale geological map is included.

NETTLES, JAMES EDWARD, see Goodell, Horace Grant, 1.

NEUMANN, FRANK, 1892-1964.
1. United States earthquakes 1933: U. S. Coast and Geod. Survey Ser. 579, ii, 82 p., illus., 1985; ... 1935, ser. 600, iv, 90 p., illus., 1937; ... 1936, ser. 610, iv, 44 p., illus., 1938; ... 1940, ser. 647, iv, 74 p., illus., 1942. Shocks of questionable seismic origin are reported from Eatonton, Putnam Co., on June 9, 1933. A moderate quake is reported from along the North Carolina border on Jan. 1, 1935; the same is true for Jan. 1, 1936?

NEVIUS J. NELSON.
1. Dr. James Hall [1811-1898]: Engineering and Mining Jour., vol. 66, p. 184, port., 1898.

NEW ENGLAND COMPANY.
1. Extensive coal and iron properties in Dade County, Georgia. New England City, the center of the great mineral quadrilateral . . . 48 p., illus., New York, South Publishing Co., [n. d.] [post 1890] [contains reports by George Little, Charles Henry Hitchcock, and M. T. Singleton]. This is a prospectus for a land company in Dade Co., but contains geological reports on the mineral resources of the region. Coal, iron, stone, and clay are the chief resources. Their occurrence is described.
NEWHOUSE, WALTER HARRY, 1897- see also Park, Charles Frederick, Jr., 2.

NICHOLS, EDWARD.

NININGER, ADDIE Delp.
   1. Third catalog of meteoritic falls (S. R. M. nos. 183-321) reported to the Society for Research on Meteorites, January 1939 to October, 1940: Popular Astronomy, vol. 48, p. 555-560, 1940. The list includes information about the Aragon and Cedartown, Polk Co. iron, Paulding Co. iron, and Pickens Co. stone. Date of find, number of fragments, weights, and depository are given.

NITZE, HENRY BENJAMIN CHARLES, 1867-1900.
   2. Gold mining in North Carolina and adjacent southern Appalachian regions: North Carolina Geol. Survey Bull. 10, 164 p., illus., 1897. A general description of the gold-bearing quartz veins in metamorphic rocks of the Piedmont and Blue Ridge of Georgia are included. Little detail is given.

NORMAN, M. E., see Alexander, Clyde Wayne, 1.

NUTTALL, BRANDON D.

NUTTING, PERLEY GILMAN, 1873-1949.
   1. The bleaching clays: U. S. Geol. Survey Circ. 3, 51 p. (†), illus., 1932. The fuller’s earth deposits around Macon and in the southwestern part of the Coastal Plain are cursorily described, with most of the emphasis placed upon the physical properties of the Eocene Twiggs clay and Miocene Hawthorne Formation.

O'BANNON, PRENTICE HOWARD, see Davis, Morgan Jones, 1.
OKLAHOMA CITY GEOLOGICAL SOCIETY.

OKULITCH, VLADIMIR JOSEPH, 1906-

OLSON, EVERETT CLAIRE, 1910-

OLSON, JERRY CHIPMAN, 1917- see also Griffitts, Wallace Rush, 1.

OLSSON, AXEL ADOLF.

O'MEARA, ROBERT GIBSON, see Klinefelter, Theron Albert, 1.

O'NEILL, JAMES F.

ORTON, EDWARD, 1829-1899.

OSBORN, CLARENCE C., see Soper, Edgar Kirke, 2.

OSBORN, HENRY FAIRFIELD, 1857-1935.
6. Species of American Pleistocene mammoths, Elephas jeffersonii, new species: Amer. Museum Novitates 41, 16 p., illus., 1922. Elephas columbi is considered a synonym of E. jeffersoni. Details of the teeth are used as the basis. The Georgia material is not specifically alluded to, however. The type specimen, from Glynn Co., is considered to be a dwarfed female.


OVERSTREET, WILLIAM COURTNEY, 1919-


OVEY, C. D.


OWEN, RICHARD, 1804-1892.

1. Descriptive and illustrative catalogue of the fossil organic remains of Mammalia and Aves contained in the Museum of the Royal College of Surgeons in England. vii, 391 p., illus., London, Richard and John E. Taylor, 1845. An elephant, Lophiodon bathynathus, is described from Pleistocene deposits in Glynn County. It was originally called a boar by Harlan. A few fragments and several teeth are present.
2. Observations on certain fossils from the collection of the Academy of Natural Sciences of Philadelphia: Acad. Natural Science Philadelphia Proc., vol. 3, p. 93-96, 1846; ... Jour., 2d ser. vol. 1, p. 18-20, illus., 1847; correction by Joseph Leidy, ... Proc., vol. 7, p. 89, 1856. Fragments of bison, horses, and mastodons from [Pleistocene] rocks from the Brunswick Canal in Glynn Co. are described. Genus *Harlanus*, a type of mastodon, is illustrated; Leidy says the *Harlanus* is a *Bison*.

**Owen, Vaux, Jr., 1927-1961.**
1. Mississippian reef structures in [Dade Co.] northwest Georgia: Georgia Acad. Science Bull., vol. 13, p. 128-131, illus., 1955. Lithostrotion coral masses, surrounded by oolitic limestone, which is in turn engulfed by fine-grained limestone and minute fossils are interpreted as having grown as reefs. Dolomitization and replacement in part by silica occurred later.


3. Summary of ground water resources of Lee County, Georgia: Georgia Mineral Newsletter, vol. 11, p. 118-121, 1958. The various subsurface formations of Cretaceous to Eocene age are described along with their water-bearing properties. analyses of the water are included.

4. A summary of ground-water resources of Sumter County, Georgia: Georgia Mineral Newsletter, vol. 12, p. 42-51, illus., 1959. A survey of the Cretaceous to Recent rocks of the county is followed by a description of the water-bearing properties of each unit. Well data are tabulated. Some springs are present also.

**Ozawa, Yoshiaki, see Cushman, Joseph Augustine, 4.**

**Palache, Charles, 1869-1954.**

**Pallister, Hugh Davidson, 1883-**


3. (and Burchard, Ernest Francis). Natural resource base of the iron and steel industries of the south, Part 2 of The iron and steel industries of the south, by H. H. Chapman, p. 27-98, illus., University, Alabama, Univ. Alabama Press, 1953. An extremely generalized description of the occurrence of iron ore in the Silurian rocks, and as residual deposits in Cambrian rocks, and of the coal-field region of northwestern Georgia is included. No new data are given.

**Palmer, Katherine Evangeline Hilton Van Winkle, 1895- see also Wheeler, Harry Edgar, 1.**
1. The Veneridae of eastern North America, Cenozoic and Recent:


PARDEE, JOSEPH THOMAS, 1871-1960.
1. (and Park, Charles Frederick, Jr.). Gold deposits of the southern Piedmont: U. S. Geol. Survey Prof. Paper 213, vii, 156 p., illus. incl. geol. maps, 1948. Details of the geology and gold deposits of Piedmont and Blue Ridge Georgia are included. The gold occurs primarily in quartz veins in metamorphic rocks, and also as placers and as residual gold in the saprolite. Many individual occurrences in Georgia are mapped and discussed.

PARIS MUSEUM D'HISTOIRE NATURELLE.
1. Guide dans la collection de météorites . . . . 40 p., Paris, Libr. de l'Academie de Medicine, 1882. A general discussion of meteorites includes a catalogue in which fragments of the Union, Whitfield, and Monroe Co. meteorites are included. No new data are given.

PARIZEK, ELDON JOSEPH, 1920- see also Woodruff, James Frederick, 1, 2.

PARIZEK, ELDON JOSEPH, 1920- see also Woodruff, James Frederick, 1, 2.


3. Does Georgia have any tidelands oil?: Georgia Review, vol. 7, p. 309-318, illus., 1953. This is a popular account of the emerged and submerged Coastal Plain, along with a description of legal problems attendant upon ownership.


6. Lithologic and structural control of southeast-flowing streams in the Georgia Piedmont: Assoc. Amer. Geographers Southeast Div. Memorandum Folio, vol. 5, p. 27-29 (†), 1953. Lithology, joints, and faults are shown to influence the direction of some of the streams, but meanders and other stream patterns suggest that the rivers are flowing below an old peneplain upon which they were originally consequent.

7. Observations on the types and directions of lineation in a portion of the eastern Georgia Piedmont, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 296-303, illus., 1953. Lineation in the crystalline rocks is primary and secondary. Several kinds are mapped; they are:
primary flow, secondary flowage, slippage, rotation, and intersection of planes. In the southeast, Oglethorpe Co., the trends are N20-30E; in the center, Oconee, Clarke, Madison Cos., they trend north-south, and in the northwest, Barrow and Jackson Cos., they trend northwest-southeast.

8. (A) preliminary investigation of the geology of Clarke Co., Georgia, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 21-31, illus., 1953. A generalized description of the topography, petrography, and stratigraphy is given. Gneiss, migmatite, and gneissoid granite have been intruded by granite, and all of these intruded by diabase dikes. A sketch map is included. The metamorphic rocks are considered Precambrian in age; the age of the igneous rocks is uncertain.

9. (and Woodruff, James Frederick). The problem of a peculiar quartz horizon in the [north Georgia] Piedmont: Assoc. Amer. Geographers Southeast Div. Memorandum Folio, vol. 5, p. 30-34 (+), 1953. A quartz zone, a few inches to a foot thick, and containing occasional residual bedrock fragments, lies horizontally between 6 and 10 feet below the surface. Possible sources are described, and ground water plus solid diffusion are offered as the explanation.

10. Sedimentary study of a commercial sand deposit in northwest Greene County, Georgia, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 270-277, illus., 1953. Histograms and other data are presented for a sand deposit occurring in the Oconee River floodplain. The sands are arkosic and nonfossiliferous. Fluvial deposition is suggested by the sorting. They may be of floodplain origin, or partly floodplain and partly marine. The Fall Line is not far to the south of the deposit.


12. (The) influence of lithology and structure on the course of the upper Oconee River: Georgia Acad. Science Bull., vol. 12, p. 110-114, illus., 1954. In Hall, Jackson, Clarke, and Oconee Cos. the Oconee River has incised itself consequently from an original peneplain. Joints, faults, and hard rocks have caused the resulting post-uplift-streams to adopt peculiar courses resembling meanders.


17. Xenoliths in granodiorites of the east Georgia [Clarke Co.] Piedmont: Georgia Acad. Science Bull., vol. 13, p. 85-89, illus., 1955. Schist and hornfels xenoliths in granodiorite are described. They are interpreted as being part of the original country rock. The long dimensions of the xenoliths and the flow patterns in the granodiorite are concordant.

18. (and Woodruff, James Frederick). (The) apparent absence of soil creep in the Georgia Piedmont: Geol. Soc. America Bull., vol. 67, p. 1111-1116, illus., 1956. Stone lines, layers of pebbles at the junction of the bedrock with the overlying soil, do not reflect creep in Georgia as the other obvious criteria for soil creep are not present. The lack of features reflecting creep in itself is remarkable.


20. (and Woodruff, James Frederick). Description and origin of stone layers in the soils of the southeastern states: Jour. Geology, vol. 65, p. 24-34, illus., 1957. Lenses and blankets of stones or pebbles, called carpedoliths, located in the soil zones of the southeastern United States, are interpreted as lag gravels, or surface accumulations which were later covered by sedimentary processes. Much data comes from Clarke County.

21. (and Woodruff, James Frederick). Mass wasting and the deformation of trees: Amer. Jour. Science, vol. 255, p. 63-70, illus., 1957. Illustrative examples, some from the Piedmont of Georgia, are used to show that the effect of soil creep on the curvature of trees need not be as important as is suggested. In many books. Some trees on slopes are not curved; some are curved in opposite directions from each other; and some are curved opposite to the direction expected.

PARK, CHARLES FREDERICK, JR., 1903- see also Pardee, Joseph Thomas, 1.


2. Some gold deposits in Georgia, in Walter Harry Newhouse, ed., Ore deposits as related to structural features, p. 199-201, illus., Princeton, New Jersey, Princeton Univ. Press, 1942. The gold-bearing veins of the Piedmont are cited as examples of deposits which are both parallel and oblique to the directions of layered rock. Fault planes served as channels for the emplacement of the veins.

3. Gold deposits of Georgia, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 60-67, illus., 1953; Georgia Mineral Newsletter,
vol. 6, p. 107-113, illus., 1953. This is an extremely generalized review of the occurrence of gold in Georgia. The gold comes from quartz veins intruded into the metamorphic rock of the Piedmont and Blue Ridge. It is commonly associated with pyrite.

PARKER, EDWARD WHEELER, 1860-

PARKER, FRANCES LAURENCE, 1906- see Cushman, Joseph Augustine, 12.

PARKER, GEORGE HOWARD, 1864-

PARKER, GLENN LANE, 1884-1946.

PARKER, JOHN MASON, 3d., 1906-
1. Feldspar and mica deposits of southeastern United States, in Snyder, Frank G., ed., Symposium on mineral resources of the southeastern United States, p. 42-48, illus., 1950. A very generalized discussion of the occurrence and origin of these materials includes those from the Piedmont of Georgia. Little detail is given.

PARSONS, ARTHUR BARRETTE, 1887-
1. Gold in the land of cotton: Mining and Metallurgy, vol. 16, p. 251-255, 260, illus., 1955. This is a semipopular account of the occurrence of gold in the southeastern states, including the Piedmont and Blue Ridge of Georgia. No details are included.

PARTSCH, PAUL MARIA, 1791-1856.
1. Die Meteoriten oder vom Himmel gefallen Steine und Eisenmassen im k. k. Hof-mineralien Kabinette zu Wien. xii, 162 p., illus., Vienna, Kaulfuss Witwe, Prandel and Comp., 1843. A general description of the meteorites in the collection includes two of the pieces from the Monroe Co. stone.

PATTERSON, R. M.
2. Ueber die Beschaffenheit und das Vorkommen des Goldes, Platins und der Diamanten in den Vereinigten Staaten: Deutsche geol-
A diamond from Hall Co. is described. It came from gold placer deposits and is 2½ carats in size. Others are reported.

PATTON, JACOB L.
1. Petroleum operations in south Alabama, Georgia, and Florida: Georgia Mineral Newsletter, vol. 7, p. 135-139, illus., 1954. This is a generalized review of the stratigraphy of the area and an account of the major structural features. In Georgia they are: Decatur Arch, the Southwest Georgia Trough, the Ocala Uplift and the Southeast Georgia Basin.

PAULSEN, CARL GUSTAVE, 1881-1961.

PAYNE, WILLARD M., see Harris, R. Merrill, 1, 2.

PEALE, ALBERT CHARLES, 1849-1914, see also Stephenson, Lloyd William, 14.
1. Lists and analyses of the mineral springs of the United States: U. S. Geol. Survey Bull. 32, 235 p., 1886. Many springs in the state are included in tabular descriptions; analyses are included for many.

PEARE, CATHERINE OWENS.

PECK, JACOB.
1. Geological and mineralogical account of the mining districts in the State of Georgia . . . : Amer. Jour. Science, vol. 23, p. 1-10, illus., 1833; corrections, p. iii. A very general survey of the geology and topography of the Blue Ridge and Piedmont is given. Gold occurs in quartz veins which are in the slate and schist country rock, and sulphide ores are noted. Little detail is included.

PEELE, ROBERT, 1858-

PEGRUM, REGINALD HERBERT.

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PELLOUX, ALBERTO.

PENDLETON, EDMUND MONROE, 1815-1884.

PENFIELD, SAMUEL LEWIS, 1856-1906, see Genth, Frederick Augustus, 7.

PENROSE, RICHARD ALEXANDER FULLERTON, JR., 1863-1931.
1. (The) distribution of manganese in North America: Engineering and Mining Jour., vol. 52, p. 126, 1891. A cursory description of the occurrence of manganese as a residual deposit includes that of Bartow County. No details are included.
2. Manganese, its uses, ores, and deposits: Arkansas Geol. Survey Rept. 1890, vol. 1, xxvii, 642 p., illus., 1891. A detailed treatise on manganese includes a discussion of the nature and occurrences of the ore in the Cartersville District of Bartow Co. and in the Cave Spring District of Polk County. The ore occurs primarily as residual material and as veins in the Cambrian terrane.

PEPPER, WILLIAM, 1843-1898.

PERKINS, HENRY FRANK, see England, Charles Bennett, 1.

PERRY, ALEXIS.
1. Mémoire sur les tremblements de terre aux États-Unis et dans le Canada: Société d'Emulation du Département des Vosges Annales, vol. 7, p. 341-411, Épinal, France, [1849]. Four earthquakes centered in Georgia are listed, but no detailed information other than the date and the time of day are given.

PERRY, EUGENE CARLETON, JR., 1933- see also Furcron, Aurelius Sydney, 50, 51.
PERRY, JOHN BULKLEY, 1825-1872.

PERRY, STUART HOFFMAN, 1874-1957, see also Henderson, Edward Porter, 2, 3.
1. The metallography of meteoritic iron: U. S. Natl. Museum Bull. 184, vii, 206 p., illus., 1944. A detailed discussion of the metallographic techniques and their application to the study of iron meteorites is followed by illustrations of results. Many meteorites from Georgia are included.
2. The Cedartown, [Polk Co.] Georgia meteorite: Smithsonian Misc. Collections, vol. 104, no. 23, 3 p., illus., 1946. The iron-nickel meteorite of 25.5 pounds is described and analyzed. Photomicrographs are included.

PETAR, ALICE VIRGINIA, see also Tyler, Paul McIntoshi, L.
1. Sillimanite, kyanite, andalusite, and dumortierite: U. S. Bur. Mines Inf. Circ. 6255, 19 p. (†), 1930. A general discussion of the uses and properties of these materials is followed by extremely cursory references to occurrences, some in Cherokee, Cobb, Habersham, and Upson Counties. Only kyanite is known from Georgia.

PETEYSON, HAZEL AGNES.

PETTY, JULIAN JAY, 1901-
1. Pedestal rocks of granite in the southeastern Piedmont: Elisha Mitchell Scientific Soc. Jour., vol. 48, p. 119-122, illus., 1932. Chemical weathering, acting more rapidly near the soil at the base, results in mushroom-shaped outcrops. Some examples are from Jones and DeKalb Counties.

PEYTON, ALEXANDER L.
PEYTON, GARLAND, 1892-1964, see also Furcron, Aurelius Sydney, 2.

2. (and others). Glass sands and glass making materials in Georgia: Georgia Geol. Survey Inf. Circ. 11, 26 p. (†), 1940. A general discussion of the origin of glass sand is followed by a description of occurrences in Georgia, listed by county. Analyses are included.
5. Progress of oil search in Georgia: Oil Weekly, vol. 123, no. 3, p. 92-94, 96, illus., 1946. A general review of the geology of the Coastal Plain and the Paleozoic terrane is given. Generalized well logs are included, as is a cross-section of the Coastal Plain. A history of drilling activity is included.
6. The industrial minerals of Georgia, in Short contributions to the geology, geography, and archaeology of Georgia: Georgia Geol. Survey Bull. 56, p. 1-10, 1950; Georgia Mineral Newsletter, vol. 7, p. 1-8, illus., 1954. This is a generalized review of the mineral industry of Georgia. No new data are included.
7. Georgia, in Underground storage of liquid petroleum hydrocarbons in the United States, p. 15-16, illus., Oklahoma City, Interstate Oil Compact Commission, Research and Coord. Committee, 1956. Limestone and shale terrane in northwestern Georgia contain potential storage structures, as does cavernous, shale-covered limestone in the Coastal Plain. Porosity could be created artificially in some of the crystalline rocks.

PHALEN, WILLIAM CLIFTON, 1877-1949, see also Hayes, Charles Willard, 23; LaForge, Laurence, 2.

2. On a peculiar cleavage structure resembling stretched pebbles near Ellijay, [Gilmer Co.] Georgia: Jour. Geology, vol. 18, p. 554-564, illus., 1910. Elongated pebbles in metamorphic rocks are attributed to being a peculiar combination of flow cleavage plus fracture cleavage and not to being stretched pebbles resulting from metamorphism.

PHILIPS, JAMES V., see Barrows, Harry H., 1.
PHILLIPS, KENNETH N., 1897-

PHILLIPS, WILLIAM E.
2. Geology, in Health and profit as found in the Hilly Pine region [Coastal Plain] of Georgia and South Carolina ..., by S. E. Habersham, vii, p. 79-85, Augusta, Augusta Press Book and Job Office, 1869. This is in a prospectus designed to exhort the Savannah River area and attract immigrants. A description of the topography, Fall Line, and [Cretaceous and Tertiary] rocks is included.
3. Report ... upon the topography and hydrography in the vicinity of Augusta, [Richmond Co.] Ga .... 28 p., illus., Augusta, John M. Weighs and Co., 1892. This is an engineers report to the city fathers explaining the periodic flooding of the city by the Savannah River. Descriptions of topographic details are included, along with various remedial engineering suggestions.

PIERCE, WILLIAM GAMEWELL, 1904-
1. Cobalt-bearing manganese deposits of ... Georgia ... : U. S. Geol. Survey Bull. 940, p. 265-285, illus., 1944. Cobalt-bearing manganese occurrences from Bartow, Floyd, and Polk Cos. are described. Analyses of the cobalt content of the ores are included.

PIERSON, RICHARD EDWIN, 1921-1963.

PIGGOTT, CHARLES SNOWDEN, 1892-
1. The radium content of the Stone Mountain Granite [DeKalb Co.]: Washington Acad. Science Jour., vol. 18, p. 313-316, 1928. A brief summary of the technique employed in the investigation is given; analyses are included. The content varies from 4.013 to 6.757 x 10^-12 gms. radium per gm. of granite.
2. Radium in rocks [Part] 1, The radium content of some representative granites of the eastern seaboard of the United States: Amer. Jour. Science, 5th ser. vol. 17, p. 13-34, illus., 1929; [Part] 2, Granites of eastern North America from Georgia to Greenland, vol. 21, p. 28-36, 1931; (and Merwin, Herbert Eugene). [Part] 4, Location and association of radium in igneous rocks, vol. 23, p. 49-56, 1932. The chemical technique employed is described, and the results are cited. Stone Mountain Granite, from DeKalb Co., is unusually high in its Ra content. The radium is concentrated in the mica minerals. The granite from Stone Mountain is higher in Ra content than any other granite examined. Changes are made in part 2, but the value is still very high. The content of Ra from
Stone Mountain Granite, along with that from other granites, is used to show that the Ra content of granites is higher than that of basic rocks.

PILSBRY, HENRY AUGUSTUS, 1862-1957.

PINSON, WILLIAM HAMET, JR., 1919- see also Ahrens, Louis Herman, 1; Aldrich, Lyman Thomas, 2.
2. (and Ahrens, Louis Herman, and Franck, Mona L.). The abundances of Li, Sc, Sr, Ba, and Zr in chondrites and some ultramafic rocks: Geochemica et Cosmochimica Acta, vol. 4, p. 251-260, London, 1953. Numerous rocks and meteorites are analyzed, among them the Stewart Co. chondrite. The amounts of these rare elements are shown to be relatively uniform throughout, though low, of course; the distribution may be lognormal.

PIRSON, LOUIS VALENTINE, 1860-1919.

POPE, GEORGE S.

PORTER, JOHN BONSALL, 1861-
2. The iron ores and coals of Alabama, Georgia and Tennessee: Amer. Inst. Mining Engineers Trans., vol. 15, p. 170-218, illus., 1887. A general geological description of the region is followed by more detailed descriptions of the occurrence of residual limonite, Silurian oolitic iron ore, magnetite, and specular hematite in various parts of northwestern Georgia. Coal occurrences and limestone are also discussed. Analyses are included.

POSEY, JOHN F.
1. Report upon the topography and epidemic diseases of the state of Georgia: Amer. Medical Assoc. Trans., vol. 10, p. 127-148, 1857; Southern Medical and Surgical Jour. new ser. vol. 14, p. 106-114,
191-202, 1858. Descriptions of the physiography of the Coastal Plain, Piedmont, Blue Ridge, and what is called the limestone region of upper Georgia [the Paleozoic terrane] are given. The nature of the rocks and the resulting topographic expression are described. The origin and location of swamps are described, with the relationships of the swamps to diseases noted.

POSTLEY, OLIVE CLARA, 1882-1941.
2. Oil and gas possibilities in the Atlantic Coastal Plain from New Jersey to Florida: Amer. Assoc. Petroleum Geologists Bull., vol. 22, p. 789-815, illus., 1938. A summary of the stratigraphy and the known structures of the Coastal Plain includes those of southeastern Georgia. Remarks are given regarding certain oil wells which have been drilled.

POULOS, NICK E., see Mitchell, Lane, 8.

POUND, JAMES HANNON, JR., 1932-

POWELL, JOHN WESLEY, 1834-1902.

PRATT, JOSEPH HYDE, 1870-1942.
1. The occurrence and distribution of corundum in the United States: U. S. Geol. Survey Bull. 180, 98 p., illus., 1901; revised . . . Bull. 269, 175 p., illus., 1906. This is a monograph of descriptions of occurrences in many Piedmont and Blue Ridge counties; no details are given, however.
2. (and Lewis, Joseph Volney). Corundum and the peridotites of western North Carolina: North Carolina Geol. Survey, vol. 1, 464 p., illus., 1905. Besides the detailed descriptions of the occurrence of corundum and peridotite in North Carolina, descriptions of occurrences in Georgia are included. Corundum occurs associated with the peridotite belt in the Piedmont and Blue Ridge Provinces of Georgia. Little detail is given. Peridotite bodies, and serpentine, are also described.
products of the area include those from Georgia. Little detail is given.


PRATT, NATHANIEL ALPHEUS, JR., 1834-1906.


2. Report on the Banks [pyrite] Mine, Paulding County, Georgia, Atlanta, November 29, 1883. [not seen] [unpublished?]

3. Chestatee pyrites deposit [Lumpkin Co.]: Amer. Fertilizer, vol. 35, no. 5, p. 44c-44h, illus., 1911. A pyrite vein, 30 feet thick, has been intruded along a contact between mica schist and hornblende gneiss, and is exposed at the surface in the form of gossan. The vein is vertical and has been examined by drilling and by a shaft. The nature of the ore body and its occurrence are described.

PRETTYMAN, THOMAS MANN, 1888-1940.

1. (and Cave, Harold Sergius). Petroleum and natural gas possibilities in Georgia: Georgia Geol. Survey Bull. 40, viii, 167 p., illus., 1923. A general discussion of the origin and occurrence of oil and gas is followed by a discussion of the stratigraphy of the Coastal Plain of Georgia. Well logs are described as are structural features. The prospects for a future petroleum industry in Georgia are not bright.

PRICE, PAUL HOLLAND, 1898-

1. The Appalachian structural front: Jour. Geology, vol. 39, p. 24-44, illus., 1931. General descriptions of the folded rocks to the east of the front and relatively flat rocks to the west are given; Georgia is implied. The nature of the deformation is related to the stratigraphy which in turn is related to the depositional history.

PRICE, WILLIAM ARMSTRONG, 1889-


PRINDLE, LOUIS MARCUS, 1865-1956.

1. (and others). Kyanite and vermiculite deposits of Georgia: Georgia Geol. Survey Bull. 46, ix, 50 p., illus., 1935. A generalized description of the origin and occurrence of kyanite is followed by descriptions of individual deposits, most of which are in the Blue Ridge. It occurs in schist, as placers, and in small veins.
PRIOR, GEORGE THORLAND, 1862-
1. Catalog of meteorites, with special reference to those represented in the collection of the British Museum (Natural History). 196 p., London, British Museum, 1923; revised 1926; appendix, 1927; 2d appendix by Max Hutchinson Hey, 1940. Brief descriptions of the material in the collection are given. Fragments from Cherokee, Whitfield, Monroe, Chattooga, Henry, Stewart, Paulding, Pickens, Wilcox, Putnam, Union, and other counties are present.

PROCTOR, CHARLES A., see Curry, Richard O., 1.

PROUTY, WILLIAM FREDERICK, 1879-1949.
3. Carolina Bays and their origin: Geol. Soc. America Bull., vol. 63, p. 167-224, illus., 1952. The nature of Carolina Bays, some of which are found on the Coastal Plain of Georgia, is described. An origin attributed to shock waves associated with meteorites is offered after much evidence is discussed. They are also associated with an area of great known meteorite occurrence, part of which is in Georgia.

PRUITT, ROBERT GRADY, JR., 1930- see also Barge, Edward Mason, 2, 3.
1. (The) Brevard zone of northeasternmost Georgia [Stephens and Habersham Cos.]. M. S. Thesis, Emory Univ. 1952.

PUMPELLY, RAPHAEL, 1837-1923.
2. An apparent time break between the Eocene and Chattahoochee Miocene in southwestern Georgia: Amer. Jour. Science, 3d ser. vol. 46, p. 445-447, 1893. The basal unit of the Chattahoochee Group is always a limestone conglomerate composed of fragments of the underlying Eocene limestone; the contact of this conglomerate with the underlying formations undulates. "The Eocene rises island-like into the Miocene." This evidence is interpreted as an unconformity. Most of the evidence is from Decatur County.

PURI, HARBANS SINGH, 1925-
1. Stratigraphy and zonation of the Ocala Group: Florida Geol. Survey Bull. 38, 248 p., illus., 1957. A detailed stratigraphic and paleontol-
ogical evaluation of this Eocene group includes some reference to its occurrence in the subsurface of southern Georgia. The Crystal River Formation is present in Decatur and Bacon Counties.

PURINGTON, CHESTER WELLS, 1871-1928.
1. Geological and topographical features of the region about Atlanta, Georgia: Amer. Geologist, vol. 14, p. 105-108, illus., 1894. A generalized description of the Piedmont Province of Georgia is given. A dissected flat area containing monadnocks is described. The monadnocks are recognized as igneous intrusions into now-deeply-weathered Archean metamorphic rocks.

RABBITT, JOHN CHARLES, 1907-1957, see Kaiser, Edward Peck, 1,

RAGOTZKIE, ROBERT A.

RAISZ, ERWIN JOSEPHUS, 1893-
1. Map of the landforms of the United States. Scale, 1 inch to 50 miles, Cambridge, Massachusetts, Harvard Inst. Geographic Exploration, 1939; also later editions. A map showing landforms, mountains, rivers, etc. includes those from Georgia. Generalized features are also named.

RAMDOHR, PAUL.

RAMMELSBERG, KARL FRIEDRICH, 1818-1899.
1. Die chemische Natur der Meteoriten: K. Akademie der Wissenschaften Berlin Abhandlungen 1870, p. 75-160, 1871. The various chemical components and variations are discussed. The Putnam Co. meteorite is described and analyzed. It is virtually pure iron and nickel.

RANKIN, HIRAM S., see Hunter, Charles Eugene, 3.
RANSOME, FREDERICK LESLIE, 1868-1935.


RATH, GERHARD VOM, 1830-1888.


RATHBUN, MARY JANE, 1860-1943.


RAY, DONALD L., see Furcron, Aurelius Sydney, 49

RAY, LOUIS LAMY, 1909-


RAYMOND, PERCY EDWARD, 1879-1952.


RAYMOND, ROSSITER WORTHINGTON, 1840-1918, see also Adelberg, Justus, 1, 2; Hitchcock, Charles Henry, 2.


READ, THOMAS THORNTON, 1880-1947.


READE, ERNEST HERBERT, JR., 1936-

REEDS, CHESTER ALBERT, 1882-

REESIDE, JOHN BERNARD, JR., 1889-1958.
1. Stratigraphic nomenclature in the United States: Internatl. Geol. Cong. 16th, Washington 1933, Guidebook 29, 7 p., illus., 1933. A discussion of stratigraphic philosophy in the United States, intended for foreign visitors, includes time-rock charts of all of the periods. The rocks of Georgia are included on most of the charts.

REHDER, HARALD ALFRED, 1907- see Bartsch, Paul, 1.

REICHENBACH, KARL FRIEDRICH VON., 1788-1869.
1. Ueber die Rinde der meteorischen Eisenmassen: Annalen der Physik und Chemie, [2d ser.] vol. 103, p. 637-644, Leipzig, 1858. A general treatise on the chemical and physical nature of the crust of iron meteorites, resulting from the fall through the atmosphere and subsequent weathering, includes a description of that on the Putnam Co. iron.

REITZ, T. A., DU.
1. The deformation of the Pre-Cambrian peneplain of North America: 225
A map shows the nature and elevation of the Precambrian surface in North America. In Georgia, it rises from below the Coastal Plain to over 1000 feet in the Blue Ridge. No details are included.

RENAUD, CHARLES L.

RENNER, GEORGE THOMAS, JR.
1. The physiographic interpretation of the Fall Line: Geographical Review, vol. 17, p. 278-286, illus., 1927. The origin of the Fall Line of the southeastern United States, including Georgia, is discussed. He concludes that it is due to the intersection of two peneplains, the earlier one having been tilted.
2. The Fall Line of the eastern United States: Science, new ser. vol. 66, p. 356-357, 1927; discussion with title, The Fall Zone Peneplane, by Henry Staats Sharp, vol. 69, p. 544-545, 1929. The graded condition of streams on both sides of the Fall Zone eliminates rock-type resistance-differences as being the major cause of the Fall Zone. The Fall Zone is due rather to the intersection of two peneplains, one of which, tilted, is partly covered by the Tertiary sediments eroded during the formation of the second. Sharp suggests the name Fall Zone Peneplane for the buried one.

RENSHAW, ERNEST WILROY, 1927- see also Cofer, Harland Elbert, Jr., 5.
2. (and Allen, Arthur Thomas, Jr.). Statistical studies of the sandstones within the Lee Group, Lookout Mountain [Dade Co.], Georgia, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 289-295, illus., 1953. Histograms and other statistical data are given to show the sedimentary distinctions between the Sewanee Conglomerate, Bonair Sandstone, and the Rockcastle Sandstone. The Sewanee is distinctly different.

RESSER, CHARLES ELMER, 1889-1943.
4. Faunal content of the Maryville Formation: Smithsonian Misc. Collections, vol. 101, no. 10, 8 p., 1942. Evidence is presented to show that the Maryville Formation in Tennessee is an equivalent of the Conasauga Shale in northwestern Georgia. Fossils are listed.


REYNOLDS, DUMOND STODDART, see Mitchell, Lane, 3.

RICE, WILLIAM ELMER, 1897- see Fieldner, Arno Carl, 1; Harr, Luther, 1.

RICH, JOHN LYON, 1884-1956.


RICHARD, LOUIS M.


2. Geological survey of Macon County, Georgia, with list of minerals. 44 p., illus., Oglethorpe, Georgia, Macon Co. Geol. Survey Committee, 1958. This is a review of the geology and mineral resources of the county. Kaolin is the most important resource present.

RICHARDS, HORACE GARDINER, 1906- see also Cooke, Charles Wythe, 22; Straley, H. W., 3d, 1.

1. Fauna of the Pleistocene Pamlico Formation of the southern Atlantic Coastal Plain: Geol. Soc. America Bull., vol. 47, p. 1611-1656, illus., 1935. Only the Pamlico Terrace in Georgia contains fossils. Vertebrates and invertebrates are reported from Chatham and Glynn Counties. The occurrences are described; the fauna is listed.


4. (The) Atlantic Coastal Plain, its geology and oil possibilities: World Oil, vol. 127, no. 3, p. 44-50, 58, illus., 1947. This is a generalized review of the Coastal Plain which includes cross sections from north to south and from east to west in Georgia. The petroleum potential is discussed.

5. Invertebrate fossils from deep wells along the Atlantic Coastal Plain: Jour. Paleontology, vol. 21, p. 23-37, illus., 1947. A list of
the fauna, mostly mollusks, is given along with references to locations. Many of the locations are from wells along the Atlantic Coastal Plain, although a few are from the Gulf Coastal Plain. Most are illustrated. *Ostrea pectoni*, *Hamulus howelli*, and *Pecten sealegi*, all Cretaceous, from Dougherty Co., are described.

6. Studies on the subsurface geology and paleontology of the Atlantic Coastal Plain: Acad. Natural Science Philadelphia Proc., vol. 100, p. 89-76, illus., 1948. Correlations in the Cretaceous and Cenozoic rocks are made from well-log data. The configuration of the basement surface is discussed as well as is the presence of Paleozoic rocks.

7. The occurrence of Triassic rocks in the subsurface of the Atlantic Coastal Plain: Pennsylvania Acad. Science Proc., vol. 23, p. 45-48, 1949. Sandstone and shale at the bottom of an oil well in Mitchell Co. may be Triassic; diabase was also encountered.


9. (and Straley, H. W., 3d). Geophysical and stratigraphic investigations on the Atlantic Coastal Plain, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 101-115, illus., 1953. An extremely cursory review of the Cretaceous and Cenozoic stratigraphy of the Atlantic Coastal Plain includes Georgia. The petroleum potential is discussed also.

10. Georgia's geology and the life of its past: Georgia Acad. Science Bull., vol. 11, p. 25-31, illus., 1953. This is a popular review of the geological history of the state. The events of each period are described and a brief mention of the common fossils is included.

11. Record of the rocks. xiv, 413 p., illus.; New York, Ronald Press, 1953. A text book of the historical geology of the eastern United States includes some explanations of Georgia geology. No new data are included.


13. (The) Pliocene of Georgia: Georgia Mineral Newsletter, vol. 7, p. 159-162, illus., 1954. This is a semi-popular account of the nature and distribution of Pliocene sediments on the Coastal Plain of Georgia. Lists and illustrations of common fossils are included.


15. (The) Oligocene of Georgia: Georgia Mineral Newsletter, vol. 8, p. 60-64, illus., 1955. This is a semi-popular account of the origin and distribution of Oligocene rocks in the Coastal Plain of Georgia. Fossils are listed, and most are illustrated.


18. Don't write off the Atlantic Coastal Plain: Oil and Gas Jour., vol. 54, no. 52, p. 182-191, illus. incl. port., 1956. A general review of the Cretaceous and Cenozoic geology of the Atlantic Coastal Plain includes Georgia. Cross sections show the relationship of the basement to the overlying sedimentary rocks. Little detail is included.

19. (The) marine Pleistocene of eastern North America: Internatl. Quaternary Cong. 4th, Rome-Pisa 1953, Actes, [vol.] 2, p. 526-528, Rome, 1956. Sangamon interglacial deposits are the earliest recognized along the east coast. The fauna suggests a slightly warmer climate than that which now exists. No paleontological data support the existence of earlier Pleistocene deposits.

20. (and Hand, Bryce M.). Fossil shark teeth from the Coastal Plain of Georgia: Georgia Mineral Newsletter, vol. 11, p. 91-95, illus., 1958. A general description of shark teeth and the Coastal Plain of Georgia is followed by a list of the more important collecting localities. They range in age from Cretaceous to Miocene. Systematic descriptions and illustrations are included.

21. Recent studies on the Pleistocene of the south Atlantic Coastal Plain: Southeastern Geology, vol. 1, p. 11-21, 1959. The terraces of the Coastal Plain, including those in Georgia, are correlated within various states and to those of the Mediterranean Sea. This is a review of current work and few new data are included.

RICHARDSON, GEORGE BURR, 1872-1949.


RICHTER, RUDOLF.


RICKARD, THOMAS ARTHUR, 1864-

RIES, HEINRICH, 1871-1951, see also Watkins, Joel Hill, 3.


2. The clays of the United States east of the Mississippi River: U. S. Geol. Survey Prof. Paper 11, 298 p., illus., 1903. A general discussion of the nature and origin of clay includes detailed descriptions of the occurrence of various types of clay in Georgia. Included are descriptions of residual clay and shale in the Paleozoic terrane and the Cretaceous and Tertiary rocks of the Coastal Plain. Analyses are made.


4. (and Bayley, William Shirley, and others). High-grade clays of the eastern United States . . . : U. S. Geol. Survey Bull. 708, xiv, 314 p., illus., 1922. Descriptions of the occurrence of kaolin on the Coastal Plain of Georgia are included in a general treatise on the occurrence of clay. No new data are included.


7. Clays—their occurrence, properties, and uses . . . . 1st ed., 1906; 2d ed., 1908; 3d ed., 613 p., illus, New York, Wiley, 1927. A complete discussion of the types, nature, occurrence, and use of clay includes descriptions of the kaolin deposits of the Fall Line area in Georgia. No details, save for analyses, are included.

RIGNEY, HAROLD WILLIAM.


RINEHART OIL NEWS COMPANY.

1. Review of Georgia oil development in 1947: Rinehart's Yearbook 1948, [1 p.] 1948. Thirty-two wells have been drilled in the Coastal Plain since 1938. They are summarized, and five drilled in 1947 are reviewed. The total depth of the well and the lithology at the bottom are given.

RIPLEY, HARRIET ERNESTINE, 1872-


ROBERTS, JOSEPH KENT, 1889- see also McGill, William Mahone, 1.

1. William Barton Rogers [1804-1882] and his contribution to the


ROBERTSON, ALMON FULTON.
1. Georgia iron deposits, Cherokee, Bartow, Floyd, and Polk Counties, Part 2: U. S. Bur. Mines Rept. Inv. 4179, 42 p. (†), illus., 1948. Limonite in the residual clay of the Cambrian rocks is described. Holes have been drilled and samples analyzed. Only certain mines in Bartow and Polk Cos. are included.

ROBINSON, HEATH MONTGOMERY, 1890-

ROBINSON, SAMUEL.
1. A catalogue of American minerals with their localities viii, 316 p., Boston, Cummings, Hilliard, and Co., 1825. Each state, including Georgia, has a list of minerals and locations given. The locations are extremely brief. According to this account, Georgia is remarkably poor in minerals.

ROCKWOOD, CHARLES GREENE, 1814-1904.
2. Notices of recent American earthquakes: Amer. Jour. Science, 3d ser. vol. 12, p. 25-30, 1876. An earthquake at Milledgeville, Baldwin Co., is described, as is one which was felt throughout northern Georgia.

RODGERS, JOHN, 1914-
1. Evolution of thought on structure of middle and southern Appalachians: Amer. Assoc. Petroleum Geologists Bull., vol. 33, p. 1643-1654, illus., 1949. This is a general survey of the ideas of persons who have contributed much toward the unravelling of the structure of the Appalachians, including that part in Georgia.
3. (The) clastic sequence basal to the Cambrian System in the central and southern Appalachians, in El Sistema Cambrico, su paleoge-
4. (The) known Cambrian deposits of the southern and central Appalachians, in El Sistema Cambriico, su paleo­geografia y el problema de su base, vol. 2, p. 385-413, illus., Mexico, Internat. Geol. Cong. 20th, 1956. A general­ized review of the Cambrian rocks in the southern Appalachians includes those in Georgia. No new data are included, but the clastic-dolomite contact is noted and considered widespread and important. A paleo­geographic summary is included.

ROGERS, HENRY DARWIN, 1808-1866, see also Rogers, William Barton, 1.


ROGERS, WILEY SAMUEL, 1928-
1. The crystallographic and chemical examination of the crystal forms of titanite [Cobb Co.]. M. S. Thesis, Emory Univ., 1951.

2. (and Lester, James George). Titanite near Kennesaw Mountain, Cobb County, Georgia, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 303-308, illus., 1958. Titanite from pegmatite and from along the borders of other dikes is described chemically, physically, and optically.

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ROGERS, WILLIAM BARTON, 1804-1882, see also Rogers, Henry Darwin, 2.
1. (and Rogers, Henry Darwin). On the physical structure of the Appalachian chain, as exemplifying the laws which have regulated the elevation of great mountain chains, generally: Assoc. Amer. Geologists and Naturalists Repts., p. 474-531, illus., 1843; reprinted in Geology of the Virginias, p. 601-642, illus., 1884; summary, Amer. Jour. Science, vol. 44, p. 359-363, 1843. A general description of the structural geology of the entire Appalachian Mountain System includes the Alabama Division, which embraces northwestern Georgia. The origin of the folds and faults is attributed to large-scale undulations in the earth's crust, similar to the wave-like motion of the earth's surface resulting from earthquakes.

ROMER, ALFRED SHERWOOD, 1894-

ROSE, GUSTAV, 1798-1883.

ROSE, NICHOLAS ANTHONY, 1909-1955, see Spain, Ernest Lynwood, Jr., 1.

ROSENFELD, SIGMUND JUDITH, 1929-
2. Depositional features of an Ordovician laminated limestone in northwest Georgia: Georgia Acad. Science Bull., vol. 13, p. 27-31, illus., 1955. These argillaceous and calcareous laminae are intercalated; they are interrupted or disturbed by breccias, conglomerates, and crumbling. All are described. Calcareous deposition was continuous with the argillaceous material being introduced cyclically. The environment of deposition was quiet.

ROSENKRANS, ROBERT RUSSELL, 1909-

ROSS, CLARENCE SAMUEL, 1880-
4. Welded tuff from deep-well cores from Clinch County, Georgia: Amer. Mineralogist, vol. 43, p. 537-545, illus., 1958. The sequence begins with fine-grained, dacitic volcanic conglomerate which is overlain by rhyolitic welded tuff replaced by laumontite which is in turn overlain by more volcanic conglomerate. They are 4060 feet deep and are only slightly metamorphosed. Photomicrographs are included.

ROWLAND, GERALD LEE, 1928- see Leonard, Frederick Charles, 6.

ROWLANDS, CHARLES EVANS, JR., see also Brown, William Robert, 1.
1. (and Straley, H. W., 3d). Geomagnetics of Savannah [River] Valley, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 119-125, illus., 1953. A small-scale isogam map includes a part of Georgia along the river. There is a magnetic high from Savannah (Chatham Co.) to Wentworth (Screven Co.) which then trends southwestward. The origin is not positively identified.

ROY, RUSTUM, 1924- see Mumpton, Fred Albert, 1.

ROY, SHARAT KUMAR, 1897-
2. (and Wyant, Robert Kriss). The Smithonia [Oglethorpe Co.] meteorite: Field Museum Natural Hist., Geol. Ser., vol. 7, p. 129-134, illus., 1950. This iron meteorite is described and illustrated. An analysis and photographs of the polished surface are given.

RUDEMANN, RUDOLF, 1864-1956, see also Schuchert, Charles, 6.
141-149, illus., 1910. Isles Wisconsin and Adirondack enclose a giant basin which is divided into two basins by the Cincinnati arch. Isle Appalachia extends into Georgia. The eastern basin has been distorted by the Appalachian (or Atlantic) pressures. The symmetry of the whole is stressed.


3. (and Balk, Robert, eds., and others). Geology of North America, vol. 1. 643 p., illus., Berlin, Gebrueder Borntraeger, 1939. This is a symposium-type volume, with each subject of the geology of the United States discussed by a leading authority. Georgia is included, although few new data are given.


RUFIN, EDMUND, 1794-1865.
1. Report of the commencement and progress of the agricultural survey of South Carolina for 1843. 120 p., appendix, 55 p., illus., Columbia, A. H. Pemberton, 1843. The [Eocene] rocks at Shell Bluff, Burke Co., are described, with a view to considering their potential as fertilizer.

RUFINER, WILLIAM HENRY, see Campbell, John Lyle, 1.

RUSCHENBERGER, WILLIAM SAMUEL WAITHMAN, 1807-1895.

RUSSELL, RICHARD JOEL, 1895- see Lester, James George, 8.

SAFFER, PARKE E.

ST. JOHN, F. B., JR.

SALOMON-CALVI, WILHELM.
1. Birlesik Amerika'daki Georgia (Warm Springs) [Meriwether Co.] banyoları şeklinde Türkiye'de desicak banyolar tesin etmek kabil mi?: Maden Tetkik ve Arama Enstitüsü Mecmuası, sene 6, sayı 3/24, p. 353-360, Ankara, 1941 [Turkish with German summary]. A description of the origin and occurrence of the Warm Springs, in Meriwether County, is given in a discussion of the possibility of finding similar phenomena in Turkey.
SALTER, JOHN WILLIAM, 1820-1869.
1. On the fossils of the Lingula-flags or “Zone Primordiale”: Geol. Soc. London Quart. Jour., vol. 15, p. 551-555, illus., 1859. Conocochalus antiquatus is described and illustrated. It is presumably from Cambrian rocks in northwestern Georgia, but no location is given.

SALTPETER, E. W.
1. The Vatican collection of meteorites. 40 p., Vatican City, Specola Vaticana, 1957. Fragments of the Whitfield, Cherokee, Stewart, Putnam, and Union County meteorites are included in this museum. Few data are given.

SAND, LEONARD B., 1922-
1. Mineralogy and petrology of residual kaolins of the southern Appalachian region. Ph. D. Thesis, Pennsylvania State Univ., 1952; (and Bates, Thomas Fulcher). Pennsylvania State Univ. School of Mineral Industries Tech. Rept. 7, 122 p. (†), illus., 1952; summary with title, On the genesis of residual kaolins: Amer. Mineralogist, vol. 41, p. 28-40, illus., 1956. Weathered pegmatites from non-specifically identified locations in the Georgia Piedmont are analyzed along with others from elsewhere to show that the formation of the kaolin minerals (especially hydrated halloysite) is a product of the environment. This has not changed appreciably since early Tertiary times when the commercial deposits were formed.

SANDFORD, KENNETH STUART.

SANDLIN, WALTER LEE, JR., 1935-

SANFORD, SAMUEL, 1867-1927, see also Fuller, Myron Leslie, 3.
1. (and Stone, Ralph Walter). Useful minerals of the United States: U. S. Geol. Survey Bull. 585, 250 p., illus., 1914; (and Schrader, Frank Charles). revised, Bull. 624, 412 p., illus., 1917. An alphabetically arranged list of mineral resources of each state is given; Georgia is included. Brief remarks are included for each entry.

SANTMYERS, REIGART MEREDITH, 1893-

SAY, THOMAS, 1787-1834.
5, p. 225-229, 1827. Scutella 5-faria is described. It is reported from "near Milledgeville" It is probably from Eocene rocks.

SAYLER, NELSON.
1. An outline geological map of Tennessee, including portions of Mississippi, Alabama, and Georgia. Scale, 1 inch to about 20 miles, Cincinnati, E. Mendenhall, 1866. The northwestern part of the crystalline area is mapped as Azoic, the Valley and Ridge as Lower Silurian [Cambrian and Ordovician], and the Appalachian Plateau is considered [Pennsylvanian].

SAYRE, ALBERT NELSON, 1901-

SCHALIE, HENRY VAN DER.

SCHALLER, WALDEMAR THEODORE, 1882-

SCHEPIS, EUGENE LOUIS, 1926-

SCHLEGEL, DOROTHY MC KENNEY.

SCHMIDHUBER, —
1. [Das Vorkommen des Goldes in einem Theil von Georgien und

SCHMITT, WALDO LASALLE.

SCHNEIDERHOEN, HANS, 1887-1962.

SCHOFF, JAMES MORTON, 1911-

SCHOTTENLOHER, RUDOLF.
1. Die Gebirgszunge des nordamerikanischer Kontinents: Geographische Gesellschaft Wien Mittheilungen, vol. 77; nos. 7-9, p. 129-145, illus., 1934. A discussion of the distribution of tectonic elements includes the Appalachian Mountains, some of which are in northwestern Georgia. No specific Georgia information is included.

SCHRADER, FRANK CHARLES, 1860- see Sanford, Samuel, 1.

SCHREIBER, F.
1. A geological map of the N-W portion of Georgia from a survey made in 1844-5. Scale, 1 inch to about 10 miles, Hesse Casse, Germany, [n. p.] [1845?]. A map of uncertain origin in the Library of Congress shows the Paleozoic terrain separated from the crystalline terrane as understood now (1966) with the gold and itacolumnite regions outlined. The map actually shows all of Georgia north of a line from Carroll to Wilkes Counties.

SCHUCHERT, CHARLES, 1858-1942, see also Ulrich, Edward Oscar, 1.
1. On the faunal provinces of the Middle Devonian of America and the Devonian coral subprovinces of Russia, with two paleogeographic maps: Amer. Geologist, vol. 32, p. 137-162, illus., 1903. Devonian elements, especially mountains, in North America in relation to world-faunal provinces are outlined. During Hamilton time, an arm of what is called the Indiana Basin is present in Georgia. Ostracods and corals of this fauna are reported from Floyd Co. from the base
of the Chattanooga Shale. The fauna of the Armuchee Chert is Oriskany in age. Lists are not included.


3. Paleogeography of North America: Geol. Soc. America Bull., vol. 20, p. 427-606, illus., 1910. A detailed discussion of the methods and problems of paleogeography is followed by discussions of correlations, some of which involve Georgia. Small-scale maps are given for most of the epochs, and Georgia is included on these maps. Major structural features are described also.


20. Stratigraphy of the eastern and central United States. 1013 p., illus., New York, John Wiley, 1943. A cursory review of the Precambrian to Cenozoic geologic formations is given. No new data are included. This is a compilation of the stratigraphic understanding to that date.

SCHWARZER, D., see Fireman, Edward Leonard, 1.

SCHWEITZER, R. R.
1. Ground water resources for industry: Manufacturer's Record, vol. 107, no. 5, p. 44, 56, 1938. This is an exhortation for the use of ground water on the Coastal Plain of Georgia as well as elsewhere. The Brunswick Basin is described as an artesian area. Few technical details are given.

SCOTT, WILLIAM BERRYMAN, 1858-1947.

SCROGGS, FRED O.
1. Collecting staurolite crystals in North Carolina and Georgia: Mineralogist, vol. 14, p. 61-62, 1946. This is a popular account of the occurrence of staurolite in Fannin Co. and nearby areas. No details are given.

SELL, EDWARD SCOTT, 1887-

SELLARDS, ELIAS HOWARD, 1875-1961.

SEMMES, DOUGLAS RAMSAY, 1892-

SEMSEY, ANDOR VON, 1833-1923.

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SENTFLE, FRANK EDWARD.
1. (and Thorpe, Arthur Nathaniel). Magnetic susceptibility of tektites and some other glasses: Geochemica et Cosmochemica Acta, vol. 17, p. 234-247, illus., 1959. Numerous tektites, including one from Georgia, are examined. Obsidian has higher susceptibility unless heated to 1450°C, where its susceptibility then becomes similar to that of tektites. Therefore, tektites were probably heated over 1400°C. The tektites must have entered the earth as glass.

SERVOS, KURT.
1. Meteorites in the collections of Yale University: Postilla, no. 27, 24 p., 1956. Fragments of meteorites from Cherokee, Whitfield, Monroe, Chattooga, Henry, Putnam, and Union Cos. are present in this collection. Only the weight is given.

SEVERINGHAUS, NELSON.
1. Problems in the quarrying of Lithonia, Georgia, granite [DeKalb Co.], in Short contributions to the geology, geography, and archaeology of Georgia: Georgia Geol. Survey Bull. 58, p. 80-84, 1950. In an otherwise geographic and technical discussion of granite by-product uses, analyses are given.

SEYBERT, ADAM, 1773-1825.
1. A catalogue of some American minerals, which are found in the different parts of the United States: Philadelphia Medical Museum, vol. 5, p. 152-159, 256-268, 1808. This is one of the first lists of minerals in the United States. Many materials from many places include reference to porcelain clay of the Savannah River [area].

SHALER, NATHANIEL SOUTHGATE, 1841-1906.
1. The national survey and the resources of the southern states: Industrial South, vol. 6, p. 138-135, 1886. This is a general exhortation for a survey of the mineral resources of the southern states, Georgia included.
SHARP, HENRY STAATS, 1902- see also Renner, George Thomas, Jr., 2.

SHAW, DENIS MARTIN, 1923-

SHAW, EUGENE WESLEY, 1881-1935.
1. Ages of peneplains of the Appalachian Province: Geol. Soc. America Bull., vol. 29, p. 575-586, illus., 1918. The floor of the Cretaceous sedimentary rocks on the Coastal Plain dips seaward about 30 feet per mile. The Coastal Plain sediments, if spread evenly over the Appalachian area would form a blanket between 2000 and 5000 feet thick. Therefore, surfaces which are now preserved are not likely to be very old, Tertiary at the oldest, and not Cretaceous.

SHEARER, HAROLD KURTZ, 1889-1946, see also Cooke, Charles Wythe, 2.
1. A report on the bauxite and fuller’s earth of the Coastal Plain of Georgia: Georgia Geol. Survey Bull. 31, xv, 340 p., illus., 1917. A brief review of the geology of the Coastal Plain is followed by descriptions of individual deposits of bauxite and fuller’s earth from the various counties. Sections are measured; analyses are made. The origin of the deposits is also discussed.
2. (and Hull, Joseph Poyer Deyo). (A) preliminary report on a part of the pyrites deposits of Georgia: Georgia Geol. Survey Bull. 33, xii, 229 p., illus., 1918. Pyrite occurs in the Piedmont and Blue Ridge Provinces. It occurs largely in metamorphosed pyrite veins and as limestone replacements. The deposits occur in a diagonal belt from Carroll to Rabun Cos. and in Fannin Co. near Ducktown. Individual deposits are described; analyses are made.
3. Report on the slate deposits of Georgia: Georgia Geol. Survey Bull. 34, x, 192 p., illus., 1918. Slate occurs in Polk, Bartow, Gordon, and Murray Counties. Individual occurrences are described. Sketch maps are included; sections are measured. The slate comes from Cambrian formations. Sericite schist from Pickens Co. is discussed also.

SHEETS, MARTIN MEREDITH.
1. Diastrophism during historic time in Gulf Coastal Plain: Amer. Assoc. Petroleum Geologists Bull., vol. 31, p. 201-226, illus., 1947. Two earthquakes are recorded from the Georgia Coastal Plain; both are minor. Not much other diastrophism is occurring.
SHELDON, PEARL GERTRUDE, 1885-
1. Atlantic slope areas: Palaeontographica Americana, vol. 1, no. 1, 100 p., illus., 1916. Numerous examples of this pelecypod group from the Tertiary formations in Georgia are described and illustrated.

SHEPARD, CHARLES UPHAM, 1804-1886.
3. Report on meteorites: Amer. Jour. Science, 3d ser. vol. 6, p. 402-417, illus., 1848. The Forsyth, Monroe Co., meteorite is used, along with others, as an example in a new classification of meteorites being proposed. It is in Class Stony, Order Trachytic, Section Fine-grained. It is also chemically analyzed.
5. Report on the copper and silver-lead mine at Canton, Cherokee County, Georgia, 2d ed. 20 p., illus., New Haven, Ezekiel Hayes, 1856; 1st ed., Savannah, Georgia, 1855; discussion by Frederick Augustus Genth, with title, A pseudomorph of copper-glance after galena: Amer. Jour. Science, 2d ser. vol. 23, p. 415-417, 1857; reply by author, vol. 24, p. 38-44, 1857; reply by Genth, p. 133. A sulphide-bearing vein has intruded the metamorphic country rock. Chalcopyrite, pyrite, and galena are the main ore minerals. Sphalerite and various manganese-bearing minerals are also present, as are many other rare minerals, some of which are new. Genth and Shepard are bickering over new minerals.
6. Report on the New Bangor Slate Quarry in Polk County, Georgia. 12 p., illus., New Haven, E. Hayes, 1858; Mining Mag., vol. 11, p. 179-185, 1858. A report, prepared as a prospectus, describes the slate deposits in detail. The slate lacks pyrite, but contains a small amount of quartz in veins; otherwise it is pure. Cleavage is excellent.
7. Report on the Pascoe Gold Mine, Cherokee County, Georgia. 15 p., illus., New Haven, E. Hayes, 1858; Mining Mag., vol. 11, p. 136-143, 1858. Gold occurs in quartz veins, but mostly in pyrite which is scattered throughout the area in the local schist. The veins and mines are mapped.
8. On lazulite, pyrophyllite and tetradymite from Georgia: Amer. Jour. Science, 2d ser. vol. 27, p. 36-40, illus., 1859. The occurrence of lazulite from Graves Mountain, in Lincoln Co., is described. Pyrophyllite is an associate. Tetradymite occurs as a gold associate in quartz veins in hornblende gneiss in Lumpkin County. Crystals are illustrated.
9. Report of the Mount Pisgah copper mine in Fannin County, Georgia. 8 p., illus., New Haven, printed by E. Hayes, 1859. A report for a prospectus describes a chalcopyrite-bearing quartz vein in metamorphic rock, called primary slate. The geological circumstances are similar to those at Ducktown, nearby.


11. Composition of meteoric iron from Losttown, Cherokee Co., Georgia, no. 3 of Notices of new meteoric irons in the United States: Amer. Jour. Science, 2d ser. vol. 47, p. 234, 1869. An analysis is given of this meteorite. It has over 95 per cent iron and over 3 per cent nickel.


SHERIDAN, JOHN THOMAS, 1925

SHIELDS, BEULAH ELECTA, see Bartsch, Paul, 1.

SHIMER, HERVEY WOODBURN, 1872-1965
1. Correlation chart of geologic formations of North America: Geol. Soc. America Bull., vol. 45, p. 909-936, charts, 1934. A brief explanation is followed by time-rock correlation charts of all the systems. There is no column for Georgia but Alabama and Tennessee are included.


SHOTTS, REYNOLD QUINN, 1909-
1. (and Cudworth, James Rowland). Some general characteristics of the principle known sulfide deposits of the southern Appalachian and Piedmont area: Alabama Acad. Science Jour., vol. 25, p. 47-53, illus., [1953]. This is a general survey of the occurrence of sulphide bodies in the Piedmont and Blue Ridge. Most are of the “Creighton” type, which (1) are near the contact between a basic metamorphic rock and mica schist, (2) have a younger granitic body nearby, (3) are sometimes associated with gold; the gold, if present, is between the sulphide and granite, and (4) which are seldom, if ever, true fissure veins. Characteristics of other types are discussed also.

SHROCK, ROBERT RAKES, 1904-

SHULER, RAY MC KEE, see Swartz, Joel Howard, 1.

SILLIMAN, BENJAMIN, SR., 1779-1864.

SILLIMAN, BENJAMIN, JR., 1816-1885.

SILVER, LEON T., see Grunenfelder, Marc H., 1.

SIMMONS, WOODROW WILSON, 1912-
1. (and Kingman, Owen, and Laurence, Robert Abraham). Mineral resources index. 24 p., illus., [Amer. Inst. Mining Engineers South-eastern Section], 1952. A list of mineral resources of each of the various states, Georgia included, is given. No new geological data are given.

SIMPKINS, IRWIN F.

SIMPSON, CHARLES TORREY, 1846-1932.
1. On the evidence of the Unionidae regarding the former courses of the Tennessee and other southern rivers: Science, new ser. vol. 12,
Many of the genera and species of the Unionidae in the Alabama River system are found in the Tennessee River system, and many in the Chattahoochee River are found in the Savannah River. The hypothesis of a Tertiary continuity of each of these sets is presented, i.e., that the Tennessee River once was continuous with the Alabama, and that the Upper Savannah was once continuous with the Chattahoochee.

SIMPSON, GEORGE GAYLORD, 1902-

SINGEWALD, JOSEPH THEOPHILUS, JR., 1884-1963.

SINGLETON, M. T., see New England Company, 1.

SINHA, EVELYN ZEPEL.

SINKANKAS, JOHN.
1. Gemstones of North America. xv, 675 p., illus., Princeton, New Jersey, Van Nostrand Co., 1959. A popular account of the origin and properties of gemstones of all sorts includes descriptions of occurrences in each of the states, Georgia included. Most are from the Blue Ridge and Piedmont areas.

SISK, LEON J.
1. All this started from the trickle from a roof: Soil Conservation, vol. 1, no. 2, p. 12-13, illus., 1935. An illustration of Providence Canyon in Stewart Co. is followed by a description of its supposed origin, the runoff from a barn roof in 1855. Little specific detail is included.

SLANIN, BORIS, see Leonard, Frederick Charles, 1.

SLATE, FREDERICK.

SLICHTER, CHARLES SUMNER, 1864-
1. Artesian wells of Savannah [Chatham Co.] Ga., in The motion of underground waters: U. S. Geol. Survey Water-Supply Paper 67, p. 97-101, illus., 1902. The artesian water system of the city of Savannah is cited as an example of the good use of artesian pressure in a paper otherwise devoted to theoretical considerations of the motion of ground water. The Savannah water comes from Cretaceous rocks.
SLOAN, EARLE, 1858-1926.
1. A summary of the mineral resources of South Carolina. 66 p., illus., Columbia, South Carolina Dept. Agriculture, Commerce, and Immigration, 1907; reprinted in Handbook of South Carolina, by E. J. Watson, p. 77-145, illus., South Carolina Dept. Agriculture, 1907. A general description of the geology and mineral resources of the state includes references to some from Georgia, just across the Savannah River. Eocene rocks are described also.
2. Catalog of the mineral localities of South Carolina: South Carolina Geol. Survey, 4th ser. Bull. 2, 505 p., illus., 1908. The exposures in the bluffs along the Savannah River are described. They are Eocene and Miocene in age. Locations are at Silver Bluff, Shell Bluff, Blue Bluff, Griffins Landing, Porters Landing, McBean Creek, and Ebenezer.

SMALL, JAMES BARTER, 1907- see Davis, George Hamilton, 1.

SMALLWOOD, JOE KENNETH, JR., 1936-

SMITH, CARL DAVID, 1879- see also Nacoochee Hydraulic Mining Co., 1.
1. Report of C. K. Jarrett's Gold Mines, located in Nacoochee Valley, [White Co.] Ga. 8 p., Waltons Ford, Georgia, Southern Watchman Power-Press Print., 1870. The structural complexity of the metamorphic country rock is given as the reason for the thinness of the gold-bearing quartz veins which have also been deeply weathered. Hydraulic mining in the saprolite is recommended. Veins and placers are also present.

SMITH, CLIFFORD LEWIS, see Smith, Leon Perdue, 2.

SMITH, EUGENE ALLEN, 1841-1927.
2. (and Johnson, Lawrence Clement and Langdon, Daniel W., Jr.). Report on the geology of the Coastal Plain of Alabama. xxiv, 759 p., illus., Montgomery, Alabama Geol. Survey, 1894. Detailed descriptions of the Cretaceous, Tertiary, and Quaternary formations include some locations in Georgia, generally along the Chattahoochee River. Sections are measured; fossils are listed and illustrated.


SMITH, GEORGE OTIS, 1871-1944.


SMITH, GUY-HAROLD, 1895-.


SMITH, HAROLD THEODORE UHR, 1908- see Thorp, James, 1.

SMITH, JAMES WILLIAM, 1934-.

1. Graded bedding [Gordon Co.] a clue to the existence of the Cartersville Fault: Georgia Mineral Newsletter, vol. 10, p. 53-55, illus., 1957. Graded bedding in the metamorphic rocks indicates that the beds, which dip eastward, are not overturned east of the proposed fault. The metamorphic rocks are most likely pre-Cambrian which overlie the eastward-dipping proposed fault; this predicates a fault.


SMITH, JOHN LAWRENCE, 1818-1883.


2. Description and analysis of a meteoric stone that fell in Stewart County, Ga. (Stewart County Meteorite) on the 6th of October,

3. Notes on the corundum of North Carolina, Georgia, and Montana, with a description of the gem variety of the corundum from these localities: Amer. Jour. Science, 3d ser. vol. 6, p. 180-186, 1873; Académie des Sciences Paris Comptes Rendus, vol. 77, p. 439-442, 1873; in his Original researches . . . , p. 185-191, 1884. The occurrence of corundum and its associates is described. No specific location in Georgia is mentioned in the text. Corundum occurs in chrysolite or serpentine rocks and is associated with many minerals, including chlorite, margarite, zoisite, and andesite.

4. Original researches in mineralogy and chemistry, edited by J. B. Marvin. 401 p., Louisville, John P. Marton and Co., 1884; also an 1873 edition. Reprints of his numerous publications in journals are included.

SMITH, LEON PERDUE, see also Brokaw, Albert Dudley, 1.
   2. Troup County minerals and rocks, chapter 10 of History of Troup County, by Clifford Lewis Smith, p. 82-87, Atlanta, [priv. pub.], 1933. An alphabetical list of rocks and minerals includes a brief description of each. No geographic data are included.

SMITH, PAUL C.
   1. Erosion farm enemy no. 1: Bureau Farmer (Illinois Agric. Assoc. Sec.) vol. 9, p. 15-16, illus., March, 1934. "Story of Providence cave [!Canyon] at Lumpkin [Stewart Co.] Ga., and how the chasm 150 feet deep and nearly 1 mile wide first started as a small gully in 1874 and eventually swallowed up buildings. Losses through soil washing are estimated and reclamation by the C. C. C. is discussed at length."

SMITH, PHILIP SIDNEY, 1877- see McCallie, Samuel Washington, 36.

SMITH, RENA FAYE RITCHEY, see Smith, William Gilleland.

SMITH, RICHARD WELLINGTON, 1898- see also Furcron, Aurelius Sydney, 2, 3; Stose, George Willis, 3.
   1. Sedimentary kaolins of the Coastal Plain of Georgia: Georgia Geol. Survey Bull. 44, x, 482 p., illus. incl. geol. map, 1929. A general description of the properties and uses of kaolin is followed by a brief review of the geological history of the Coastal Plain and then a detailed description of individual deposits, by county. Sections are measured; analyses are made. Most are in Cretaceous rocks; some are in Paleocene and Eocene rocks.
   2. Cyanite in Georgia: Forestry-Geological Review, vol. 2, no. 10, p. 7-8, 1932. This is a popular account of the origin and occurrence of kyanite in Cherokee and Habersham Counties. No new data are included.

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3. Kyanite, vermiculite, and olivine in Georgia: Georgia Geol. Survey Inf. Circ. 3, 4 p., illus., 1934; reprinted from Forestry-Geological Review, vol. 2, no. 12, 1932; vol. 4, nos. 5 and 6, 1934. A cursory review of these materials is given. They occur associated with ultrabasic rocks in the Blue Ridge Province and in the Piedmont. Little detail is included.


7. Shales and brick clays of Georgia: Georgia Geol. Survey Bull. 45, xiii, 348 p., illus. incl. geol. map, 1931; summary, Amer. Ceramic Soc. Jour., vol. 16, p. 36-44, 1933. A general discussion of the various properties of clay and its uses is followed by a review of its occurrence in Georgia. The various shale formations of northwestern Georgia are described, as are individual deposits. Residual and alluvial clays, mostly on the Coastal Plain, are also described along with descriptions of individual deposits. Analyses are included. Bentonite in Ordovician limestone from many places in northwest Georgia is described and analyzed.

8. Rich find of gold nuggets [White Co.]: Forestry-Geological Review, vol. 5, no. 7, p. 8, 1935. Descriptions of several large nuggets and the conditions under which they were found are given.

9. (The) kyanite industry of [Habersham and Rabun Cos.] Georgia: Amer. Inst. Mining and Metallurgical Engineers Tech. Pub. 742, 11 p., illus., 1936; with discussions, ... Trans., vol. 129, p. 520-530, illus., 1938. Kyanite-bearing schists are described. The kyanite is considered to have a metamorphic origin. Much emphasis is placed on mining and milling techniques.

SMITH, WILLIAM GILLELAND, see Smith, Rena Faye Ritchey.

SMITH, WILLIAM LA RUE, 1922-


SMOCK, JOHN CONOVER, 1842-1926.


SNOBBLE, JAMES B., see Wilbur, Robert O., 1.

Snyder, Frank G., 1912- see also Behre, Charles Henry, Jr., 1; King, Phillip Burke, 6; Miser, Hugh Dinsmore, 5.
1. Symposium on mineral resources of the southeastern United States. vii, 236 p., illus., Knoxville, Univ. Tennessee, 1950. Contains numerous papers which are cited individually.

Somers, Ransom Evarts, 1885-
1. Microscopic examination of clays: Washington Acad. Science Jour., vol. 9, p. 113-126, illus., 1919; U. S. Geol. Survey Bull. 708, p. 292-305, illus., 1922. Clays of several types, from different places in the United States, including many different places in Georgia, are analyzed for their mineralogical content. Clay minerals and other forms are noted.

Soper, Edgar Kirke, 1886-
2. (and Osborn, Clarence C.). The occurrence and uses of peat in the United States: U. S. Geol. Survey Bull. 728, x, 207 p., illus., 1922. A general treatise on peat, its uses, and geological control, includes brief references to peat deposits in the Okefenokee Swamp in Effingham County. No details are included.

Sosman, Robert Browning, 1881- see Day, Arthur Louis, 1.

Southeastern Geological Society.
1. Southwestern Georgia. Southeastern Geol. Soc. [Guidebook] Field Trip 2, iii, 63 p. (†), illus., 1944; contains papers by authors which are cited separately.

Southern Gold Company.
1. Prospectus of the Southern Gold Company [Lumpkin Co.] ... , with the report of Professor W[illiam] P[hilips] Blake, also abstracts of Professors Charles T[homas] Jackson and James T[hatcher] Hodge. 15 p., illus., [n. p.], 1859. The property called the Singleton, or Copp's, lot is described cursorily. The occurrence of gold in quartz veins, in placers, and in the saprolite is described. A map shows the distribution of the veins.
SOWERS, GEORGE FREDERICK, see also Conn, William V., 2.

SPANISH, ERNEST LYNWOOD, JR., 1910-1973

SPEIL, SIDNEY, 1917-1989
1. Applications of thermal analysis to clays and aluminous materials: U. S. Bur. Mines Rept. Inv. 3764, 36 p. (‡), illus., 1944. A discussion of the technique and value of differential thermal analyses is followed by curves of examples. Some of the kaolin standards are from Georgia, as are some of the unknown examples. Various mixtures are analyzed.

SPENCER, ARTHUR COE, 1871-1964

SPENCER, JOSEPH WILLIAM WINTHROP, 1851-1921
1. Economic geological survey, in Georgia and Alabama, throughout the belt traversed by the Macon and Birmingham Railway . . . . 86 p., illus., Athens, J. E. Gardner, 1889. The general geology along the line from Macon to Birmingham is described. Precambrian and Cretaceous rocks are encountered in Georgia. Clay is the chief mineral resource present in Georgia.
3. “Southern drift” and its agricultural relations: Univ. Georgia Exper. Sta. Bull. 6, p. 90-94, 1890. This is a semi-popular description of the rocks of the Coastal Plain, explaining why they are different from the rocks of the rest of the state and why the resulting soil and agriculture are different.
4. [Stone Mountain, DeKalb Co.]: Geol. Soc. America Bull., vol. 1, p. 175, 1890. A description of Stone Mountain as an example of a rounded rock surface, due to causes other than glaciation, is given.
5. A general or preliminary geological report on southwest Georgia and report on Polk County: Georgia Geol. Survey Rept. Prog. 1, 1890-91, p. 11-90, 99-128; illus. incl. geol. map, 1891. A complete survey of the Coastal Plain along the Chattahoochee River and eastward is described. Cretaceous to Pleistocene rocks are described; sections are measured. Ground water, phosphate, clay, and limestone are the mineral resources present. A complete description of Polk
Co. is also given. Cambrian to Mississippian rocks are described, and structures explained. Iron ore is the chief mineral resource, and stone and clay are also present. Analyses of the iron ore are included.

6. The Paleozoic group, the geology of ten counties of northwestern Georgia and resources. 406 p., illus. incl. geol. map, Atlanta, Georgia Geol. Survey, 1893. A detailed survey of the Paleozoic rocks and the enclosed mineral resources is given. Folds and faults are described, as is the topography. Sections are measured; analyses are included. Iron, limestone, and clay are the chief economic products discussed.

7. The submarine valleys and canons off the American coast, Chapter 9 of Monograph on the sub-oceanic physiography of the North Atlantic Ocean . . . , by Edward Hull, p. 21-30, illus., London, Edward Stanford, 1912. A chart shows the topography on the continental shelf off of the coast of Georgia. Submarine canyons are shown associated with the Savannah and Altamaha Rivers. The channel between the coast and the Blake [Bahama] Plateau is described. The Plateau is considered a submerged former Coastal Plain. The Savannah and Altamaha submarine canyons are filled with Pleistocene sediments shoreward. They are therefore pre-Pleistocene and indicate great submergence since then.

SPENCER, LEONARD JAMES, 1870-1959.

SQUIRES, DONALD FLEMING.
1. New species of caryophyllid corals from the Gulf Coast Tertiary: Jour. Paleontology, vol. 31, p. 992-996, illus., 1957. Lophelia tubaeformis, from a cherty boulder found in Decatur Co., is described and illustrated. The age is not specified, but it is in the Oligocene Flint River Formation.

STAIR, RALPH, 1900-
1. The spectral-transmissive properties of some of the tektites: Geochemica et Cosmochemica Acta, vol. 7, p. 43-50, illus., London, 1955. Data from spectral ultraviolet, visible, and infrared transmittances of Georgian and other tektites are compared with those of known artificial glasses. The absorption characteristics offer potential means of evaluating formation temperatures, etc.

STANDARD GOLD MINING COMPANY.
1. Prospectus, Standard Gold Mining Company. Dahlonega [Lumpkin Co.]. 47 p., illus., [n. p.] [n. d.] [includes reports by E. T. Henderson and William Smith Yeates]. Brief descriptions of numerous quartz veins in the Lumpkin Co. area are given. Among them are the Singleton and Tahloneka Veins. Few new data are included.
STANLEY-BROWN, JOSEPH, 1858-1941, see also Dall, William Healey, 4, 5, 10, 11.

STANTON, GILMAN S.

STANTON, TIMOTHY WILLIAM, 1860-1953.

STEARNS, HAROLD THORNTON, 1900- see Stearns, Norah Dowell, 1.

STEARNS, NORAH DOWELL, 1891- 
1. (and Stearns, Harold Thornton, and Waring, Gerald Ashley). Thermal springs of the United States: U. S. Geol. Survey Water-Supply Paper 679-B, 206 p., illus., 1936. Several springs in Pike, Meriwether, and Upson Cos., in the vicinity of Pine Mountain, are described in a table, and are on a map. Little detail is included.

STEFANINI, GIUSEPPE, 1882-1933.
2. Relations between American and European Tertiary echinoid faunas: Geol. Soc. America Bull., vol. 35, p. 827-846, illus., 1924. Inference is made to the fauna in Georgia. Many genera in Georgia are in common with Europe, but no common species are recognized.

STEGNER, WALLACE EARLE.

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STENZEL, HENRYK BRONISLAW, 1899-
2. Type invertebrate fossils of North America. 8½ x 11 inch cards, numbered consecutively, illus., Texas Bur. Econ. Geol., [?1943-]. Each card is devoted to an illustrated description of an invertebrate. Many are from the Tertiary of the Coastal Plain of Georgia.

STEPHENSON, LLOYD WILLIAM, 1876-1962. see also Veatch, Jethro Otto, 9.
3. Cretaceous deposits of the eastern Gulf region: U. S. Geol. Survey Prof. Paper 81, p. 1-40, illus., 1914. The Cretaceous rocks of Georgia are correlated with those in the rest of the Gulf region. The Tuscaloosa Formation is considered Lower Cretaceous and is overlain by the Upper Cretaceous Eutaw and Ripley Formations. The fauna is listed.
4. Species of *Exogyra* from the eastern Gulf Region and the Carolinas: U. S. Geol. Survey Prof. Paper 81, p. 41-77, illus., 1914. *Exogyra upatoiensis* new, *E. ponderosa*, *E. erraticostata*, *E. costata*, and *E. c. cancellata* are described and illustrated. They are from different Cretaceous Formations along the Chattahoochee River.
5. (The) Cretaceous-Eocene contact in the Atlantic and Gulf Coastal Plain: U. S. Geol. Survey Prof. Paper 90, p. 155-182, illus., 1915. A generalized description of the regional unconformable contact and the paleontology of these two systems is followed by detailed accounts of several exposures in several states, none in Georgia.
6. (and Dale, Richard Bryant). Preliminary report on Savannah [Chatham Co.] water supply, [Part 1] of Reports on the condition of water supply at Savannah, Georgia, in Savannah. Rept. Mayor of Savannah, p. 1-14, illus., 1915. A description of the ground water circumstances and water-well data are included. The aquifer is in the Oligocene and Eocene limestones below the city. Some of the water is contaminated from surface leakage.
7. (and Veatch, Jethro Otto). Underground waters of the Coastal Plain of Georgia: U. S. Geol. Survey Water-Supply Paper 341, 539 p., illus., 1915. A detailed description of the Cretaceous to Recent stratigraphic units of the Coastal Plain includes a discussion of the water-bearing properties. Each county is discussed separately. Sections are measured; fossils are listed. Analyses and well logs are included.
bacia rotatilis georgiana and M. hilgardii from the Ripley Formation in Quitman Co. are described and illustrated.


10. Correlation of the Upper Cretaceous or Gulf Series of the Gulf Coastal Plain: Amer. Jour. Science, 5th ser. vol. 16, p. 485-496, illus., 1928. The exposed Cretaceous rocks in Georgia are cursorily described and correlated with other Cretaceous sections elsewhere. No new data are included.


12. Structural features of the Atlantic and Gulf Coastal Plain: Geol. Soc. America Bull., vol. 39, p. 887-900, illus., 1929. No details are included. The Coastal Plain is composed of a seaward thickening wedge of Cretaceous and Tertiary sedimentary rocks interrupted only locally by structural deformation. A small scale map shows two axes of warping in Georgia, one along the Chattahoochee River and the other along the Savannah River.


16. Index fossils, with particular reference to the Upper Cretaceous of the eastern United States: Geol. Soc. Japan Jour., vol. 56, p. 89-94, Tokyo, 1950. An address regarding the relationship between stratigraphy and paleontology, with the emphasis placed upon index fossils, includes allusions to the Cretaceous rocks and fossils of Georgia. The genus Exogyra is especially valuable.

Paper 274-J, p. iii, 227-250, illus., 1957. Nine mollusks, one an ammonite, are described and illustrated.

STEPHENSON, MATTHEW F., see also Adelberg, Justus, 1.
1. Geology and mineralogy of Georgia, with a particular description of her rich diamond district . . . . 244 p., illus. incl. geol. map, Atlanta, Globe Pub. Co., 1871. This is a general discussion of the geology of the state. There is little organization, but mineral resources and potentials are described, as are topography, climate, etc. Little space is given to the Coastal Plain.
2. Diamonds and precious stones in Georgia . . . . 32 p., Gainesville, Eagle Job Office, 1878. A general account of the occurrence of diamonds includes a description of their occurrence in Georgia. The relationship of diamond to itacolumite is noted. Diamonds are found as placers in White, Habersham, Hall and Banks Counties. The itacolumite in Hall Co. is made much of. Amethyst, beryl, topaz, quartz, and many other precious and semi-precious stones are discussed.

STERRETT, DOUGLAS BOVARD, 1883-
1. North Carolina, South Carolina, and Georgia, in Monazite and zircon: U. S. Geol. Survey Mineral Resources 1906, p. 1196-1204, 1907. This is a very generalized account of the occurrence of monazite in igneous rocks in Hall and Rabun Counties. Little detail is included.

STEVENS, O. B., see also McCallie, Samuel Washington, 8.

STEVENS, RAY E.

STEVENS, ROLLIN ELBERT, 1905-

STEVENS, JOHN JAMES, 1841-1924.


STEWART, JOSEPH WILLIAM, see also Callahan, Joseph Thomas, 4.
1. (and Counts, Harlan Bryan). Decline of artesian pressures in the Coastal Plain of Georgia . . . : Georgia Mineral Newsletter, vol. 11, p. 25-81, illus., 1958. Figures and graphs are given to demonstrate that the artesian water pressure of the area is diminishing due to increased pumping.

2. Earthquake history of Georgia: Georgia Mineral Newsletter, vol. 11, p. 127-128, table, 1958. A table of major United States earthquakes includes a brief description of those which centered in or were felt in Georgia.


STILLE, HANS, 1876-
1. Einführung in den Bau Amerikas. xx; 717 p., Berlin, Gebrüder Borntraeger, 1940. A survey of the structural geology of North and South America and the United States includes discussions of the tectonics of the Appalachian Mountains, northern Georgia included, but not much.

STOCKDALE, PARIS BUELL, 1896-1962.
1. Some problems in Mississippian stratigraphy of the southern Appalachians: Jour. Geology, vol. 56; p. 264-268, 1948. This is a review of the problems of correlation of the Mississippian formations including those in northwestern Georgia. No new data are included. More field work is needed.

STOKES, HENRY, NEWLIN, 1859-
1. Kaolin [from Georgia side of Savannah River, near Augusta, Richmond Co.] in Miscellaneous analyses, in Report of work done in the division of chemistry and physics . . . 1889-90: U. S. Geol. Survey Bull. 78, p. 120, 1891. A single analysis is given.

STONE, RALPH WALTER, 1876-1964, see Sanford, Samuel, 1.

STONE, ROSS CONWAY.
1. The gold mines, scenery and climate of Georgia and the Carolinas
... for the Atlanta and Charlotte Air Line Railway Company. 40 p., illus., New York, Natl. Bank Note Co., 1878. A guide to the resort area of the Piedmont and Blue Ridge includes discussions and descriptions of the gold-bearing regions. Little technical information is included.

STOSE, ANNA ISABEL JONAS, 1881- see Jonas, Anna Isabel; Stose, George Willis, 6, 9, 10; White, William Alexander, 3.

STOSE, GEORGE WILLIS, 1869-1960, see also White, William Alexander, 3.
1. Manganese ores of the southern states: Engineering and Mining Jour., vol. 110, p. 256-262, illus., 1920. A cursory review of the occurrence of manganese includes those deposits from northwestern Georgia. The ore occurs as oxides in residual deposits in Cambrian rocks. No new data are included.
2. Geologic map of the United States. Scale, 1 inch to 2,500,000 inches, 4 sheets, U. S. Geol. Survey, 1932; southern Appalachian portion revised and reprinted in U. S. Geol. Survey Prof. Paper 213. A complete map of the United States includes Georgia which is on the southeastern quarter sheet.
4. Source beds of manganese ore in the Appalachian Valley: Econ. Geology, vol. 37, p. 163-172, 1942. The residual manganese ores in northwestern Georgia came from the alteration of a manganese-rich zone at the contact of quartzite with the overlying dolomite. The manganese-rich zone was deposited upon the old land surface of the quartzite. Georgia is implied.
5. (and others). Geologic map of Georgia. Scale, 1 inch to 500,000 inches, Georgia Geol. Survey and U. S. Geol. Survey, 1939; Coastal Plain portion reprinted in U. S. Geol. Survey Bull. 941, 1943.
6. (and Stose, Anna Isabel Jonas). (The) Chilhowee Group and Ocoee Series of the southern Appalachians: Amer. Jour. Science, vol. 242, p. 367-390, 401-416, illus., 1944. A regional study includes the Blue Ridge Province of Georgia and a part of the Piedmont Province. The Ocoee Series (late Precambrian) is largely metamorphic rocks but with some igneous intrusions. The series is overthrust toward the northwest and overlies the Chilhowee Group (Cambrian). The Ocoee Series is correlated with the Talledega Series elsewhere in Georgia and Alabama. Numerous formations are involved.
9. (and Stose, Anna Isabel Jonas). Ocoee Series of the southern Appalachians [Blue Ridge]: Geol. Soc. America Bull., vol. 60, p. 267-520, illus. incl. geol. map, 1949. The Ocoee Series, Precambrian in age, is composed of metamorphosed sedimentary rocks which have been folded and thrust faulted. The rocks and structures are
described from the Blue Ridge area of Georgia and elsewhere. The overlying Cambrian and Ordovician rocks, adjacent to the overthrusts, are also described.


STOW, MARCELLUS HENRY, 1902-1957.

STRACHAN, CLARICE B.

STRALEY, H. W., 3d, 1905- see also Brown, William Robert, 1; Burdick, Glenn A., 1; Johnson, W. Ray, Jr., 1; McClain, Donald Schofield, Jr., 4; Richards, Horace Gardiner, 8, 9; Rowlands, Charles Evans, Jr., 1; Tucker, Charles V., Jr., 1.
2. Geomagnetic profiles along the Savannah River, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 115-119, illus., 1953. Magnetic highs and lows are recorded and are compared with similar features toward the northeast. Basement lithologic differences are interpreted as the causes in part.
3. Some [Burke Co.] Georgia Carolina Bays, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 130-132, 1953. Two closed magnetic highs were detected associated with some circular depressions considered to be Carolina Bays. One is associated with one "bay" and the larger high is associated with a number of overlapping "bays." The depth to the source of the anomaly is between 1400 and 2400 feet.
STRALEY, H. W., 4th, see Johnson, W. Ray, Jr., 1.

STRALEY, WILLIAM FOREST, see Johnson, W. Ray, Jr., 1.

STRINGFIELD, VICTOR TIMOTHY, 1902-


2. Groundwater in the southeastern states: Amer. Water Works Assoc. Southeastern Div. Jour., vol. 9, p. 58-70, illus., 1940; discussions, p. 70-74. The importance, general conditions, and problems of groundwater in the southeastern United States, including Georgia, are cursorily discussed. No new data are given.

3. (and Warren, Moultrie Alfred, and Cooper, Hilton Hammond, Jr.). Artesian water in the coastal area of Georgia and northeastern Florida: Econ. Geology, vol. 36, p. 698-711, illus., 1941. The Eocene Ocala Limestone is the greatest of the reservoirs. Most wells using it along the coast are artesian except those around Savannah. Piezometric maps are given, along with analyses. Over 180 million gallons per day are withdrawn.

4. Ground-water geology in the southeastern United States, in Snyder, Frank G., ed., Symposium on mineral resources of the southeastern United States, p. 211-222, illus., 1950. A very generalized review of the geology of the various provinces including those in Georgia, is given. A brief survey of the ground water potential is included. No new data are included.

5. (and Cooper, Hilton Hammond, Jr.). Geologic and hydrologic factors affecting perennial yield of aquifers.: Amer. Water Works Assoc. Jour., vol. 43, p. 803-816, illus., 1951. Various factors effecting yields in aquifers are discussed, as are generalized principles of ground water movement. A small-scale piezometric surface map of southeastern Georgia is included. No new data are given.


STROMER, ERNST, 1871-


STUART, ALFRED WRIGHT, 1932-


2. Dolomitic limestone and shale in the Fairmount area [Gordon Co.]: Georgia Mineral Newsletter, vol. 9, p. 85-89, illus. incl. geol. map, 1956. Dolomitic limestone and shale in the Conasauga Formation are analyzed chemically and petrographically. A detailed measured
section is included, as is a map showing the distribution of various deposits.


STUCKEY, JASPER LEONIDAS, 1891-
2. Talc, soapstone, and pyrophyllite in the southeastern United States, in Snyder, Frank G., ed., Symposium on mineral resources of the southeastern United States, p. 112-119, illus., 1950. A general description of the origin and occurrence of these materials includes brief references to those in Georgia. Most are in the Piedmont.

STULL, RAY THOMAS, 1875- see also Maynard, Thomas Poole, 7.
1. Distribution of kaolinite and bauxite of the Coastal Plain of Georgia: Amer. Ceramic Soc. Jour., vol. 7, p. 513-522, illus., 1924. Kaolin and desilicated kaolin, bauxite, occur as sedimentary lenses in the Cretaceous rocks of Georgia. Their origin and distribution are described as is their relationship to each other. The kaolin was deposited in the sea after transposition from the Piedmont area, and hydraulic separation.

SULLIVAN, EUGENE CORNELIUS, 1872-

SULLIVAN, JOHN WENTWORTH.
1. (The) geology of the Sand-Lookout Mountain area, northwest Georgia: Georgia Geol. Survey Inf. Circ. 15, 68 p. (†), illus., 1942. A complete geologic description of the area is given. Ordovician to Pennsylvanian rocks are described. Sections are measured; fossils are listed. Folds are the dominant structure. Coal, clay, iron ore, bentonite, and stone are the chief mineral resources.
2. (An) occurrence of concretions in the Pottsville of [Dade Co.] Georgia: Jour. Geology, vol. 50, p. 209-212, illus., 1942. The concretions are in a sandy shale zone in the [Gizzard Formation]. They are elliptical, with central cores 3 to 8 feet in diameter. They are possibly a result of the ground water precipitating material in an area formed by a fortuitous combination of bedding planes and joints.

SUMNER, JAMES BATCHELLER, 1887-1955.

SUN, Y. C., 1897-
SUTHERLAND, WILLIAM JAMES, 1865-1914.
1. Physiography of the Gulf Coastal Plains: Jour. Geography, vol. 6, p. 337-347, 1908. A very generalized geological history is given, which is followed by a review of the various physiographic features and materials. Hardly any detail is included for Georgia, however.

SWANSON, KATHERINE LUTZ, see McKelvey, Vincent Ellis, 2.

SWANSON, VERNON EMANUEL, 1922-
1. Uranium in marine black shales of the United States: Internatl. Conference on Peaceful Uses Atomic Energy [1st], Geneva 1955, Proc., vol. 6, p. 430-434, 1956; U. S. Geol. Survey Prof. Paper 300, p. 451-456, illus., 1956. This is a very generalized survey which incudes a discussion of the Chattanooga Shale, some of which is in Georgia. The uranium in the shale is a result of absorption, by the organic material in the original mud, of the uranium salts in solution in the sea.

SWARTZ, CHARLES KEPHART, 1861-1949.

SWARTZ, FRANK MC KIM, 1899-

SWARTZ, JOEL HOWARD, 1893-
1. (and MacCarthy, Gerald Raleigh, and Shuler, Ray McKee). A magnetic survey of the southern part of Georgia: U. S. Geol. Survey Repts. Open File 355, 128 p. (†), illus., [1956]. Twelve traverses along roads, with reading intervals of about one mile are made; about 2/3 of the state is covered. The data are presented on tables showing miles, station number, vertical intensity in gammas, and remarks.

SWICK, CLARENCE HERBERT, 1883-
SWINEFORD, ADA, see Mumpton, Fred Albert, 1.

SWINNERTON, ALLYN COATS, 1897-1952.


TABER, STEPHEN, 1882-1963.

1. The earthquake in the southern Appalachians: Seismol. Soc. America Bull., vol. 6, p. 218-226, illus., 1916. A large earthquake, centering in North Carolina, was recorded in southern Georgia. Another is recorded southeast of Atlanta, with an intensity of VI.

2. Gold crystals from the southern Appalachians: Amer. Mineralogist, vol. 33, p. 482-488, illus., 1948. Small crystals of gold in quartz from White Co. are reported. Each is 3 to 4 mm. in diameter, but the faces are so imperfect that the crystal forms could not be determined for certain. They are produced in cavities.


TAGGART, MILLARD SEALS, JR., 1909- see Buckley, Stuart Edward, 1.

TAPPAN, HELEN NINA, see Loeblich, Alfred Richard, Jr., 1.

TATHAM, WILLIAM.

1. Gold mining in Georgia: Franklin Inst. Jour., vol. 146, p. 19-26, 1898. This is an extremely cursory description of some of the gold deposits in the Blue Ridge and Piedmont. The gold occurs in quartz veins associated with galena, pyrite, chalcopyrite, and sphalerite. The quartz veins are in fissures in metamorphic rocks. Local details are described, but no new data are included.

TATTON, M.


TAYLOR, ARTHUR ELIJAH, 1877-.


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TAYLOR, FRANK HAMILTON, 1846- see Morris, Charles E., 1.

TAYLOR, JAMES WICKES, 1819-1893 see also Browne, John Ross, 1.

TAYLOR, JOSEPH H.
1. Pyrite and pyrrhotite resources of Ducktown, Tenn. [and Fannin Co.]: Amer. Inst. Mining Engineers Bull. 134, p. 529-533, 1918; . . . Trans., vol. 59, p. 88-92, 1918. Pyrite and pyrrhotite occur in lenticular bodies, more or less connected. Some are found in Georgia. Generalized analyses are included.

TAYLOR, WILLIAM JOHNSON.

TEAGUE, KEFTON HARDING, 1920- see also Broadhurst, Sam Davis, 1; Furcron, Aurelius Sydney, 7, 10, 11, 12, 13; Hash, Lewis J., 1; Hull, Joseph Poyer Deyo, 1.
2. Georgia talc industry [Murray Co.] helped by geologic study: Engineering and Mining Jour., vol. 147, no. 11, p. 63-65, illus., 1946. A description of the talc occurrence, derived from the alteration of impure dolomitic limestone of Precambrian age, is given. The talc bodies occur in granite or granite gneiss. Talcose schist is also present.
3. (and Furcron, Aurelius Sydney). Geology and mineral resources of Rabun and Habersham Counties, Georgia. Map, scale, 1 inch to 126,720 inches, Georgia Geol. Survey and Tennessee Valley Auth., 1948. A single map sheet shows the geology contacts and locations of twenty different mineral resources.
TEAS, LIVINGSTON PIERS, 1893- see also Hull, Joseph Poyer Deyo, 1.

1. Preliminary report on the sand and gravel deposits of Georgia: Georgia Geol. Survey Bull. 37, xiii, 392 p., illus., 1921. A general discussion of the nature of sand and gravel, both physical and chemical, uses and production, is followed by a discussion of their distribution in Georgia. The individual deposits in each county are described. Sections are measured.


3. Singing sands [Upson Co.]: Georgia Geol. Survey Bull. 37, p. 378-380, 1921; Georgia Mineral Newsletter, vol. 8, p. 21-22, 1955. The sand at Thunder Spring makes noise when rubbed or walked upon. The sound is due to the sand grains rubbing together, with the presence of mica adding to the sonorousness.

TEILHARD DE CHARDIN, PIERRE, 1881-1955.


TELLER, JAMES DAVID.


TENNEY, WILLIAM J.

1. Gold deposits in South Carolina and Georgia [abs.]: Mining Mag., vol. 1, p. 628-629, 1853.


THEIS, CHARLES VERNON, 1900-

1. Savannah River site, in A review of the ground-water geology of the major waste-producing sites: U. S. Atomic Energy Comm. Rept. T I D--7517, pt. 1a, p. 126-131 (♀), illus., 1956. A very general review of the Cretaceous and Tertiary rocks of Burke and Richmond Cos. is followed by a discussion of the ground water and its movement in the area. The Tuscaloosa Formation is the major aquifer; waste disposal is allowed to seep into the overlying Tertiary rocks.

THOENEN, JOHN ROY, 1886-


THOM, WILLIAM TAYLOR, JR., 1891-


3. Tectonic sketch map of North America, showing regional structural features and approximate configuration of surface of basement complex. Scale, 1 inch to 10,000,000 inches, Red Lodge, Montana, Yellowstone-Big Horn Research Assoc., 1959. Georgia has the Appalachian Trough in the northwestern portion and the Okefenokee Lineament running northward from the Okefenokee Swamp through the Albany, Dougherty Co., area.

THOMAS, HENRY DIGHTON.

THOMPSON, RAYMOND MELVIN, 1918- see also Warren, Walter Cyrus, 1.

THOMPSON, THOMAS GORDON, 1888-

THOMSON, MEDFORD THEODORE, 1904- see also Herrick, Stephen Marion, 2.
2. (and Herrick, Stephen Marion, and Brown, Eugene). The availability and use of water in Georgia: Georgia Geol. Survey Bull. 65, xiii, 329 p., illus., 1956. A generalized discussion of the occurrence of water includes ground water. The nature of its occurrence, artesian wells, etc., are discussed cursorily. Analyses of water from wells in Coastal Plain rocks are included.

THORP, JAMES, 1896-
1. (and Smith, Harold Theodore Uhr, chairmen, and others). [Map of] Pleistocene eolian deposits of the United States, Alaska, and parts of Canada, 2 sheets. Scale, 1 inch to 2,500,000 inches, (1 inch to about 40 miles) Geol. Soc. America and Natl. Research Council, 1952. Much of the terrace material along the Atlantic Coast is mapped as eolian, as is a narrow band of sand dunes, running roughly east to west, in the south western portion of the state.

THORPE, ARTHUR NATHANIEL, see Sentfle, Frank Edward, 1.

TINGLE, WOODROW WILSON.
TODD, JOHN DAVID.
1. What's wrong with the eastern Gulf Coast?: Oil Weekly, vol. 123, no. 3, p. 89-91, illus., 1946. A survey of the general geology of the Coastal Plain is included. Large tectonic features in Georgia are shown on a structural contour map on the top of the Cretaceous System.

TODD, MARGARET RUTH, 1913-

TOLER, HENRY N.

TOMKINS, IVAN R.
1. The Georgian oyster: Nature Mag., vol. 40, p. 432, 444, illus., 1947. This is a popular description of Shell Bluff in Burke County.

TORBERT, JOHN BRYANT, 1867-1929.
1. (and McGee, W J). Geological map of the United States showing the distribution of Pleistocene ice-work and water work so far as known. Scale, 1:15,000,000, in Johnson's Universal Cyclopaedia, vol. 3, following p. 796, New York, A. J. Johnson and Co., 1895.

TOULMIN, LYMAN DORGAN, JR., 1904-
1. Volume of Cenozoic sediments in Florida and Georgia: Geol. Soc. America Bull., vol. 63, p. 1165-1176, illus., 1952. Cenozoic rocks have a maximum thickness of 3000 feet and an average thickness of 1500 feet, and are under 23,000 square miles of southern Georgia. The total volume is 9500 cubic miles.
3. (and Winters, Stephen Samuel). Pre-Eocene solution features in southeast Alabama and southwest Georgia: Florida State Univ. Studies, no. 13, p. 72-83, illus., 1954. Solution pits in Paleocene Clayton Limestone in Clay Co. are described. They are filled with Tuscaloosa and Nanafalia Sandstone, indicating a pre-Eocene age for the pits. Natural bridges are also present, but their age is indeterminate.
1955. A detailed discussion includes much data from the Coastal Plain of Georgia. Paleocene to post-Miocene rocks are described and correlated.

1. Geology of some American estuarine harbors [Chatham Co.]: Amer. Soc. Civil Engineers Proc., vol. 82, Paper 956, (Jour. Hydraulics Div., no. HY 2.), 18 p., illus., 1956. Savannah harbor is the result of post-glacial sea level rise. When it was artificially deepened, the sedimentation regimen was changed. The sediments are in part deposited by tidal currents because the heavy minerals in the harbor are not from the Savannah River drainage basin.

TRAYLOR, HENRY GRADY, 1925-1951.

TROEDSSON, GUSTAF TIMOTEUS, 1891-1954.

TROWBRIDGE, ARTHUR CARLTON, 1885-1951.
2. Mississippi River and Gulf Coast terraces and sediments as related to Pleistocene history—a problem: Geol. Soc. America Bull., vol. 65, p. 793-812, illus., 1954. The geology of the marine terraces on the Georgia Coastal Plain is reviewed. They are thought to be predominantly the result of tectonic uplift rather than by progressively decreasing sea level.

TROXELL, JOHN RUTMAN.
1. Exploration of Lookout Mountain and Sand Mountain coal deposits, Dade and Walker Counties, Georgia: U. S. Bur. Mines Rept. Inv. 3860, 10 p. (†), illus., 1946. Columnar sections in Pennsylvanian rocks, derived from core drilling, are analyzed. Four coal seams are identified, and analyses are included.

TRUESDELL, G. C., see Klinefelter, Theron Albert, 1.

TRUMBULL, JOHN, see Johnston, John Edward, 1.

TRUXES, LEE SAYLES, 1927-1951.
TUCEK, CHARLES S., see Broecker, Wallace S., 1.

TUCKER, CHARLES V., JR.

TUCKER, HELEN IONE, also as Tucker-Rowland, Helen Ione.
2. The Atlantic and Gulf Coast Tertiary Pectinidae of the United States, sec. 3, systematic descriptions: Musée Royal d'Histoire Naturelle Belgique Mém., 2d ser. vol. 13, 76 p., illus., Brussels, 1938. Chlamys alpha and C. suwaneensis from “Oligocene” rocks in Decatur Co. are described and illustrated along with many others from elsewhere in the United States.

TUFFT, H. E.

TUREKIAN, KARL K.
1. (and Kulp, John Laurence). The geochemistry of strontium: Geochimica et Cosmochimica Acta, vol. 10, p. 245-296, London, 1956. Numerous analyses of many rocks and minerals from many different places include some from Georgia. The Sr content is determined. Granite from Little Stone Mountain has 19 p p m Sr, and granite from Black Ledge has 67 p p m Sr. The locations are not specified.

TURNER, FRANCIS EARL, 1905- see Stenzel, Henryk Bronislaw, 1.

TURNER, PHILIP AMBROSE.

TURENTINE, JOHN WILLIAM, 1880-
1. Potash. 188 p., illus., New York, Reinhold, 1926. A generalized discussion of the origin, occurrence, and development of potash-bearing minerals in the world includes a brief discussion of high-potassium slates near Cartersville, Bartow County.

TWENHOFEL, WILLIAM HENRY, 1875-1957.
The Ordovician rocks of northwestern Georgia are included in a time-rock correlation chart. A brief description is included.

TWENHOFEL, WILLIAM STEPHENS, 1918-

TWITCHELL, MAYVILLE WILLIAM, 1868-1927, see also Clark, William Bullock, 3.

TYLER, PAUL MC INTOSH, 1889-

UCHIYAMA, AIJI, see Goldberg, Edward D., 1.

ULRICH, EDWARD OSCAR, 1857-1944.
1. (and Schuchert, Charles). Paleozoic seas and barriers in eastern North America: New York State Museum Bull. 52, p. 633-668, illus., 1902. The paleogeography of the Appalachian Geosyncline area is discussed, including that of northwestern Georgia. The differences in the rock types are attributed to a provenance from different barriers, which were the result of folds. A generalized sketch map shows the relationships.
2. Revision of the Paleozoic Systems: Geol. Soc. America Bull., vol. 22, p. 281-680, illus., 1911; Index, vol. 24, p. 625-668, 1913. Worldwide evidence is used to support the presence of the Canadian and Ozarkian Periods between the Cambrian and Ordovician Periods and the Waverlyan and Tennessean Periods between the Devonian and Pennsylvanian. In northwestern Georgia, the Knox Formation is Ozarkian and Canadian in age; the Chattanooga Shale and Fort Payne Chert are Waverlyan and the Floyd Shale and limestone correlative's are Tennessean. Paleontological data are used a great deal.
3. The Ordovician-Silurian boundary: Internatl. Geol. Cong. 12th, Canada 1913, Comptes Rendus, p. 593-667, illus., Ottawa, 1914. A general discussion of the stratigraphic and paleontological criteria used is followed by small-scale paleogeographic maps showing the
distribution of the various units adjacent to the boundary. Georgia is included on the maps.

4. (and Bassler, Ray Smith). American Silurian formations: Maryland Geol. Survey, Silurian, p. 233-270, illus., 1923. A generalized review of the Silurian formations includes cursory descriptions and correlation of those from Georgia. No details are given, although small-scale paleogeographic maps are included.

5. (and Bassler, Ray Smith). Arthropoda, in Systematic paleontology: Maryland Geol. Survey, Silurian, p. 500-718, illus., 1923. The ostracodes Zygobolbina conradi and Mastigobolbina lata are reported from the Silurian rocks in Floyd County. They are described and illustrated.

UNITED STATES BUREAU OF MINES.
1. Materials survey, bauxite. irreg. paged, illus., 1953. Analyses of bauxite from Wilkinson Co. are included and very cursory descriptions of the occurrence of bauxite on the Coastal Plain and in northwestern Georgia are cited.

UNITED STATES GEOLOGICAL SURVEY.
1. [Map of] Mineral resources of the Tennessee River Basin and adjoining areas. Scale, 1 inch to 500,000 inches; U. S. Geol. Survey, 1933 [not seen].

UPHAM, WARREN, 1850-1934.

VANDERHOOF, VERTRESS LAWRENCE, 1904-1964. see Camp, Charles Lewis, 1.

VAN DER MEULEN, PETER ANDREW, 1891-

VAN HISE, CHARLES RICHARD, 1857-1918.
1. Correlation papers—Archaean and Algonkian: U. S. Geol. Survey Bull. 86, 549 p., illus., 1892. The literature dealing with the Precambrian rocks in Georgia is reviewed.

VAN HORN, EARL C., see also Hash, Louis J., 1.
1. Talc deposits of the Murphy Marble Belt: North Carolina Div. Mineral Resources Bull. 56, vii, 54 p., illus. incl. geol. map, 1948. A small portion of the northern part of Fannin Co. is included. Numerous metamorphosed sedimentary formations of unspecified age are mapped. The talc occurs as hydrothermally-introduced solutions into the impure marble, although none is found in Georgia. The marble is conformable with Precambrian (?) Ocoee rocks. The rocks are much deformed, and new stratigraphic-structural interpretations are made.

VANUXEM, LARDNER.
1. Geological observations on the Secondary [Mesozoic], Tertiary, and Alluvial [Quaternary] formations of the Atlantic Coast of the United States of America, arranged from the notes of Lardner Vanuxem by Samuel George Morton: Acad. Natural Science Philadelphia Jour., vol. 6, p. 59-71, 1829; correction, foot-note, p. 107. What had theretofore been called and mapped as Alluvial is broken into the three recognizable units. The Cretaceous of Georgia is alluded to because of fossils, but no locations are known. Shell Bluff in Burke Co. is recognized as being composed of Eocene rocks. The red-earth portion of the Ancient Alluvial [Pliocene] is common, and the modern Alluvial [Pleistocene] contains the large mammal fragments.

VAN VALKENBURG, SAMUEL.

VAUGHAN, THOMAS WAYLAND, 1870-1952.
2. (A) Tertiary coral reef near Bainbridge, [Decatur Co.] Georgia: Science, new ser. vol. 12, p. 873-875, 1900. A cursory description of what are called Oligocene rocks is given. About twenty-five or thirty species of coral are present. The tentative identification of the genera is included. They occur in cherty limestone.
5. Fuller's earth of southwestern Georgia and western Florida: U. S. Geol. Survey Mineral Resources 1902, p. 922-934, 1902. Descriptions of the occurrence of the clay from Decatur Co. are given. Sections are measured; analyses are included.

6. Fuller's earth deposits of Florida and [Decatur Co.] Georgia: U. S. Geol. Survey Bull. 213, p. 392-399, 1903. Descriptions and analyses of the clay are given; no geology is included. The age is considered upper Oligocene.


10. Fossil corals from Central America, Cuba, and Porto Rico, with an account of the American Tertiary, Pleistocene, and Recent coral reefs, in Contributions to the geology and paleontology of the Canal Zone . . . : U. S. Natl. Museum Bull., vol. 103, p. vi, 189-524, illus., 1919. A detailed discussion of the geological history of the southeastern states includes Georgia. Eleven genera and species of corals from the Oligocene [Tampa] Limestone in Decatur Co. are described and illustrated. Others from limited exposures in southern Georgia are also present. These are in the earliest known reefs in the United States.

11. American and European Tertiary larger Foraminifera: Géol. Soc. America Bull., vol. 35, p. 785-822, illus., 1924. A comparison of the genera and species includes descriptions and discussions of many Foraminifera which come from the Georgia Coastal Plain. Many genera and some species are common to both continents.

12. Criteria and status of correlation and classification of Tertiary [and Quaternary] deposits: Geol. Soc. America Bull., vol. 35, p. 677-742, tables, 1924. The history of the subdivision of Cenozoic deposits from Europe is followed by an enumeration of the various stages as they are now understood. The American Coastal Plain Cenozoic formations are correlated with one another and with those of Europe. The rocks in Georgia are included.


VAUGHN, WILLIAM HARRY, see Henry, Arthur Van, 1.
VEATCH, ARTHUR CLIFFORD, 1878-1938, see Fuller, Myron Leslie, 1.

VEATCH, JETHRO OTTO, 1883- see also McCallie, Samuel Washington, 24; Stephenson, Lloyd William, 7, 14.

1. The term "colluvial" as applied to clay deposits: Science, new ser. vol. 24, p. 782, 1906. The term is used to include clay deposits which originated by being transported to the base of slopes in low areas by various agents.

2. Kaolin mining in [Twiggs Co.] Georgia: Engineering and Mining Jour., vol. 83, p. 278-279, illus., 1907. A general discussion of the industry at Dry Branch includes cursory descriptions of the Cretaceous rocks containing the kaolin and the kaolin itself. Analyses are included also.


4. Altamaha Formation of the Coastal Plain of Georgia: Science, new ser. vol. 27, p. 71-74, 1908. A general description of this clastic formation is given. It is correlated with the Lafayette Formation of Pliocene age.

5. (The) kaolins of the Dry Branch region, [Twiggs Co.] Georgia: Econ. Geology, vol. 3, p. 109-117, illus., 1908. The occurrence of the sedimentary clay in Cretaceous sedimentary rocks is described. It occurs in massive lenses and was deposited as clay in quiet lakes and ponds by sediment-choked, rejuvenated streams.

6. (A) new discovery of bauxite in [Wilkinson Co.] Georgia: Engineering and Mining Jour., vol. 85, p. 688, 1908. A horizontal blanket of pisolithic bauxite is reported from the Cretaceous Tuscaloosa Formation. Analyses are included.

7. Second report on the clay deposits of Georgia: Georgia Geol. Survey Bull. 18, 453 p., illus. incl. geol. maps, 1909. A general discussion of the classification, origins, and chemistry of clays is followed by a discussion of their geological distribution in Georgia. Generalized discussions of the Coastal Plain formations are given as well as of those in northwestern Georgia. Individual deposits are described; analyses are included, as is a discussion of a bauxite occurrence in Wilkinson County.

8. Graphite in vein quartz [Troup Co.]: Science, new ser. vol. 33, p. 88, 1911. The occurrence of tiny flakes of graphite in vein quartz is described. Graphite comprises 2-3 percent of the rock. The igneous origin of the rocks is demonstrated.


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VENABLE BROTHERS.

VERNON, ROBERT ORION, 1912-
1. (chairman, and others). Geology of the crystalline rocks and of the Paleozoic area of northwest Georgia: Southeastern Geol. Soc. [Guidebook] Field Trip 7, 41 p. (1), illus., [Tallahassee, Fla.], 1951; contains several papers by different authors, each of which is cited separately.

VER WIEBE, WALTER AUGUSTUS, 1887-1961.

VEST, ERNEST LOUIS, JR., 1929-

VIOLINI, ROBERT DE, see Leonard, Frederick Charles, 5.

VISHER, STEPHEN SARGENT, 1887-

VIVIAN, ARTHUR C.

VOGDES, ANTHONY WAYNE, 1843-1923.
1. Short notes upon the geology of Catoosa County, Georgia: Amer.

2. Description of a new crustacean from the Upper Silurian of [Catoosa and Walker Cos.] Georgia, with remarks on Calymene clintoni: Acad. Natural Science Philadelphia Proc. 1880, p. 176-178, illus., 1881. Calymene rostrata and C. clintoni, both Silurian, are described and illustrated. They both are reported from Taylor Ridge, Catoosa Co., and at Dug Gap, Walker Co.

3. Description of a new crustacean from the Clinton Group of [Catoosa Co.] Georgia with remarks upon others. 5 p., illus., New York City [priv. pub.], 1886. Encrinurus americanus, Calymene rostrata, and C. clintoni from Silurian rocks in Catoosa Co. are described and illustrated.

VOLNEY, CONSTANTIN FRANCOIS CHASSEBOUEF, 1757-1820.

WADSWORTH, MARSHMAN EDWARD, 1847-1921, see Whitney, Josiah Dwight, 1.

WAGGAMAN, WILLIAM HENRY, 1883-

WAHL, WALTER.
1. A check on some previously reported analyses of stony meteorites with exceptionally high content of salic constituents: Geochemica et Cosmochemica Acta, vol. 1, p. 28-32, London, 1950. A check suggests that some earlier analyses are in error for the Al₂O₃ content of the meteorite from Pickens County.

WAIT, ROBERT L., see also Herrick, Stephen Marion, 9.
1. History of water supply at Albany [Dougherty Co.] Georgia: Georgia Mineral Newsletter, vol. 10, p. 143-147, illus., 1957. An historical review and a discussion of some of the engineering problems includes some references to the Tertiary rocks of the area.
2. Sources of groundwater for irrigation in Dougherty County, Georgia: Georgia Mineral Newsletter, vol. 11, p. 123-127, illus., 1958. A brief review of the subsurface geology of the county includes analyses and discussions of potential water yield for the various units. The Ocala Limestone is the principal, but not the only, source.

WALCOTT, CHARLES DOOLITTLE, 1850-1927, see also Hayes, Charles Willard, 1.

1. Correlation Papers—Cambrian: U. S. Geol. Survey Bull. 81, 447 p., illus., 1891. Very generalized descriptions of the Cambrian rocks in northwestern Georgia are given. Correlations with other areas in the Appalachian Mountains are included also.

2. (The) North American continent during Cambrian time: U. S. Geol. Survey Ann. Rept. 12, pt. 1, p. 523-568, illus., 1891. A general description of the paleogeography of the United States during Cambrian time includes Georgia, which, for the most part, was flooded in the northwestern corner and was being eroded elsewhere.


8. Olenellus and other genera of the Mesonacidae, no. 6 of Cambrian geology and paleontology I: Smithsonian Misc. Collections, vol. 53, p. 231-422, illus., 1910. Olenellus thompsoni fragments from the Cambrian Weisner Quartzite in Bartow County are reported.

9. Cambrian Brachiopoda: U. S. Geol. Survey Mon. 51, 2 vols., 1235 p., illus., atlas of plates, 1912. Many brachiopods, mostly inarticulate, from the Knox Formation, the Conasauga Shale, the Rome Formation, and the Weisner Quartzite from Floyd and Bartow Cos., are described and illustrated.


11. Cambrian trilobites, no. 5 of Cambrian geology and paleontology III:
Smithsonian Misc. Collections, vol. 64, p. 303-456, illus., 1916. *Dolichometopus productus* from the Conasauga Shale in Floyd Co. is described and illustrated.

12. Middle Cambrian Spongiae, no. 6 of Cambrian geology and paleontology IV: Smithsonian Misc. Collections, vol. 67, p. 261-364, illus., 1924. *Chancelloria drusilla* and *Protospongia fenestrata* from the Conasauga Shale in Floyd Co. are described and illustrated.


WALKER, FRANCIS A.

WALKER, LAWRENCE T.
1. Climax Cave [Decatur Co.]: Georgia Spelunker, vol. 1, no. 2, p. 3-4 (†), illus., 1957. A map of the cave is included along with a very brief description.

WALTER, KENNETH GAINES, 1932-
1. Comparison of stream sediments from a metamorphic area [DeKalb Co.] with those from an igneous source: Georgia Acad. Science Bull., vol. 14, p. 6-12, illus., 1956. Sedimentary analyses of stream deposits are compared. Sphericity of metamorphic particles vary greatly, whereas the sphericity of igneous particles is not so varied. The metamorphic particles also vary more in roundness than do the igneous particles. No differences in sorting occur. Sediments derived from saprolite are also included in the analyses.


WALTERS, RAYMOND.

WALTON, GEORGE EDWARD, 1839-
1. The mineral springs of the United States and Canada. vii, 390 p., illus., New York, D. Appleton, 1873; 2d ed., 1874; 3d ed., 1883. A treatise on the joys and pleasures of bathing in and drinking mineral spring water includes general descriptions of many, several of which are in Georgia. Analyses for many are included.

WANLESS, HAROLD ROLLIN, 1899-

2. Pennsylvanian geology of a part of the southern Appalachian coal field: Geol. Soc. America Mem. 13, xi, 162 p., illus., 1946. A detailed description of Pennsylvanian rocks in northwestern Georgia
is included. The rocks in Georgia are considered to be a part of the Lee Group. Sections are measured, and correlations are made with surrounding areas.

3. Depositional basins of some widespread Pennsylvanian coal beds in the United States: Conference on origin and constitution of coal, 3d, Nova Scotia 1956, [Proc.], p. 94-125, illus., Nova Scotia Dept. Mines [1956]; discussions, p. 125-128. A description of the bituminous coal fields in the Appalachian area includes those in Georgia. They are discussed as sedimentary traps, and environmental maps are included. The rocks in Georgia are correlated with those in nearby areas.


WARD, HENRY AUGUSTUS, 1834-1906.
1. The Ward-Coonley collection of meteorites. iv, 100 p., illus., Chicago, [priv. pub.7], 1900; also a 1901 edition. Fragments of the Cherokee, Whitfield, Monroe, Chattooga, Henry, Putnam, Union, and Stewart County meteorites are in this collection. Very brief descriptions are included.

WARD, WILLARD P.
1. The gold deposits of the southern states: Engineering and Mining Jour., vol. 9, p. 392, 1870. Much economic discussion is included, but evidence is presented from mines near Acworth, Cobb Co., that the gold-bearing quartz is not in veins but rather in lenses conformable with the stratification.

WARDEN, DAVID BAILIE, 1778-1845.

WARDROPER, D. LEE.
1. The formation of coal beds [Walker Co.]: Engineering and Mining Jour., vol. 45, p. 473, illus., 1883. Coal fragments in sandstone overlying the main coal seam are described and illustrated. An explanation is sought.

WARING, GERALD ASHLEY, 1883- see Stearns, Norah Dowell, 1.

WARREN, HELEN ANN.

WARREN, MOULTON ALFRED, 1912-1956, see also Cooper, Hilton Hammond, 1; Stringfield, Victor Timothy, 1, 8.
1. (and Munyan, Arthur Claude). Georgia, in Water levels and artesian pressure in observation wells in the United States in 1939: U. S. Geol. Survey Water-Supply Paper 886, p. 69-90, illus., 1940. The depth to the water table in 48 wells is recorded; all are on the Atlantic Coastal Plain except for a few in Dougherty County. A piezometric map of the artesian pressure along the east coast is included.

2. (and Munyan, Arthur Claude). Georgia, in Water levels and artesian pressure in observation wells in the United States in 1940, part 2, southeastern states: U. S. Geol. Survey Water-Supply Paper 907, p. 35-55, 1942. Measurements of the depth to the water table are recorded for 103 wells. All are along the Atlantic coast except for a few in Dougherty County.

3. Georgia, in Water levels and artesian pressure in observation wells in the United States in 1941, part 2, southeastern states: U. S. Geol. Survey Water-Supply Paper 937, p. 28-64, 1943. One hundred forty wells along the Atlantic coast, save for a few in Dougherty Co., are used to record the depth to the water table. The information is in tables.

4. Artesian water in southeastern Georgia, with special reference to the coastal area: Georgia Geol. Survey Bull. 49, 140 p., illus., 1944. The Eocene Ocala Limestone and the Oligocene Suwanee Limestone are the major artesian aquifers. They are covered down-dip by Miocene clay and crop out updip in the Coastal Plain. Small-scale piezometric maps are included, as is a general discussion of the hydrology of the system.

5. Georgia, in Water levels and artesian pressure in observation wells in the United States in 1942, part 2, southeastern states: U. S. Geol. Survey Water-Supply Paper 945, p. 49-83, 1944. Wells in 27 counties, all on the Coastal Plain, are tabulated. They record the depth to the water table.

6. Artesian water in southeastern Georgia with special reference to the coastal area, well records: Georgia Geol. Survey Bull. 49-A, 83 p., illus., 1945. Well records, alphabetically arranged by county, do not include any lithologic data. There are over 1500 wells; the tables include depth, sea level depth, flow, and remarks.

7. (and Herrick, Stephen Marion). Georgia, in Water levels and artesian pressure in observation wells in the United States in 1943, part 2, southeastern states: U. S. Geol. Survey Water-Supply Paper 987, p. 44-86, 1945. The depth to the water table in 231 wells in 29 counties, all but seven being in the Coastal Plain, is given in tabular form. The seven are from the Piedmont, near Atlanta.

WARREN, WALTER CYRUS.


WARRINER, LENDALL P.

1. (and Burgess, Blandford Corneilous). The pegmatites of Jasper
County, Georgia: Mining Engineering, vol. 1, p. 376-380, illus., 1949; Amer. Inst. Mining Engineers Trans., vol. 184, p. 376-380, illus., 1949. Pegmatites in gneiss are described. Quartz, mica, and microcline are the major components; little else is present. The origin is uncertain, but they are probably related to granitic intrusions nearby. Analyses are included. The feldspar is sought commercially.

WASHINGTON, HENRY STEPHENS, 1867-1934.
2. Chemical analyses of rocks published from 1884 to 1900 . . . : U. S. Geol. Survey Prof. Paper 14, 495 p., 1903. A discussion of the C. I. P. W. classification is followed by tabular descriptions of analyses; three of the rocks are from Georgia.

WASHINGTON ACADEMY OF SCIENCES.

WATERS, JAMES ALTON, 1890-

WATKINS, ELLA JOWETT.
1. Museum of Natural Resources of Georgia, directory and description of exhibits. 77 p. (4), illus., Atlanta, Georgia Dept. Natural Resources, 1942. A guide to the mineral collection in the museum is included. Examples of ores and gem materials of the state are cursorily described.

WATKINS, JOEL HILL.
1. New occurrence and use of halloysite [Chattooga Co.]: Mining and Engineering World, vol. 38, p. 721-722, illus., 1913. Bedded halloysite occurs at the contact between the Fort Payne Chert and the Floyd Shale. It varies from 4 to 10 feet thick, and averages seven. It was probably secondarily formed from a bed of high-alumina shale.
2. Occurrence of bauxite in central [Coastal Plain] Georgia: Mining and Engineering World, vol. 42, p. 1073-1075, illus., 1915. The occurrence of this ore is in Sumter, Schley, and Macon Counties. The bauxite occurs as well-defined lenses in Cretaceous rocks near the contact with the overlying Tertiary rocks. Some are more
than ten feet thick, and all are invariably associated with Cretaceous clay, from which the bauxite was probably derived by alteration.


4. Kyanite in Graves Mountain [Lincoln Co.], Georgia: Amer. Ceramic Soc. Bull., vol. 21, no. 7, p. 140-141, illus., 1942. The geology of Graves Mountain and the composition of the kyanite which is present are discussed. The deposit is rich and workable, and commercial production could be accomplished quickly.

WATSON, E. J., see Sloan, Earle, 1.

WATSON, ELAINE, see Boardman, Annabel Leona, 1.

WATSON, JOHN WILBUR, see Watson, Thomas Leonard, 18.

WATSON, THOMAS LEONARD, 1871-1924.

1. A preliminary petrographic report on the metamorphic rocks in and around Dahlonega, Lumpkin County, Georgia: Georgia Geol. Survey Bull. 4-A, p. 320-330, 1896. Twelve different schists from various locations in the gold region are described.

2. (The) Georgia bauxite deposits—their chemical constituents and genesis: Amer. Geologist, vol. 28, p. 25-45, illus., 1901. The deposits in Bartow, Floyd, and Polk Cos. are described. The ore is commonly associated with the Knox Formation. Analyses are included. The various theories of the origin of the ore are reviewed, and that of the deposition of aluminum from ascending ground water along faults is supported. The bauxite is Eocene in age.

3. (The) granitic rocks of Georgia and their relationships: Amer. Geologist, vol. 27, p. 190-225, illus., 1901. Many analyses and photomicrographs of granitic rocks of all sorts are given. They occur throughout the Piedmont. Evidence to support their intrusion into the metamorphic country rocks is reviewed. Some are definitely Precambrian, and others may be younger.

4. On the origin of the phenocrysts in the porphyritic granites of [Piedmont] Georgia: Jour. Geology, vol. 9, p. 97-122, illus., 1901. Numerous exposures are described, with detailed chemical and petrographic analyses included. The evidence points to the phenocrysts having grown in place at the same time as the groundmass, rather than having formed earlier.

5. Weathering of granitic rocks of Georgia: Geol. Soc. America Bull., vol. 12, p. 93-108, illus., 1901. Chemical analyses of granitic rocks are compared with analyses of residual products derived from them from many places throughout the Piedmont. The relative proportions of the various minerals and elements and their geochemical
movement are discussed. The various factors affecting the types and rates of weathering are described.

6. On the occurrence of aplite, pegmatite, and tourmaline bunches in the Stone Mountain Granite of [DeKalb Co.]: Georgia: Jour. Geology, vol. 10, p. 186-193, illus., 1902; Denison Univ. Scientific Lab. Bull., vol. 12, p. 17-24, illus., 1902. The granite, aplite, and tourmalines are described chemically and petrographically. The tourmaline is a derivative, in part, of feldspar, as a result of fumarolic action, rather than having been present as an original part of the magma.


8. (A) preliminary report on a part of the granites and gneisses of Georgia: Georgia Geol. Survey Bull. 9-A, 367 p., illus., 1902. A general petrographic description and an economic-product description are followed by descriptions of the occurrences of the entire Piedmont Province. Many analyses are included. A great deal of general granite petrology is included as are the weathering phenomena.


10. (A) preliminary report on the bauxite deposits of Georgia: Georgia Geol. Survey Bull. 11, 169 p., illus. incl. geol. map, 1904. A general description of the stratigraphy in the Coosa River valley is followed by numerous analyses of the bauxite. Individual deposits are described. The ore occurs in sedimentary layers in the Knox Formation, as residual deposits in the overlying clay, and as concentrates in pockets in the bedrock. The aluminum came from the underlying Conasauga Shale and was brought to the surface and concentrated by ground water ascending along fault planes.

11. (The) Seminole copper deposit of [Lincoln and Wilkes Cos.]: Georgia: U. S. Geol. Survey Bull. 225, p. 182-186, 1904. Descriptions of the ore, its occurrences, and geological environment, are given. The ore is copper-bearing galena, sphalerite, and pyrite. Some chalcopyrite is present, as is native copper.

shattered Weisner Quartzite and in branching veins in the residual clay of the quartzite formation. The ocher was emplaced by solutions which replaced some of the quartzite with ocher; the residual clay deposits are of the same nature. Analyses are included.


14. A preliminary report on the manganese deposits of Georgia: Georgia Geol. Survey Bull. 14, 195 p., illus., 1908; summary, Economic Geology, vol. 4, p. 46-55, 1909; Mining World, vol. 30, p. 643-644, 1909. Manganese occurs in northwestern Georgia as a residual concentrate from Cambrian formations. It is distributed throughout the clay residuum. Analyses are included, and individual deposits are described. Manganese also occurs non-commercially in the Piedmont and Blue Ridge as concentrates from the decay of manganese-bearing silicate minerals. Individual occurrences are described, and analyses are included.


17. (An) association of native gold with sillimanite [Union Co.]: Amer. Jour. Science, 4th ser. vol. 33, p. 241-244, illus., 1912. Sillimanite schist was invaded by gold-bearing pegmatites. Photomicrographs show the relationships.


23. Lazulite of Graves Mountain [Lincoln Co.], Georgia ... : Washington Acad. Science Jour., vol. 11, p. 386-391, 1921. A brief, description of the geology of Graves Mountain is followed by a detailed description of the occurrence of the lazulite there; it is analyzed chemically and optically. It is compared with lazulite from other parts of the world.

24. Thermal springs of the southeastern Atlantic states, part 3 of The temperatures of hot springs and the sources of their heat and water supply: Jour. Geology, vol. 32, p. 373-384, illus., 1924. A discussion of Warm Springs, in Meriwether County, Lifsey Spring in Pike County, and Thundering Spring in Upson County is included. Analyses are given. Geologic details are uncertain, but the springs seem to be related to faults along Pine Mountain. The water is of meteoric origin.

WATTS, ARTHUR SIMEON, 1876-
1. The mining and treatment of feldspar and kaolin in the southern Appalachians: U. S. Bur. Mines Bull. 55, 170 p., illus., 1913. In an otherwise technical report on mining and milling problems are descriptions of deposits of mica, feldspar, and kaolin, all having been derived from the weathering of pegmatites on the Piedmont.

WEBB, JAMES EDWARD.
2. Reconnaissance geologic survey of parts of Polk and Haralson Counties, Georgia: Georgia Mineral Newsletter, vol. 11, p. 19-24, illus. incl. geol. map, 1958. A complete but cursory description of the area is given. Possible Precambrian crystalline rocks, Cambro-Ordovician, and Mississippian sedimentary rocks are mapped. Much emphasis is placed upon the structural interpretations.

WEED, WALTER HARVEY, 1882-1944.
The general geology is discussed; the origin of the spring is considered, and an analysis is included.

3. The copper mines of the United States in 1905: U. S. Geol. Survey Bull. 285, p. 93-124, illus., 1906. Brief descriptions of copper production by states includes that from Fannin County, where copper ore in the extension of the Ducktown deposit is being wrought. No details are included.

4. Copper deposits of the Appalachian states: U. S. Geol. Survey Bull. 455, 166 p., illus., 1911. A generalized description of numerous occurrences of copper-bearing minerals is given. Much of the copper is associated with pyrite and is found in many places in the Piedmont and Blue Ridge.

WEIGEL, WILLIAM MELVIN, 1878-

2. Georgia clays for rubber filler: Rubber Age, vol. 15, no. 8, p. 301-304, 1924. In an otherwise technical discussion of the use of kaolin as rubber filler are many chemical analyses of kaolin from the Coastal Plain.


4. High grade clays of the southeastern states: Mining Congress Jour., vol. 12, p. 157-161, 171, illus., 1926. A general description of kaolin deposits of the United States Coastal Plain includes cursory references to those of Georgia. Few new geologic data are included.

WEITZ, JOHN HILLS, 1916-

WELLER, JAMES MARVIN, 1899-

WELLS, HORACE LEMUEL, 1855-1924.

WELLS, JOHN WEST, 1907-.  


WELLS, ROGER CLARK, 1877-.  

WENDT, ARTHUR FREDERICK, 1852-1893.  
1. The pyrites deposits of the Alleghanies: School of Mines Quarterly, vol. 7, p. 154-188, 218-235; 301-323, illus., 1886; Engineering and Mining Jour., vol. 41, p. 407-410, 426-428, 446-447; vol. 42, p. 4-5, 22-24, illus., 1886. The pyrite and chalcopyrite bodies of the Piedmont region are considered to have been originally sedimentary bodies, having been altered by subsequent metamorphism. The Ducktown District, with some deposits in nearby Fannin Co., is extensively described. Much emphasis is placed upon the engineering and metallurgical aspects.

WESTGATE, LEWIS GARDNER, 1868-1948.  

WETMORE, ALEXANDER, 1886-.  

WHATLEY, E. T.  
1. Geological report—Pike County [sic.]: Georgia Geol. Survey Prog. Rept. 1, 1890-91, p. 133-144, 1891. A detailed description of the area is given. Precambrian metamorphic rocks underlie the area. Granite and other igneous rocks are also present. Stone, iron ore, graphite, kaolin, and clay are the mineral resources present.

2. The Yonah Land and Mining Company of White Co., Georgia. 1893 [not seen].

WHEELER, GARLAND EDGAR, 1928-.  
2. Occurrence, possible origin, and geological significance of the phosphatic concretions in the Maury Shale: Georgia Acad. Science Bull., vol. 13, p. 22-27, illus., 1955. Concentric calcium carbonate and phosphate nodules growing around nuclei are considered to be syngenetic accretions formed during the deposition of the enclosing shale in shallow water.

WHEELER, HARRY EDGAR.


WHITE, AMOS MCNAIRY, see Overstreet, William Courtney, 1.

WHITE, CHARLES ABIATHAR, 1826-1910.


2. A review of the fossil Ostreidae of North America and a comparison of the fossil with living forms: U. S. Geol. Survey Ann. Rept. 4, p. 273-430, illus., 1884; appendix by Angelo Heilprin. Oysters from Cretaceous and Eocene rocks are discussed. None of those illustrated, however, are from the Coastal Plain of Georgia.

3. Correlation papers—Cretaceous: U. S. Geol. Survey Bull. 82, 273 p., illus., 1891. A very generalized description of the Cretaceous System on the Coastal Plain is given. Correlations with adjacent states are suggested, although no new data are included.

WHITE, CHARLES DAVID, 1862-1935.

1. Deposition of the Appalachian Pottsville: Geol. Soc. America Bull., vol. 15, p. 287-282, illus., 1904. A discussion of the entire Appalachian sedimentary basin includes by inference that part which is now northwestern Georgia. The nature of the Lower Pennsylvanian sedimentation is discussed along with the history of the basin.


3. Lower Pennsylvanian species of Mariopteris, Eremopteris, Diplothemema, and Aneimites from the Appalachian region: U. S. Geol. Survey Prof. Paper 197-C, p. 85-140, illus., 1943. Mariopteris pottsvillea, Aneimites (Wardia) tenuifolia difoliatus, and A. pottsvillensis intermedius from the Lookout Formation in Dade County are described and illustrated.

WHITE, CHARLES HENRY, see Hayes, Charles Willard, 5.

WHITE, DALE.

WHITE, GEORGE, 1802-1887.
1. Statistics of the State of Georgia. 624 p., illus. incl. geol. map, Savannah, W. Thorne Williams, 1849; summary, DeBow's Review, vol. 10, p. 65-73, 243-252, 375-386, 1851. One chapter is devoted to a cursory description of the general geology of the state. No new details are included, although the geological map is new.

WHITE, ISRAEL CHARLES, 1848-1927.

WHITE, JAMES, 1863-1928.

WHITE, JOSHUA E.
1. Topography of Waynesborough [Burke Co.] (Georgia), and its vicinity . . . : Medical Repository, 2d hex. vol. 3 [vol. 9], p. 36-47, 140-154, 241-248, 1806. A brief description of the topography of the area is followed by extensive descriptions of case histories of diseases, most of which are attributed to topographical peculiarities, the swamps and standing water being the most offensive.
2. Cursory observations on the soils, climate, and diseases of the State of Georgia: Medical Repository, 2d hex. vol. 3 [vol. 9], p. 349-365, 1806; vol. 4 [vol. 10], p. 117-130, 1807. Descriptions of the Coastal Plain and southern Piedmont are given; with a view to showing the different types of topography and the relationships of the topography to diseases. The early geological observations are very good.
3. Topography of Savannah [Chatham Co.] and vicinity . . . : Medical Repository, 2d hex, vol. 4 [vol. 10], p. 352-363, 1807; vol. 5 [vol. 11], p. 12-24, 1808. This is a fascinating account of the topography of the Savannah area in 1808. Springs, hills, gullies, etc., are noted, and the emphasis is placed upon the relationship of the topographic features to diseases. The low areas are the worst, the whole area being bad.

WHITE, WALTER STANLEY, 1915-
1. Geologic map and structure section of the Warm Springs bauxite area, Meriwether County, Georgia. Scale, 1 inch to 200 feet, text and sections on a second sheet. U. S. Geol. Survey Strategic Minerals Investigations Prelim. Map [1943].

WHITE, WILLIAM ALEXANDER, 1906-
1. Determining factors in the coloration of granite soils in the south-

2. Origin of granite domes in the southeastern Piedmont: Jour. Geology, vol. 53, p. 276-282, illus., 1945. The forms of granite domes, including Stone Mountain in DeKalb Co., which heretofore have been attributed to exfoliation, are regarded as largely the product of granular disintegration brought about by chemical weathering. Some exfoliation is present, however.

3. Blue Ridge front—a fault scarp: Geol. Soc. America Bull., vol. 61, p. 1309-1346, illus., 1950; discussion by George Willis Stose and Anna Isabel Jonas Stose, vol. 62, p. 1371-1373, 1951. The Blue Ridge Scarp is the result of a great normal fault. The fault has utilized pre-existing structural trends for movement. The various levels of plateaus, the Dahlonega Plateau in Georgia, reflect the uplifts. Various other geological features are also cited as evidence.

WHITFIELD, JAMES EDWARD, 1859-

WHITLOCK, HERBERT PERCY, 1868-

WHITNEY, JOSIAH DWIGHT, 1819-1896.
1. (and Wadsworth, Marshman Edward). The Azoic System and its proposed subdivisions: Harvard College Museum Comp. Zool. Bull., vol. 7, p. 331-565, 1884. A survey of the Precambrian rocks of the United States includes a discussion of those in Georgia. George Little, the Georgia State Geologist at that time, is quoted as saying that there are no Precambrian rocks in Georgia, whereas T. S. Hunt is quoted as referring to some of the gneisses as being Montalbon [Precambrian] in age. No new data are included.

WILBUR, ROBERT O.
1. (and Snobble, James B.). Sedimentary petrology of some Atlantic and Gulf coast beach sands [Chatham Co.]: Virginia Jour. Science, vol. 3, p. 48-49, 1942. Samples from the beach sands near Savannah and from other places are analyzed mineralogically. Comparisons and distinctions between the various samples are noted. Quartz is the most common mineral, with much feldspar also being present, as are magnetite, ilmenite, garnet, hornblende, zircon, tourmaline, sillimanite, staurolite, and others. A crystalline-rock source is substantiated.
WILCOX, WALTER DWIGHT, 1869-

WILDER, JOHN T.
1. The Chattanooga mineral district: Iron, Coal, and Manufacturer's Association of Chattanooga Trans., p. 19-22, 1880. An extremely cursory review of the mineral resources of the area is given. Iron and coal also come from northwestern Georgia, although little detail is included.

WILKENS, HENRY A. J., see Nitze, Henry Benjamin Charles, 1.

WILKES, J. FRANK.
1. Gold mining in the south: Engineering Assoc. South Proc. [Papers], vol. 19, no. 1, p. 1-15, illus., 1908. A general description of the gold mining situation at that time is given. Very little geological information is included, none of which is new anyway.

WILLARD, BRADFORD, 1894.

WILLET, JOSEPH E.
2. Account of the fall of a meteoric stone in Stewart County, Georgia: Amer. Jour. Science, 2d ser. vol. 50, p. 335-338, 1870. This is an eye-witness account of the descent of a small, 12-ounce stony meteorite.

WILLIAMS, ALBERT (JR), 1852-1914.

WILLIAMS, CHARLES REGAN, see Billings, Marland Pratt, 1.

WILLIAMS, GEORGE HUNTINGTON, 1856-1894.
1. The distribution of ancient volcanic rocks along the eastern border of North America: Jour. Geology, vol. 2, p. 1-31, illus., 1894. Volcanic rocks occur in a belt along the Piedmont, the southern limits probably being in Georgia and Alabama. None have been positively identified in situ, however, but areas of probable occurrence are mapped.
WILLIAMS, HOWEL, 1898-

WILLIAMS, T.

WILLIAMS, W. THORNE.
1. Bonner's map of the State of Georgia with the addition of geological features. Scale, 1 inch to 10 miles, Savannah, W. T. Williams, 1849, in George White, Statistics of the State of Georgia, 1849.

WILLIAMSON, ERSKINE D., see Adams, Leason Heberling, 1.

3. The mechanics of Appalachian structure: U. S. Geol. Survey Ann. Rept. 13, part 2, p. 217-282, illus., 1893. A general description of the types of folds which occur in the Appalachian Mountains includes examples from Georgia, which is in the district of folds and faults. Laboratory experiments are conducted to ascertain the origin and nature of the structures.
4. Ueberschiebungen in den Vereinigten Staaten von Nordamerika: Internatl. Geol. Cong. 9th, Vienna 1904, Comptes Rendus, vol. 2, p. 529-540, illus., Vienna, 1904. A general description of types of overthrust faults includes some examples which are from Georgia. Fold-thrusts are the common type in the area. The mechanism and related paleogeography are also discussed.
7. Index to the stratigraphy of North America. U. S. Geol. Survey Prof. Paper 71, 894 p., illus. incl. atlas of maps, 1912. A descrip-
tion of the 1912 edition of the Geological Map of the United States includes brief discussions of the rock units, some of which are in Georgia.


WILSON, CHARLES WILLIAMS, JR., 1905- see Jewell, Willard Brownell, 1, 2.

WILSON, HEWITT, 1891-
1. Iron oxide mineral pigments of the United States: U. S. Bur. Mines Bull. 370, vii, 198 p., illus., 1933. A summary of the nature and occurrence of ocher in the Cartersville District in Bartow Co. is included. The ocher is associated with the Weisner Quartzite at its contact with the overlying formations and in the residuum of these rocks.

WILSON, JAMES LEE, 1920- see Balk, Christina Lochman, 1.

WILSON, ROY ARTHUR, 1891- see also Park, Charles Frederick, Jr., 1.

WINDHAM, STEVE R., 1931-
1. Origin of green chert underlying the lower bentonite bed in the Ordovician System of northwest Georgia: Georgia Acad. Science Bull., vol. 12, p. 75-78, illus., 1954. Silicified fossils in chert which also shows bedding and ripple marks are used to interpret the origin of the chert as from the replacement of a limestone by silica. The silica came from the overlying volcanic clay which was then altered to bentonite.

WINTERS, STEPHEN SAMUEL, 1920- see Toulmin, Lyman Dorgan, Jr., 3.

WOLFF, JOHN ELIOT, 1857-1940.
WOODRING, WENDELL PHILLIPS, 1891- see also Cooke, Charles Wythe, 22.

WOODRUFF, JAMES FREDERICK, see also Parizek, Eldon Joseph, 9, 11, 13, 15, 18, 19, 20, 21

WOODWARD, ARTHUR SMITH, 1864-1944.

WOODWARD, HENRY, 1832-1921.

WOODWARD, HERBERT PRESTON, 1899-
1. The age and nomenclature of the Rome ("Watauga") Formation of the Appalachian valley: Jour. Geology, vol. 37, p. 592-602, illus., 1929. This is an exhortation to continue the use of the name Rome and to expand its meaning to engulf other units of similar appearance and stratigraphic position. Evidence is presented to support the recommendation. Rome ("Watauga") is considered an acceptable temporary substitute.
2. Paleozoic formations east of the main axis of Appalachian Uplift: Pan-Amer. Geologist, vol. 63, p. 97-114, 1935. Information about Paleozoic rocks in the Piedmont is summarized, some coming from Georgia. The Brevard Schist is considered a correlative of part of the Wissahickon Schist farther north, and since the Wissahickon could be Paleozoic, so then could the Brevard. The same is true for the Hiwassee Schist. Both units may be Cambrian. Other circumstantial evidence is also cited.
WOODWARD, LEROY ALBERT, 1916-


WOODWORTH, JAY BACKUS, 1865-1925.


WOOLLARD, GEORGE PRIOR, 1908: see also Meyer, Robert Paul, 1.


2. Gravitational determination of deep-seated crustal structure of continental borders (structural interpretations of gravity observations): Amer. Geophysical Union Trans., vol. 21, p. 808-815, illus., 1940. A small-scale map of the eastern United States includes Georgia. A series of near parallel, northeastward trending zones of negative and positive anomalies are present. They are the result of density variations within the basement rocks and not the structure of the rocks. Some large faults are proposed to explain some of the variations.


4. Preliminary report on seismic investigation in Tift and Atkinson Counties, Georgia: Georgia Mineral Newsletter, vol. 8, p. 69-77, illus., 1955. Refraction tests are used to determine the depth to the pre-Cretaceous basement, which is at -4180 feet in Atkinson Co. and -5335 feet in Tift County. An ultrabasic-rock interpretation for the Tift County area conforms with the interpretation obtained from gravity and magnetic data. A basement-configuration map is included.

5. (and Bonini, William Emory, and Meyer, Robert Paul). A seismic refraction study of the sub-surface geology of the Atlantic Coastal Plain and continental shelf between Virginia and Florida. v, 128 p. (1), illus., Univ. Wisconsin Dept. Geology and Geophysics, 1957. Structure-contour maps on the top of the pre-Cretaceous basement of the south Atlantic Coastal Plain include Georgia. The Cape Fear Arch, the Peninsular Arch, and the intervening Savannah Basin are clearly shown. Much supplemental well data is included. Bouguer anomaly maps are also included, and formations above the basement are described.
WOOSTER, LYMAN CHILD, 1849-
1. Geology of Kansas and each of the United States. 93 p., illus., Emporia, Kansas, [priv. pub.?], 1930. One half page is devoted to a popular account of the geology of Georgia. Little detail is included.

WORD, ROBERT CAMPBELL, 1825-1890.

WRIGHT, ANNA Z., see Wright, Frank James, 7.

WRIGHT, DAVID CRAIG, 1930-

WRIGHT, FRANK JAMES, 1888-1954.
1. The older Appalachians of the south: Denison Univ. Bull. (Scientific Lab. Jour., vol. 26), p. 143-250, illus., 1931. The physiography of the Blue Ridge Province is described. The Schooley Peneplain is the oldest recognizable feature in the province, but it is not evident in Georgia. The topography of the Blue Ridge in Georgia is a product of the Harrisburg, or Valley Cycle. The Ocoee Basin [Ducktown Plateau] is one of the distinctive features of this cycle, as is the Chattahoochee River area in the Piedmont. Drainage patterns are extensively discussed.
5. (The) newer Appalachians of the south, part 2, south of the New River: Denison Univ. Bull. (Scientific Lab. Jour., vol. 31), p. 93-142, illus., 1936. A review of the geomorphology of the area includes northwestern Georgia. No pre-Schooley Peneplain surfaces are evident. The Harrisburg Surface is the dominating feature. It is 600 feet in elevation in northwestern Georgia and rises gently northward. The “Coosa Lowlands” are a product of solution and some corrosion during the present erosion cycle.
6. Erosional history of the southern Appalachians: Jour. Geomorphology, vol. 5, p. 151-161, 1942. The Schooley Peneplain is the oldest surface, but it is not described from Georgia. The Harrisburg Surface is at the Tennessee-Coosa River divide in Walker
County. The Coosa Lowlands in northwestern Georgia are post-
Harrisburg in age, but are due largely to solution rather than
surface erosion.


WRIGHT, JOHN KIRTLAND, 1891-
34, p. 317-318, 1944.
2. (and Carter, George Francis). Isaiah Bowman, December 26, 1878-
port., 1959.

WRIGHT, R. F., see Stevens, O. B., 1.

WUELFLING, ERNST ANTON, 1860-1930.
1. Die Meteoriten in Sammlungen und ihre Literatur . . . xlvi, 460
p., Tubingen, H. Laupp'schen, 1897. A general treatise on mete­
orites includes descriptions of fragments of those from Whitfield,
Monroe, Chattooga, Stewart, Putnam, Union, Henry, and Marion
Counties.

WUENSCH, CHARLES ERB, 1893-1949.
1. An appreciation of George Ernest Collins [1870-1946]: Engineering

WYANT, DONALD GRAY, 1918- see Gott, Garland Bayard, 1.

WYANT, ROBERT KRISS, 1918- see Roy, Sharat Kumar, 2.

WYNDHAM, C. E., see O'Neill, James F., 1.

WYRICK, R. F., see Hersey, John Brackett, 1.

YEATES, WILLIAM SMITH, 1856-1908, see also Hall, Benjamin Mortimer,
2; Standard Gold Mining Co., 1
A preliminary report on part of the gold deposits of Georgia:
Georgia Geol. Survey Bull. 4-A, 542 p., illus., 1896. The occurrence
of gold in the Piedmont and Blue Ridge is described. Various min­
ing properties are discussed in detail. The gold occurs in quartz
veins in the metamorphic rocks, as placer deposits, and as a residual
in the deep saprolite of the area.

YOCHELSON, ELLIS LEON, 1928-
1. (and Bridge, Josiah). The Lower Ordovician gastropod Ceratopea:
Ceratopea buttsi, C. keithi, and C. tennesseensis are described and
illustrated. The text does not identify the location or source rocks
except as northwestern Georgia.

298
YOHO, WILLIAM HERBERT, 1911-

1. Provenance study of the heavy minerals in the streams of the gold belt portions of Lumpkin and White Counties, Georgia, in Short contributions to the geology, geography, and archaeology of Georgia (no. 2): Georgia Geol. Survey Bull. 60, p. 239-244, illus., 1953. Samples of bedrock, saprolite, and stream sands are analyzed for heavy mineral content and concentrations. Magnetite and zircon are common; both show many euhedral grains. Hematite occurs as altered magnetite coated on magnetite crystals.

YON, J. WILLIAM, JR., see Hendry, Charles Walter, Jr., 1.

YOUNG, WILLIAM HARVEY.

1. (and Anderson, Robert Lafayette). Thickness of bituminous-coal and lignite seams mined in the United States in 1945: U. S. Bur. Mines Inf. Circ. 7442, 17 p. (*), illus., 1947. All of Georgia’s coal is from seams less than four feet thick. One mine is underground; the other is a strip mine.

2. (and Anderson, Robert Lafayette). Thickness of bituminous-coal and lignite seams at all mines and thickness of overburden at strip mines in the United States in 1950: U. S. Bur. Mines Inf. Circ. 7642, 18 p. (*), illus., 1952. All of the coal in Georgia in 1950 came from underground mines and from seams less than two feet thick. Seven mines were operating.

YOUNGMAN, E. P.

1. Deposits of titanium-bearing ores (domestic and foreign): U. S. Bur. Mines Inf. Circ. 6386, 41 p. (*), 1930. A general discussion of the origin and nature of titanium minerals is followed by very general descriptions of known deposits, some from Georgia. It occurs in rutile from Lincoln County and in the heavy minerals along the Atlantic coastal area.


2. Geology of the Andersonville Bauxite District [Macon, Schley, and Sumter Cos.]: U. S. Geol. Survey Repts. Open File 28, 60 p. (*), illus. incl. geol. map [1949]. Bauxite lenses occur within kaolin lenses which are in the Nanafalia Sandstone of Eocene age. Occurrences are described, and reserves are calculated. Over 256 million tons remain.

ZEIGLER, JOHN M.

1. Origin of the sea islands of the southeastern United States: Geographical Review, vol. 49, p. 222-237, illus., 1959. Erosion-remnant islands, marsh islands, and beach ridge islands are recognized. They are due to less-resistant sedimentary material having been eroded away, leaving the more resistant material behind as the barrier islands.
ZERFOSS, SAMUEL, 1912- see Myers, William Marsh, 1.

ZODAC, PETER.
1. Graves Mountain [Lincoln Co.] Georgia: Rocks and Minerals, vol. 14, p. 131-141, illus., 1939. This is a semi-popular account of the geology of the area, with an account of the variety of minerals to be found there. Quartz and kyanite are the most common of all.

ZUIDEMA, HENRY PETER.

ANONYMOUS, U. R.

300

Manganese ore in [Bartow Co.] Georgia: Science, new ser. vol. 48, p. 360-362, 1918. A generalized survey of the occurrence of manganese in the Cartersville District is given; few details are included.


In memoriam, John Mason Clarke, 1857-1925: New York State Museum Bull. 267, p. 7-11, 1926.


Diamonds in Georgia: Georgia Mineral Soc. Newsletter [vol. 1], no. 2, p. 2-3 (†), 1948. Five diamonds have been reported. Each
find is discussed, and all have come from the gold placer deposits in the Piedmont and Blue Ridge Provinces.


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Georgia: Furcron, A. S., 6
northwestern Ga.: Weitz, J. H., 1

gold
Gillner Co.: Phalen, W. C., 1
Lumpkin Co.: Dobson, G. M., 1
Tucker Co.: McNama, J., 1
Hab. S. M., 1; Bell, J. L., 1; Birkhbine, J. J., 1; Burchard, E. F., 6, 7; Fleming, H. S., 1; McCallie, S. W., 21; Porter, J. B., 2; Wills, B., 1
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Marcon Co.: Beck, W. A., 3
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Richmond Co.: Stokes, H. N., 1
Schiery Co.: Beck, W. A., 3
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Wilkinson Co.: Mitchell, L. S.
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Brookes Co.: Fortson, G. W., Jr., 1
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Lee Co.: Furcron, A. S., 30
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Washington Co.: Jones, J., 3
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Bartow Co.: Harder, E. C., 3; O'Neill, J. F., 1; Peck, A. L., 1; Wills, B., 2
rare elements: Kaiser, E. P., 1
Beck Co.: Harder, E. C., 3
rare elements: Kaiser, E. P., 1
Wilkes Co.: Beck, W. A., 1
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Catossa Co.: Clarke, F. W., 3
Georgia: Furcron, A. S., 3
Pickens Co.: Wells, R. C., 1
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Pickens Co.: Wahl, W., 1
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Chatham Co.: Richel, W., R. O., 1
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Burke Co.: Cotting, J. R., 2
Georgia: Jeffes, J. S., 1
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Butts Co.: Banks, J. T., 1
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Cartersville Dist.: Keesler, T. L., 4
Rome Quad.: Hayes, C. W., 18
Blue Ridge: Elliott, J. B., 1; King, P. B., 3; Rodgers, J., 3

Catonsville Co.
Dalton Quad.: Munyan, A. C., 17
Knox Group: Allen, A. T., Jr., 4
Ringgold Quad.: Hayes, C. W., 7

Chattanooga Co.
Ringgold Quad.: Hayes, C. W., 7
Rome Quad.: Hayes, C. W., 18

Cherokee Co.: Smith, J. W., 2
Cartersville Dist.: Keesler, T. L., 4
Tate Quad.: Bayley, W. S., 1

Dade Co.: New England Company, 1
Cedar Grove Quad.: Dicus, J. M., 1
Stevenson Quad.: Hayes, C. W., 8

Dawson Co., Tate Quad.: Bayley, W. S., 1

Fannin Co.
Ducktown area: Emmons, W. H., 1
Ellijay Quad.: LaForge, L., 2
Mineral Bluff Quad.: Hurst, V. J., 15
Murphy Series: Hurst, V. J., 14

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Ringgold Quad.: Hayes, C. W., 7
Rome Quad.: Hayes, C. W., 18

Forsyth Co., Tate Quad.: Bayley, W. S., 1

Georgia: Balk, C. L., 1

Glimmer Crystalline: LaForge, L., 2
Gordon Co.: Smith, J. W., 2; Stuart, A. W., 2

Fairmount area: Stuart, A. W., 1

Ranger area: Smith, W. L., 2
Ringgold Quad.: Hayes, C. W., 7
Rome Quad.: Hayes, C. W., 18

Lumpkin Co., Ellijay Quad.: LaForge, L., 2

Murray Co.
Calhoun Quad.: Cribb, R. E., 1

Dalton Quad.: Munyan, A. C., 17

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Walton, C. D., 1, 2, 3

Rome Formation: Woodward, H. F., 1

Pickens Co.: Smith, J. W., 2

Ellijay Quad.: LaForge, L., 2

Tate Quad.: Bayley, W. S., 1

Piedmont: Elliott, J. B., 1; Rodgers, J., 3

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Indian Mountain area: Crawford, T. J., 5

Rome Quad.: Hayes, C. W., 18

Union Co., Ellijay Quad.: LaForge, L., 2

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Cedar Grove Quad.: Dicus, J. M., 1

Kensington Quad.: Traplor, H. G., 1

Ringgold Quad.: Hayes, C. W., 7

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Calhoun Quad.: Cribb, R. E., 1

Dalton Quad.: Munyan, A. C., 17

Ringgold Quad.: Hayes, C. W., 7

CANADIAN SYSTEM, see also Ordovician,
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gEOGEOLOGICAL INVESTIGATIONS: Johnson, W. R., Jr., 1; Straley, H. W., 6d, 3
Coastal Plain: Frink, J. W., 1; Prouty, W. F., 2, 3

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gold
Bonner Mine: Brewer, W. M., 4
Villa Rica Dist.: Brewer, W. M., 4, 14, 15

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Georgia minerals: Crickmay, G. W., 24
Dana, E. S., 3; Robinson, S., 1

CATOOSA COUNTY, see also Georgia, and
Georgia—Northwestern
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Ringgold area: Allen, A. T., Jr., 1

Ringgold Quad.: Hayes, C. W., 7

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Catoua Spring: Land, W. J., 1
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Cambrian-Ordovician, Knox Group: Allen, A. T., Jr., 1
Cambrian-Ordovician, Tertiary, Dalton.  5: Munyan, A. C., 17
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Nevadian-Silurian: Voges, A. W., 1
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Silurian: Foerste, A. F., 1; White, C. A., 1
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Case Cave: Chapman, J. R., 2
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Georgia, popular: Chapman, J. R., 5
Crickmay, G. W., 17
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Walker Co.
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Engineering geology
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Chatham Co.: Stringfield, V. T., 1
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Mammalia, Pleistocene: Agassiz, L., 1
Cahn, A. R., 1; Cooper, W. L., 2; Cope, E. D., 1; Cooper, J. H., 4; Currier, G. L. C. F. D., 1; Gibbs, R. W., 3; Habershon, J. C., 1; Harlan, E., 1; Hay, O. P., 3; Hodgson, W. B., 1; Lee, J., 3, 4; Lytell, C., Jr., 2; Mitchell, S. L., 6
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copper: Martin, L. G., 1
Canton Mine: Deby, J. M., 1; Shepard, C. U., 5
gold: Martin, L. G., 1
Franklin Mine: Brewer, W. M., 4
Pascoe Mine: Shepard, C. U., 7
iron: Lewis, J. W., 1; Wilks, B., 1
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Piedmont: Allen, V. T., 2
Richmond Co.: Clarke, P. W., 4; Cotting, J. R., 1
Twiggs Co.: Brindley, G. W., 1; Grim, R. E., 1; Tingle, W. W., 1
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Gastropoda
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Pelecypoda
Cretaceous: Gabb, W. M., 1
Eocene: Harris, G. D., 8
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Stevenson Quad.: Hayes, C. W., 8
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Ringgold Quad.: Hayes, C. W., 7
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Cobb Co.: Marlin, L. G., 1
Canton Mine: Deby, J. M., 1; Shepard, C. U., 6
Fannin Co.: Hurst, V. J., 32; McCallie, S. W., 11; Weed, W. H., 3; Wendt, A. F., 1
Ducktown area: Emmens, W. H., 1
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Seminole Mine: Watson, T. L., 11
 Lumpkin Co.: Weed, W. H., 1
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Ellijay Quad.: LaForge, L., 2
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Pickens Co., Ellijay Quad.: LaForge, L., 2
Piedmont: Blake, W. P., 10; Weed, W. H., 4
popular: Furcron, A. S., 35
Polk Co.: Lieber, O. M., 1
Union Co., Ellijay Quad.: LaForge, L., 2
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Rabun Co.: Genth, F. A., 4; Holmes, J. A., 4
Towns Co.: Ballard, T. J., 1; Genth, F. A., 4, 6
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FURCROON, A.

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Floyd Co.: Grabau, A. W., 1; Schuchert, C., 1
Ringgold Quad.: Hayes, C. W., 7
Rome Quad.: Hayes, C. W., 18

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northwestern Ga.: Billings, M. P., 1; Burns, J. A., 1; Butts, C., 4; Featherstaugh, G. W., 1; Hayes, C. W., 2; McCutchen, A. R., 1; Spencer, J. W. W., 6; Word, E. C., 1
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Hunt, T. S., 1; Morris, C. E., 1;
Munyan, A. C., 14; Peck, J., 1
eastern: White, J. E., 2
southern: Pendleton, E. M., 1
western: Campbell, J. L., 1
Economic geology
abrasives: King, F. P., 1
asbestos: Hopkins, O. B., 1, 2; Merrill, G. P., 1
cement: Maynard, T. F., 3
copper: Blake, W. P., 16; Webb, W. H., 4
popular: Furcron, A. S., 35
corundum: Barlow, A. B., 1; King, F. P., 1; Lewis, J. V., 2; Pratt, J. H., 1, 2
dolomite: Davis, R. E., 1; Forrester, A. S., 6
feldspar: Galpin, S. L., 1; Parker, J. M., 3d, 1; Watts, A. S., 1
Macon area: Maynard, T. P., 4
granite: Watson, T. L., 8
gold: Anderson, C. S., 1; Bakewell, R., 1;
Becker, G. F., 1; Blake, W. P., 10;
Brewer, W. M., 9, 12, 18; Browne, J. R., 1;
Cannon, L. C., 1; Chestosta River, River, L. C., 1;
Crane, W. R., 1; Dickson, J., 1; Dodge, W. R., 1;
Flucker, W. H., 2; Fosbrooke, S. H., 1;
Furcron, A. S., 1; Habersham, W. W., 1, 2; Hall, B. M., 1;
Hank, G. R., 1; Jackson, C. F., 1;
Jones, S. P., 2; McCallie, S. W., 3, 38;
McElrath, T., 1; Mclaren, J. M., 1;
Matt, P. H., Jr., 1; Morris, C. E., 1;
Munyan, A. C., 14; Nickie, H. B., C. 1, 2; Pardee, J. H., 1;
Park, G. F., Jr., 2, 3; Parsons, A. B., 1;
Peck, J., 1; Schmidhuber, I, 3; Soper, R. K., 1;
Stone, R. C., 1; Tatham, W. F., 1;
Taylor, J. W., 1; Wilkes, J. F., 1; Wilson, R. A., 1;
Youette, W. S., 1
fineness: Hamra, G. B., 2
popular: turbine: Mayuny, A. C., 6; Watson, T. L., 8, 15
kaolin: Watkins, J. H., 3; Watts, A. S., 1
kyanite: Boyd, W. B., 1; Furcron, A. S., 12, 26; Smith, K. W., 3; Waggaman, W. R., 1
limestone: Furcron, A. S., 6; Maynard, T. P., 2; Watson, T. L., 20
manganese: Hoffman, J. K., 1; Hull, J. P. D., 2; Watson, T. L., 9, 14
marble: McCallie, S. W., 1
mica: Furcron, A. S., 7; Galpin, S. L., 1;
Heirich, E. W., 1; John, R. H., 1, 2; Parker, J. M., 3d, 1;
Peterson, G. 3; Smith, R. W., 5; Sterrett, D. B., 2;
Watts, A. S., 1
mineral resources: Brewer, W. M., 5; Diehl,
Bolch, O., 1; Hunter, C. E., 4
Augusta area: Munyan, A. C., 6
Macon area: Munyan, A. C., 4
monazite: Mertie, J. B., Jr., 2; Overstreet, W. C., 1
pegmatites: Galpin, S. L., 1
pyrite: McCallie, S. W., 36; Shearer, H. K., 2; Shotts, R. Q., 1
pyrophyllite: Stuckey, J. L., 2
sillimanite: Furcron, A. S., 26; Hudson, W. C., 1; Teague, H. K., 5
soapstone: Hopkins, O. B., 2; Stuckey, J. L., 2
tungsten: Epsenashade, G. H., 1
vermiculite: Hunter, C. E., 5
Engineering geology
saprolite, properties: Conn, W. V., 2
Geochemical investigations
radioactive dating: Kulp, J. L., 1
Long, L. E., 1; Pinson, W. H., Jr., 3
strontium in granite: Turekian, K. K., 1
weathering: Allen, V. T., 2
Geophysical investigations
radioactivity survey, interpretation: Schmidt, R. G., 1

Ground water
Atlanta area: Carter, R. W., 1; Herrick, S. M., 4
crystalline rocks: Crickmay, G. W., 19
Precambrian-Cambrian: King, F., 1; Furcron, A.
flexural: LeGrand, H. E., 1
mineral springs: Morris, C. E., 1
Piedmont: Holmes, J. A., 2
southeastern: LeGrand, H. E., 2
water table levels: Warren, M. A., 7

Historical geology
Cambrian-Ordovician: Elliott, J. B., 1
Paleozoic: Furcron, A. S., 31; Kulp, J. L., 1; Long, L. E., 1; Pinson, W. H., Jr; Woodward, H. P., 2
Pleistocene: Parizek, E. J., 19
Precambrian: Credner, H., 3; Furcron, A.
Precambrian-Paleozoic: Herrick, W. C., 4

Mineralogy
amethyst: Hamlin, C. A., 1
asbestos: Merrill, G. P., 1
beryl: Furcron, A. S., 53
corundum: King, F. P., 1
diamond: Blank, E. W., 1; Kuns, G. P., 4; Anon., 1, 41
gems: Kuns, G. F., 3
gold, paragenesis: Credner, H., 1
kaolinite: Sand, L. E., 1
minerals: Blake, W. P., 4
monazite: Overstreet, W. C., 1
tellurium: Credner, H., 1

Petroleum
Elberton Granite: Calhoun, F. H. H., 3
diabase: Lester, J. G., 4; McCallie, S. W., 8
granite: Turekian, K. K., 1; Watson, T. L., 8
granite porphyry: Watson, T. L., 8
granite rocks: Watson, T. L., 8
heavy minerals, saprolite: Holland, W. A., Jr.; Hurst, V. J., 4
igneous rocks: Crickmay, G. W., 25
Washington, H. S., 5
metamorphic rocks: Crickmay, G. W., 25;
Furcron, A. S., 12, 27; Hayes, C. W., 13
mylonite: Crickmay, G. W., 4
pegmatites: Jahn, R. H., 2
peridotite: Lewis, J. V., 1; Pratt, J. H., 2
quartz-monzonite: Watson, T. L., 16
serpentine: Pratt, J. H., 2
volcanic rocks: Hurst, V. J., 8; Williams, G. E., 1

Physical geology
creep: Parizek, E. J., 11, 18; Woodruff, J. F., 1

tree curvature: Parizek, E. J., 21
earthquakes: Meigs, J. L., 1; Moneymaker, B. C., 6; Rockwood, C. G., 2
erosion: Glenn, L. C., 1
faulting: Jonas, A. L., 1
folded faults: Edith, A. 2
metamorphic lineation: Parizek, E. J., 7
metamorphism: Jonas, A. L., 1
Precambrian surface deformation: Reitz, T. A. du, 1
quartz horizon: Parizek, E. J., 9
silicous layer: Parizek, E. J., 13
soils, eastern: White, J. E., 2
stream flow: Thomson, M. T., 1
structural geology: King, F. B., 1; Lombard, A. E., 1; Stone, G. W., 19
Brevard Belt: Furcron, A. S., 24
gold veins: Parizek, E. J., 1; Park, C. P., Jr., 2
marble belt: Frouty, W. F., 1
structural history: Stille, H., 1
weathering: Hunt, T. S., 2
diorite: Smith, L. F., 1
granite: Watson, T. L., 5, 8

Physiographic geology
Atlanta area: Purinton, C. W., 1
drainage changes: Parizek, E. J., 14
Chattahoochee River: Campbell, M. R., 1
drainage patterns: Parizek, E. J., 6, 15
Wright, F. J., 1
lithologic control: Woodruff, J. F., 2
Oconee River: Parizek, E. J., 12
Fall Line Peninsula: Renner, C. T., 2
lakes: Ingle, R. S., 3
pedestal rocks: Crickmay, G. W., 10
penepolias: Hayes, C. W., 1
deformation: Reitz, T. A. du, 1
Piedmont: Hayes, C. W., 5, 12; Stone, R. C., 1; Wright, F. J., 1
southwestern: Cooper, G. F., 1
stream flow: Thomson, M. T., 1

GILMER COUNTY, see also Georgia, Georgia —Northwestern, and Georgia—Piedmont

Areas described
Ellijay Quad.: Furcron, A. S., 41; LaForge, L., 2

Economic geology
iron: Phalen, W. C., 1
mineral resources, Ellijay Quad.: LaForge, L, 2

Ground water
Ellijay Quad.: LaForge, L, 2

Historical geology
Precambrian-Cambrian, Ellijay Quad.: LaForge, L, 2

Maps
Economic, mineral resources, Ellijay Quad.: LaForge, L, 2
Geologic, Ellijay Quad.: LaForge, L, 2

Mineralogy

physiography

Resource, economic, mineral resources, Ellijay Quad.: LaForge, L, 2

Geologic, Ellijay Quad.: LaForge, L, 2

Mineralogy

Physiographic geology

Petrology

GLASS SAND, see also Mineral resources, and Sand

Georgia: Peyton, G, 2
Wheeler Co.: Hudson, W, C, 3

GLYNN COUNTY, see also Georgia, and Georgia-Coastal Plain

Economy geology

limestone: Martin, J, H, C, 1
Ground water

Glynn Co.: Springfield, V, T, 1
Jekyll Island: Callahan, J, T, 7

Pleistocene: Cooper, J, H, 2, 4

Paleontology

Diatomaceae, Pleistocene: Bailey, J, W, 1
Echinoderm, Pleistocene: Cooke, C, W, 21
Gastropoda, Miocene: Conrad, T, A, 5
Invertebrata, Pleistocene: Cooper, J, H, 1, 2; Richards, H, G, 2
Mammalia, Pleistocene: Allen, J, A, 1; Cooper, J, H, 41; Falconer, H, 2; Harlan, K, 3; Hay, O, P, 1; Leidy, J, 1, 2, 3; Lucas, F, A, 1; Lydekker, R, 1; Lyell, C, Jr, 2; Osborn, H, F, 6, 14; Owen, R, 1, 2; Reptilia, Pleistocene: Cooper, J, H, 1; Harlan, R, 2; Vertebrata, Pleistocene: Richards, H, G, 12

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heavy minerals: Hurst, V, J, 10

Physiographic geology

Geologic, Ellijay Quad.: LaForge, L, 2

GNEISS, see also Metamorphic Rocks, Mineral Resources, and Stone

DeKalb Co.: Buddington, A, F, 1; Lester, J, G, 1; Navarro, A, T, 1; Severinghaus, N, 1, 2

Piedmont: Watson, T, L, 3, 8

GOLD, see also Mineral resources

Bartow Co.: Anderson, C, S, 1; DeBow, J, B, D, 3

Glade Mines: Glade Gold Mines, 1

Blue Ridge: Anderson, C, S, 1; Bakewell, R, 1; Blake, W, F, 1, 10; Brewer, W, M, 9, 12, 13; Curry, R, O, 1; Dickson, J, 1; Dodge, W, R, 1; Frame, J, 1; Habersham, W, W, 1; Hall, B, M, 1; Harlan, G, B, 1; Jackson, C, F, 1; Jones, S, P, 2; McCallie, S, W, 3; McFarland, T, 1; McLean, J, M, 1; Mell, P, H, Jr, 1; Munyan, A, C, 14; Nize, H, B, C, 1, 2; Pardoe, J, T, 1; Park, C, F, Jr, 2; Parsons, A, B, 1; Peck, J, 1; Phillips, W, E, 1; Schmidhuber, 1; Soper, E, K, 1; Tatham, W, 1; Tenney, W, J, 1, 2; Wilkes, J, 1; Wilson, R, A, 1; Yeates, W, S, 1

early account: LeMoine de Morgues, J, 1

fineness: Hanna, G, B, 2

popularity: Chickmay, G, W, 2; Furcron, A, S, 38

pseudomorphs: Gent, F, A, 2

Carroll Co.

Bonner Mines: Brewer, W, M, 4
Villa Rica area: Brewer, W, M, 4, 14, 15

Cherokee Co.: Martin, L, C, 1

Franklin Mine: Brewer, W, M, 4
Pascoe Mine: Shepard, C, U, 7
 Tate Quad.: Bayley, W, S, 1

Cobb Co.: Ward, W, P, 1

Cherokee Gold Mine: Blake, W, P, 6

O'Neill Property: Adelberg, J, 2

Danow Co., Tate Quad.: Bayley, W, S, 1
Forysth Co., Tate Quad.: Bayley, W, S, 1

Georgia: Guettard, J, E, 1

Glimmer Co., Ellijay Quad.: LaForge, L, 2

Habersham Co.: Peck, J, 1

Shelton Mine: Philipps, W, E, 1

Hart Co.: Grant, W, H, 3

Henry Co.: Fosbrooke, S, H, 1

Lincoln Co., Lincoln Mine: Lincoln Gold Mining Company, 1

Lumpkin Co.: Blake, W, P, 3; Brewer, W, M, 3; Cain, A, W, 1; Credner, H, 1; Jackson, C, G, 1, 2; Lindgren, W, 1; Mel, P, H, Jr, 2; Wells, R, C, 1

Auraria Mines: Blake, W, P, 8

Battle Branch Mine: Park, C, F, Jr, 1

Chesapeake Hydraulic Company Property: Blake, W, P, 2

Dahlgren Dist.: Eckel, E, 1, 2, 3

Ellijay Quad.: LaForge, L, 2

Field Gold Vein: Blake, W, P, 5

Hendricks Vein: Blake, W, L, 1

Moore's Gold Mine: Jackson, C, T, 2

Singleton, Lots: Southern Gold Company, 1

Standard Mines: Standard Gold Mining Company, 1

McDuffie Co.: Brulh, P, T, 1; Fliker, W, H, 1

Columbia Mine: Fliker, W, H, 2, 14, 15

Oglethorpe Co.: Fosbrooke, S, H, 1

Paulding Co.: Brewer, W, M, 4; Mel, P, H, Jr, 1

Pickens Co.

Ellijay Quad.: LaForge, L, 2

Tate Quad.: Bayley, W, S, 1

Piedmont: Anderson, C, S, 1; Bakewell, R, 1; Becker, W, F, 1; Blake, W, P, 10; Brewer, W, M, 9, 12, 13; Brown, J, R, 1; Dunning, L, C, 1; Chesapeake Pluming Company, 1

Crane, W, R, 1; Dickson, J, 3; Dodge, W, L, 1; Fosbrooke, S, H, 1; Furcron, A, S, 1; Habersham, W, W, 1, 2; Hall, B, M, 1; Hanna, G, B, 1; Jackson, C, F, 1; Jones, S, P, 2; McCallie, S, W, 3, 33; Mc-
GORDON COUNTY, see also Georgia, Georgia —Northwestern, and Georgia—Piedmont
Areas described
Fairmount area: Smith, J. W., 2; Stuart, A. W., 1
Ringgold Quad.: Hayes, C. W., 7
Rome Quad.: Hayes, C. W., 18
Economic geology
Iron, Rome Quad.: Hayes, C. W., 18
Limestone, Rome Quad.: Hayes, C. W., 7
Manganese, Ringgold Quad.: Hayes, C. W., 7
 Slate: Maynard, T. F.; Shawer, H. K., 3
Rome Quad.: Hayes, C. W., 18
Historical geology
Cambrian: Stuart, A. W., 2
Fairmount area: Stuart, A. W., 1
Ranger area: Smith, W. L., 2
Cambrian-Mississippian
Ringgold Quad.: Hayes, C. W., 7
Rome Quad.: Hayes, C. W., 18
Pliocene, Rome Quad.: Hayes, C. W., 18
Pleistocene: Smith, J. W., 2
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Economic
Limestone: Stuart, A. W., 2
Mineral resources, Ringgold Quad.: Hayes, C. W., 7
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Fairmount area: Smith, J. W., 2; Stuart, A. W., 1
Ranger area: Smith, W. L., 2
Ringgold Quad.: Hayes, C. W., 7
Rome Quad.: Hayes, C. W., 18
Petroleum
Graded bedding: Smith, J. W., 1
Igneous rocks: Clarke, F. W., 4; Washington, H. S., 2
Limestone and shale: Stuart, A. W., 2
Paleozoic rocks, Fairmount area: Stuart, A. W., 1, 3

Physical geology
Cartersville Fault: Smith, J. W., 1, 2

GRADY COUNTY, see also Georgia, and Georgia—Coastal Plain
Areas described
Grady Co.: Faircloth, W. E., 1
GRANITE, see also Igneous rocks, and Mineral resources
Blue Ridge: Munyan, A. C., 14
Clarke Co.: Inclusions: Pariezek, E. J., 1
DeKalb Co.: Stone Mountain Granite: Buddington, A. F., 1; Day, A. L., 1; Goranion, R. W., 1, 2; Herrmann, L. A., 1; Kemp, J. F., 1; Lester, J. G., 1, 6; Navarre, A. T., 1; Spencer, J. W. W., 4; Watson, T. L., 1
Age: Harzog, L. F., 2d, 1
Analysis: Venable Bros., 1
Compressibility: Adams, L. H., 1
density: Day, A. L., 1
Granite contacts: Grant, W. H., 15
Gravity survey: Gibbes, R. W., 2
Melting features: Goranion, R. W., 2
Popular: Crickmay, G. W., 15; Hopkins, M. S., 1; Maynard, T. F., 8
radioactive mica: Aldrich, L. T., 2
Radioactivity: Piggott, C. S., 1, 2
Strontium-bearing mica: Aldrich, L. T., 2
Water solubility: Goranion, R. W., 1
Fulton Co.: Cofer, H. E., Jr., 7
Fairburn Granite, porphyroblasts: Cofer, H. E., Jr., 6
Gwinnett Co.: Stone Mountain Granite: Herrmann, L. A., 1
Hancock Co.: Fortson, C. W., Jr., 3
Hart Co.: Grant, W. H., 6
Murray Co., Bloating: Furcron, A. S., 40
Frieden: Munyan, A. C.; Turekian, K. K., 1; Watson, T. L., 3, 8, 15
Elberton Granite: Calhoun, F. H., 3
pophythmite: Watson, T. L., 4
Weathering: Watson, T. L., 5
Rockdale Co.: Herrmann, L. A., 1

GRAPHITE, see also Mineral resources, and Minerals
Bartow Co.: Hayes, C. W., 24
Forsyth Co.: Thomas Mountain Granite: Herrmann, L. A., 1
Pike Co., Thomas Mountain Quad.: Clarke, J. W., 1
Talbot Co., Thomas Mountain Quad.: Clarke, J. W., 1
Troup Co., in quartz: Vestch, J. O., 3
Upson Co., Thomas Mountain Quad.: Clarke, J. W., 1

GRAPTOLITHINA, see also Invertebrata
Murray Co., Ordovician: Decker, C. E., 1
GRAVEL, see also Aggregate, Construction material, and Mineral resources
Coastal Plain
Albany area: Munyan, A. C., 10
Valdosta area: Munyan, A. C., 13
Floyd Co.: Furcron, A. S., 52
Georgia: Teas, L. P., 1
Lamar Co., Thomas Mountain Quad.: Clarke, J. W., 1
northwestern Ga.: Butte, C., 4
Pike Co., Thomas Mountain Quad.: Clarke, J. W., 1
Talbot Co., Thomas Mountain Quad.: Clarke, J. W., 1
Upson Co., Thomas Mountain Quad.: Clarke, J. W., 1

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GREENE COUNTY, see also—Georgia, and Georgia—Piedmont

Economic geology

sand; Paulsen, E. J., 10

GROUNO WATER, see also Mineral resources,
and Springs

Baker Co.

DaSoto Spring: Parker, G. L., 1
limestones: Hendricks, El L., 1, 2
Blue Ridge, crystalline rocks: Crickmay, G. W., 19; Herrick, S. M., 5
Brooks Co.: McCallie, S. W., 15
Blue Spring: Grover, N. G., 4
Burke Co., Radioactive waste disposal: Theis, C. V., 1
Butts Co., mineral spring: Banks, J. T., 1; Pepper, W., 1
Catoosa Co.: spring: Land, W. J., 1; McCallie, S. W., 18; Pepper, W., 1
Chatham Co.: Stringfield, V. T., 1
terrestrial head: Davis, G. H., 1
salt water encroachment: Counts, H. B., 1
Savannah River area: Slichter, C. S., 1; Stephenson, L. W., 6
Chattahoochee Co.: Fort Benning area: Herrick, S. M., 2
Coastal Plains: Herrick, S. M., 9; Imbeaux, C. E. A., 1; Spencer, J. W. V., 5; Stephenson, L. W., 7
analysis: Dole, R. B., 1
terrestrial levels: Cooper, H. H., 1
terrestrial wells: Clarke, F. W., 2; Darton, N. H., 1; Fuller, M. L., 4; McCallie, S. W., 4; Stringfield, V. T., 3, 6; Warren, M. A., 4, 6
Atlantic coast: Stewart, J. W., 1
Brunswick area: Schweitzer, R. R., 1
Clyton Formation: Herrick, S. M., 7
deep wells: Fuller, M. L., 1, 3
east central: LaMereaux, P. E., 1
geochemistry: Brown, E., 1
distory: Carlston, C. W., 1
northeastern: LeGrand, H. E., 1
pond levels: Hendricks, El L., 3
Springs: McNease, O. E., 2
temperatures: Darton, N. H., 5
water table levels: Warren, M. A., 1, 2, 3, 5, 7, 13
water table lowering: Harper, R. M., 13
Cobb Co.
mineral spring: Fuller, M. L., 2
salt spring: Furcron, A. S., 30
Crisp Co.: Wait, R. L., 3
Dawson Co.
crystalline rocks: Callahan, J. T., 4
radioactive waste disposal: Edgerton, J. H., 1
DeKalb Co., spring, radioactive: Hootman, F. A., 1
Dougherty Co.: Stringfield, V. T., 1; Wait, R. L., 2
Albany area: Wait, R. L., 1
Blue Spring: Hall, M. R., 1, 2
Radium Spring: Grover, N. G., 4
Douglas Co., salt spring: Furcron, A. S., 30
Early Co., sink hole lakes: Hendricks, El L., 2
Fannin Co., Ellijay Quad.: LaForge, L., 2
Floyd Co.: Callahan, J. T., 2
Cave Spring: Grover, N. C., 5; Hall, M. R., 1; Paulsen, C. G., 1
Fulton Co.
Atlanta Mineral Spring: Means, A., 1
deep wells: Fuller, M. L., 3
Georgia Co., hole: Darton, N. H., 2; McCallie, S. W., 16, 20; Menzer, O. E., 1; Stringfield, V. T., 2, 4; Thomson, M. T., 2
analyses: Collins, W. D., 1; Jones, J. H.; Lamar, W. L., 1, 2; Lohr, E. W., 1, 2
effects of earthquakes: Stewart, J. W., 1
irrigation potential: Herrick, S. M., 8
mineral springs: Crook, J. E., 1; Duggan, J. R., 1; Ellis, A. J., 1; Fitch, W. E., 1; Hopkins, T. S., 1; McCallie, S. W., 19, 22; Moorman, J. J., 1, 2; Peake, A. G., 1, 2; Walton, G. E., 1
nitrogen content: Ingles, R. S., 2
popular: Callahan, J. T., 1
water table levels: Callahan, J. T., 6
Glimer Co., Ellijay Quad.: LaForge, L., 2
Glynn Co.: Stringfield, V. T., 1
Jekyll Island: Callahan, J. T., 7
Harris Co.
Blue Spring: Grover, N. C., 2, 3
Warm Springs Quad.: Hewett, D. F., 1
Jenkins Co., Magnolia Spring: Paulsen, C. C., 1
Lee Co.: Owen, V., Jr., 3
Lumpkin Co., Ellijay Quad.: LaForge, L., 2
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Marion Co., Fort Benning area: Herrick, S. M., 2
Meriwether Co.
North Spring: Grover, N. C., 2
Warm Springs Quad.: Hewett, D. F., 1
Warm Springs: Hall, M. R., 2; Salomon-Caival, V., 1; Stearns, N. A., 1; Watson, T. L., 24; Weed, W. H., 2
Muscogee Co., Fort Benning area: Herrick, S. M., 3
northwestern Ga., springs: Callahan, J. T., 3; Grover, N. C., 1; Hall, B. M., 2
Pickens Co., Ellijay Quad.: LaForge, L., 2
Piedmont: Holmes, J. A., 2
Atlanta area: Carter, R. W., 1; Herrick, S. M., 4
crystalline rocks: Crickmay, G. W., 19; Herrick, S. M., 5
granite terrain: LeGrand, H. E., 1
southeastern: LeGrand, H. E., 2
springs: Morris, C. E., 1
water table levels: Warren, M. A., 7
Pike Co., Warm Springs Quad.: Hewett, D. F., 1
Warm Springs: Stearns, N. D., 1; Watson, T. L., 24
Rabun Co., analyses: Gibb, H. S., 1
Richmond Co., radioactive waste disposal: Theis, C. V., 1
Sumter Co.: Owen, V., Jr., 4
Talbot Co., Warm Springs Quad.: Hewett, D. N., 1
Thomas Co., blowing wells: McCallie, S. W., 13
Union Co., Ellijay Quad.: LaForge, L., 2
Upson Co., Warm Springs Quad.: Hewett, D. F., 1
Warm Springs: Stearns, N. D., 1; Watson, T. L., 24
Walker Co., deep wells: Fuller, M. L., 1
GUIDEBOOKS
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Southeastern Geol. Soc., 1
Georgia, highway geology: Lester, J. G., 8
northwestern Ga., Paleozoic rocks: Mun-
yan, A. C., 18; Vernon, R. O., 1
Piedmont, crystalline rocks: Furcron, A.
S., 27; Vernon, R. O., 1
GULLIES, see also Physiography
Baldwin Co.: Ireland, H. A., 1; Linton, E.,
1; Morris, F. G., 1
Stewart Co., Providence Canyons: Barge,
E. M., 1; Sisk, L. J., 1; Smith, F. C., 1
Sumter Co.: Morris, F. G., 1
GWINNETT COUNTY, see also Georgia, and
Georgia—Piedmont
Areas described
Lawrenceville area: Grant, W. H., 2
Stone Mountain-Lithonia area: Herrmann,
L. A., 1
Economic geology
mineral resources: Planigan, J. C., 1
silver: Tenney, W. J., 2
stone, Stone Mountain-Lithonia Dist.:
Herrmann, L. A., 1
Engineering geology
Buford Dam site: Conn, W. V., 1
Historical geology
Brevard Schist: Grant, W. H., 2
Precambrian-Triassic, Stone Mountain-
Lithonia Dist.: Herrmann, L. A., 1
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Economic, stone, Stone Mountain-Lithonia
Dist.: Herrmann, L. A., 1
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Stone Mountain-Lithonia area: Herr-
mann, L. A., 1
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pseudomelilitonite: Hurst, V. J., 9
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Etowah Mine: Pardee, J. T., 1
Kin Moris area: Pardee, J. T., 1
Georgia: Pardee, J. T., 1
Lincoln Co.: Lincoln Gold Mining Company, 1
Lumpkin Co.: Blake, W. P., 3
Barlow Mine: Pardee, J. T., 1
Battle Branch Mine: Pardee, J. T., 1
Etowah Mine: Pardee, J. T., 1
Findley Ridge area: Pardee, J. T., 1
Piedmont: Guettard, J. E., 1; Jones, S. P., 2
White Co.
Nacoochee area: Nacoochee Hydraulic Mining Company, 1
White County Mine: Pardee, J. T., 1
gold-diamond district, Georgia: Schreiber, F., 1
granite, Piedmont: Watson, T. L., 8, 15
iron, northwestern Ga.: McCallie, S. W., 5
Macon area: Munyan, A. C., 4
kaolin, Coastal Plain
Augusta area: Munyan, A. C., 6
Macon area: Munyan, A. C., 4
kyanite
Blue Ridge: Prindle, L. M., 1
Habersham Co.: Prindle, L. M., 1
Rabun Co.: Prindle, L. M., 1
limestone
Gordon Co.: Stuart, A. W., 2
Lee Co.: Furcron, A. S., 50
metal deposits, Georgia: Pardee, J. T., 1
mica
Blue Ridge: Galpin, S. L., 1; Sterrett, D. B., 2
Piedmont: Galpin, S. L., 1; Sterrett, D. B., 2
Upson Co.: Olson, J. C., 1
mineral resources
Bartow Co., Rome Quad.: Hayes, C. W., 15
Blue Ridge: Peck, J., 1
Catossa Co., Ringgold Quad.: Hayes, C. W., 7
Chattooga Co.
Ringgold Quad.: Hayes, C. W., 7
Rome Quad.: Hayes, C. W., 13
Stevenson Quad.: Hayes, C. W., 8
Crisp Co.: Furcron, A. S., 51
Dade Co.
Ringgold Quad.: Hayes, C. W., 7
Stevenson Quad.: Hayes, C. W., 8
Fannin Co., Ellijay Quad.: LaForge, L., 2
Floyd Co.: Furcron, A. S., 52
Ringgold Quad.: Hayes, C. W., 7
Rome Quad.: Hayes, C. W., 13
Georgia: Butts, A. G., 1
Central of Georgia Railway: Mallory, J. M., 1; Maynard, T. P., 7
Glimer Co., Ellijay Quad.: LaForge, L., 2
Gordon Co.
Ringgold Quad.: Hayes, C. W., 7
Rome Quad.: Hayes, C. W., 13
Habersham Co.: Teague, K. H., 3
Lumpkin Co., Ellijay Quad.: LaForge, L., 2
northwestern Ga.: Butts, C., 4; U. S. Geol. Survey, 1
Pickens Co., Ellijay Quad.: LaForge, L., 2
Piedmont: Peck, J., 1; U. S. Geol. Survey, 1
Polk Co.: Pinson, W. H., Jr., 1
Rome Quad.: Hayes, C. W., 18
Rabun Co.: Teague, K. H., 3
Union Co., Ellijay Quad.: LaForge, L., 2
Walker Co.
Ringgold Quad.: Hayes, C. W., 7
Stevenson Quad.: Hayes, C. W., 8
Whitefield Co., Ringgold Quad.: Hayes, C. W., 7
mineral springs, Georgia: Ellis, A. J., 1; McCallie, S. W., 82
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sand, Coastal Plain, Macon area: Munyan, A. C., 4
sand and gravel, Georgia: Tess, L. P., 1
shale, northwestern Ga.: Veatch, J. O., 7
sillimanite-bearing rocks, Piedmont: Furcron, A. S., 12
soapstone, Blue Ridge and Piedmont: Hopkins, O. B., 3
stone
DeKalb, Gwinnett, Rockdale Cos.: Herrmann, L. A., 1
Georgia: Burchard, E. F., 5
talc, Blue Ridge and Piedmont: Hopkins, O. E., 2
vermiculite, Blue Ridge: Prindle, L. M., 1
Forsyth
Coastal Plain, Cretaceous: Applin, P. L., 2
Geological
Bartow Co.
Cartersville Dist.: Hull, J. P. D., 2, 3; Keeler, T. L., 4
Fairmount area: Smith, J. W., 2
Hermitage Dist.: White, W. S., 2
Rome Quad.: Hayes, C. W., 15
Blue Ridge: King, F. P., 1; Sayler, N., 1
Precambrian: Stose, G. W., 9
southern: Furcron, A. S., 10, 12
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Rockdale Co., Stone Mountain-Lithonia area: Herrmann, L. A., 1
Schley Co., Andersonville area: Grumbles, G. R., 2; Zapp, A. D., 1, 2
Seminole Co., Jim Woodruff Reservoir area: Hendry, C. W., Jr., 1
Stewart Co., Lumpkin SW Quad.: Kirkpatrick, S. R., 2
Sumter Co., Andersonville area: Grumbles, G. R., 2; Zapp, A. D., 1, 2
Taylor Co.
Thomaston Quad.: Clarke, J. W., 1
Warm Springs Quad.: Hewett, D. F., 1
Tifton Co.
Twigs Co.: Thompson, R. M., 1
Union Co., Ellijay Quad.: LaForge, L., 2
Upson Co.
Thomaston Quad.: Clarke, J. W., 1
Warm Springs Quad.: Hewett, D. F., 1
Walker Co.: Johnson, V. H., 1; McCallie, S. W., 1; Renshaw, E. W., 1
Cedar Grove Quad.: Dicus, J. M., 1
Cooper Heights area: Moore, W. H., Jr., 2
Durham Quad.: Darling, R. W., 1
Kennington Quad., southern: Traylor, H. G., 1
Pigeon Mountain: Wheeler, G. E., 1
Ringgold Quad.: Hayes, C. W., 7
Washington Co.: Thompson, R. M., 2
Webster Co.: Furcron, A. S., 49; Owen, V., Jr., 2
White Co., White County Mine area: Pardee, J. T., 1
Whitfield Co.
Cahoon Quad.: Cribb, R. E., 1
Dalton Quad.: Munyan, A. C., 17; Sheridan, J. T., 1
Mill Creek Valley: Moore, J. B., Jr., 2
Ringgold Quad.: Hayes, C. W., 7
Wilkinson Co.: Warren, W. C., 1

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earthquake epicenters, Georgia: Heck, N. H., 4
gravity
Baker Co.: McClain, D. S., Jr., 1
Coastal Plain
Bouguer anomalies: Woolard, G. P., 5
isogam, Savannah River area: Rowlands, C. E., Jr., 1
Georgia: Lyons, P. L., 1; Woolard, G. P., 5
 Isselsmal, Georgia: Humphreys, W. J., 2
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Coastal Plain: Swarts, J. H., 1
Georgia: Jenny, W. P., 1
radioactivity, Charlton Co.: Moxham, R. M., 1
seismic, Coastal Plain, basement configuration: Meyer, R. F., 3; Woolard, G. P., 5

Ground water
Chattahoochee Co., Fort Benning area: Herrick, S. M., 2
Coastal Plain
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Georgia, mineral springs: Ellis, A. J., 1; Peale, A. C., 2
Marion Co., Fort Benning area: Herrick, S. M., 2

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Atlanta area: Herrick, S. M., 4
southeastern: LeGrand, H. E., 2

Isopach
northeastern Ga.
Devonian, Chattanooga Shale: Glover, L., 1
Lower Silurian: Amsden, T. W., 1

Lithofacies
northeastern Ga., Lower Silurian: Amsden, T. W., 1

Major faunal elements
northeastern Ga., Lower Silurian: Amsden, T. W., 1

Paleofloristic
Pleistocene, Georgia: Harshberger, J. W., 1

Paleogeographic
Georgia: Matthew, W. D., 1
Cambrian: Walcott, C. D., 2
Paleozoic-Cenozoic: Schuchert, C., 3
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Rockdale Co., Stone Mountain-Lithonia area: Herrmann, L. A., 1

Structure contour
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Cretaceous: Jordan, L., 5
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Dawson Co., Tate Quad.: Bayley, W. S., 1
Fannin Co., Mineral Bluff Quad.: Hurst, V. J., 15
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Glad Co., Ellijay Quad.: LeFevre, L. 2
northwestern Ga.: McCollie, S. W., 1
Pickens Co.: Wells, R. C., 1
Ellijay Quad.: LeFevre, L. 2
Tate Quad.: Bayley, W. S., 1
Piedmont: McCollie, S. W., 1
structure: Prouty, W. F., 1
Union Co., Ellijay Quad.: LeFevre, L. 2
Walker Co., analysis: Clarke, F. W., 4
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Hall Co.: Clarke, F. W., 1
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Columbia Mines: Flnker, W. H., 2;
Hall, B. M., 4
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meteors: Merrill, G. P., 3
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Economic geology
ilmenite: Martens, J. H. C., 1
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Warm Springs Quad.: Hewett, D. F., 1
North Spring: Grover, N. C., 2
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Chattooga Co.: Brezina, A. S.; Clarke, F.
W., 4; Cohen, E. W., 1; Henderson,
E. P., 3, 5; Huntington, O. W., 2;
Whitfield, J. E., 1
Cherokee Co.: Clarke, F. W., 4; Flight, W.,
1; Howell, E. E., 1; Meunier, S., 1;
Sipetner, E. W., 1; Shepard, C. U.,
1, 4, 11
Emmanuel Co.: Henderson, E. P., 4
Georgia: Brezina, A. S., 2, 6; British Museum,
1; Farrington, O. C., 1, 2, 4, 5, 6;
Fletcher, L. 1; Furcron, A. S., 17;
Henderson, E. P., 4; Huntington,
O. W., 1; LaFaz, L., 1; Leonard,
F. C., 1, 2, 5; Merrill, G. P., 5;
Nininger, A. D., 1; Ferry, S. H., 1;
Prior, G. T., 1; Reeds, C. A., 2;
Senseny, A. von, 1; Servos, K., 1;
Ward, H. A.; 1; Washington, H. S.,
1; Waelling, E. A., 1
popular: Crickmay, G. W., 8
Henry Co.: Cohen, E. W., 1, 4, 5; Fireman,
E. L., 1
Jenkins Co.: Henderson, E. P., 1; Leonard,
F. C., 3
McDuffie Co.: Morrill, G. P., 3
Marion Co.: Beall, E., 1; Buchner, G. L. O.,
2; Dans, E. S., 2; Goebel, A. 1;
Haldinger, W. K. von, 1; Hamilton,
S. H., 1; Hoff, K. E. A. von; Paris
Museum, 1; Furtch, P. M., 1;
Reichenbach, K. F. von, 2, 3; Roes,
G. 2; Shepard, C. U., 3; Stillman,
B., Sr., 1; Warden, D. B., 1
Oglethorpe Co.: Henderson, E. P., 3; Leonard, F. C., 4; Roy, S. K., 2
Paulding Co.: Watson, T. L., 19
Pickens Co.: McCaille, S. W., 23; Wahl, L. P., 1
Polk Co.: Goldberg, E. D., 1; Perry, S. H., 2
Pulaski Co.: Henderson, E. P., 4
Putnam Co.: Brezinah, A., 5; Buchner, C.L.O., 1, 2; Cohen, E. W., 2; Coulsen, A. L.; Dana, E. S., 2; Harris, E. P., 1; Rammelsberg, K. F., 1; Reichenbach, K. F., von, 1, 2, 3; Rose, G., 2, 5; Salt peter, E. W., 1; Willett, T. L., 1
Stewart Co.: Ahrens, L. H., 1; Cohen, E. W., 1; Flight, W. H.; Pinson, W. H., Jr., 2; Salt peter, E. W., 1; Smith, D. L., 2; Willett, J. E., 2
Union Co.: Buchner, C. L. O., 1, 2; Coulsen, A. L., 1; Dana, E. S., 3; Harris, E. P., 1; Mountier, S., 1, 2; Paris Museum, 1; Reichenbach, K. F., von, 1, 2; Rose, G., 2, 3; Salt peter, E. W., 1; Shepard, C. U., 4
Walton Co.: Henderson, E. P., 2, 3; McCallie, S. W., 29
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Elbert Co.: Griffiths, W. R., 1
Fannin Co.: Hurst, V. J., 28
Hart Co.: Grant, W. H., 5; Griffiths, W. R., 1; Teague, K. H., 1
Laurens Co.: Beck, W. A., 2
Thomason-Barnevile Dist.: Heinrich, E. W., 2
Thomason Dist.: Clarke, J. W., 1
Troup Co.: Beck, W. A., 2
Thomason-Barnesville Dist.: Heinrich, E. W., 2
Piedmont: Furcron, A. S., 7; Galpin, S. L., 1; Heinrich, E. W., 1; Jahns, R. H., 2; Parker, J. M., 3d, 1; Peyton, G., 3; Smith, R. W., 5; Sterrett, D. B., 2; Watts, A. S., 1
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Thomason-Barnesville Dist.: Heinrich, E. W., 2
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DeKalb Co.: Navarre, A. T., 2
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Bartow Co.: Currys, L. J., 1
Blue Ridge: Dieffenbach, O., 1; Ga. Inst. Tech. Indus., Econ. Res. Staff, 1; Hunter, C. E., 4
Burke Co.: Cotting, J. R., 2
Cherokee Co.: Tate Dist.: Bayley, W. S., 1
Coastal Plain: Macon area: Munyan, A. C., 4
Dade Co.: Gildersleeve, B., 1
Dawson Co.: Tate Dist.: Bayley, W. S., 1
Floyd Co.: Furcron, A. S., 28
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Georgia: Bellagio, J. C., 1; Behe, C. H., Jr., 1; Bevan, A. C., 2; Brewer, W. M., 1; Crickmay, G. W., 28; DeBow, J. D. B., 1, 2; Dieffenbach, O., 2; Furcron, A. S., 25; Harper, R. M., Jr., 12; Hayes, C. W., 28; Henderson, J. T., 1; James, T. P., Jr.; Warren, R. A., 1; Little, G., 1, 3; Lloyd, S. J., 1; McCaille, S. W., 8, 26, 38; Meade, R. K., 1; Middleton, G., 1; Morton, F. C., 1; Neubert, R. T., 1; Peyton, G., 6; Pratt, J. H., 3; Sanford, S. A., 1; Sell, E. S., 1; Shaler, N. S., 1; Simmons, W. W., 1; Smock, J. C., 1; Snyder, F. G., 1; Spencer, J. W., 1; Stephens, M. P., 1; Stevens, O. B., 1; Watkins, E. J., 1; White, G., 1; Williams, A., Jr., 1
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Effingham Co.
marks Head Mart: Gardner, J. A., 2
Porters Landing: Vaughan, T. W., 7
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Seminole Co., southern: Hendry, C. W., Jr., 1
Washington Co.: LaMoreaux, P. E., 1
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Cedar Grove Quad.: Dickens, J. M., 1
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northwestern Ga.: Burns, J. A., 1; Butts, C., Hayes, C. W., 2, 4; McCutchen, A. R., 1; Marquis, U. C., 1; Olson, E. C., 1; Elgin, H. W., 1; Stevenson, J. J., 2; Stockdale, P. B., 1; Sullivan, J. W., 3; Walker, J. M., 1
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Cedar Grove Quad.: Dickens, J. M., 1
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Crawford Co.: Fortson, C. W., Jr., 2
Hall Co.: Sterrett, D. B., 1
Piedmont: Mertis, J. B., Jr., 2; Overstreet, W. C., 1
Rabun Co.: Sterrett, D. B., 1
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Bartow Co.: Cooper, R. H., 1; Haney, M., 1; Hayes, C. W., 16, 22; Kesler, T. L., 1; McCallie, S. W., 25, 31; Santmyers, B. M., 1; Tuff, H. E., 1; Watson, T. L., 12, 18; Weigel, W. M., 1; Wilson, H., 1

popular: Crickmay, G. W., 4

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Brooks Co.: Fortson, C. W., Jr., 1

Coastal Plain: Appin, E. E. R., 1; Cooke, C. W., 7, 8, 16, 19; Douville, J. H., 1; MacNeill, F. S., 2; Maury, C. J., 1; Pumpelly, R., 2; Richards, H. G., 15

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east-central: LaMoreaux, P. E., 2

foraminiferal zones: McLean, J. D., Jr., 1

Glendon Limestone: Cooke, C. W., 6

southwestern: Appin, F. L., 1

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Effingham Co., Forts Landing: Vaughan, T. W., 7

Lowndes Co.: Fortson, C. W., Jr., 1

Randolph Co.: Erwin, J. W., 1

Richmond Co.: Lewis, H. C., 1

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Ringgold Quad.: Hayes, C. W., 7

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Dade Co.: New England Company, 1

Cedar Grove Quad.: Dicus, J. M., 1

Durham Quad.: Darling, R. W., 1

western: Clement, W. G., 1

Lookout Valley: Ingram, F. T., 2

Ringgold Quad.: Hayes, C. W., 7

Stevenson Quad.: Hayes, C. W., 8

Floyd Co.

Ringgold Quad.: Hayes, C. W., 7

Rome Quad.: Hayes, C. W., 18

Gordon Co.

Ringoold Quad.: Hayes, C. W., 7

Rome Quad.: Hayes, C. W., 18

northwestern Ga.: Allen, A. T., Jr., 7

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boundary: Ulrich, E. O., 3
cheret: Windham, S. R., 1
Murray Co.: Kellberg, J. M., 3
Calhoun Quad.: Cribb, R. E., 1
Dalton Quad.: Munyan, A. C., 17
Blackford Breccia: Jackson, L. E., Jr., 1
Piedmont: Elliott, J. B., 1
Polk Co.: Hayes, G. W., 6; Pinson, W. H., Jr.; Spencer, J. W., 5
Indian Mountain area: Crawford, T. J., 1
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Catoosa Co., Ordovician: Gould, J. C., 1
Coastal Plain: Cretaceous: Howes, H. van W., 4
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Floyd Co.: Sherrill: Ulrich, E. O., 5
Richmond Co., Eocene: Murray, G. E., Jr., 1
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Clarke Co., algae and diatoms, Pleistocene: Bailey, J. W., 2
Clay Co., Eocene: Berry, E. W., 8
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Eocene: Berry, E. W., 4, 5, 15, 17
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Pleistocene: Berry, E. Willard, 1
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Lumpkin Co., tree, Pleistocene: Eckel, E. C., 11
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PALEOCENE, see also Cenozoic, Eocene, and Tertiary
Bibb Co., Macon area: Cooke, C. W., 5
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Clayton Formation: Herrick, S. M., 7
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Cretaceous, belemnoids: Dorsey, G. E., 1
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Georgia schools: Lipsy, E. L., 1
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Archaeocyatha, Bartow Co.: Keeler, T. L.; Okultich, V. J., 1
Brachiopoda
Bartow Co.: Walcott, C. D., 4, 9
Floyd Co.: Walcott, C. D., 4, 9
northwestern Ga.: Resser, C. E., 3
Walker Co.: Walcott, C. D., 5
faunal facies: Balk, C. L., 1
Invertebrata, northwestern Ga.: Allen, A. T., Jr., 5
Polk Co., Indian Mountain area: Crawford, T. J., 2
Porifera, Floyd Co.: Munyan, A. C., 16; Walcott, C. D., 12
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Bartow Co.: Resser, C. E., 5; Walcott, C. D., 9
Floyd Co.: Resser, C. E., 2; Walcott, C. D., 10, 11
northwestern Ga.: Resser, C. E., 3;
Salter, J. W., 1
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Quintana Co.: Stephenson, L. W., 8; Wells, J. W., 1
Stewart Co.: Wells, J. W., 1
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Coastal Plain, paleoecology: Dorsey, G. E., 1
Washington Co.: Morton, S. G., 1, 2
Cephalopoda, Clay Co.: Gabb, W. M., 1
Crustacea, Steward Co.: Rathbun, M. J., 1
Echinoidea
Clay Co.: Clark, W. B., 3; Cooke, C. W., 24
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Cline Co.: Applin, E. E. R., 3
Coastal Plain: Applin, E. E. R., 2; Applin, P. L., 1; Cushman, J. A., 10, 11; Herrick, S. M., 1
Early Co.: Applin, E. E. R., 2
Echols Co.: Applin, E. E. R., 3
Fernie Co.: Cushman, J. A., 10
Gastropoda, Clay Co.: Gabb, W. M., 1
Invertebrata, Coastal Plain: Basiller, B. S., 1; McCullie, S. W., 20; Richards, H. G., 5; Vestch, J. O., 9
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Dougherty Co.: Richards, H. G., 5
Quintana Co.: Gabb, W. M., 1
Stewart Co.: Gabb, W. M., 1
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Houston Co.: Berry, E. Wilbur, 1, 10, 14
Marion Co.: Berry, E. Wilbur, 1, 10, 14
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Invertebrata, northwestern Ga.: Allen, A. T., Jr., 5
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Anchusa
Burke Co.: Lonsdale, W., 1
Decatur Co.: Vaughan, T. W., 1
Screven Co.: Lonsdale, W., 1; Millin-Edwards, H., 1; Vaughan, T. W., 1
Brachiopoda, Dougherty Co.: Dall, W. H., 2
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Echinoidea
Baker Co.: Conrad, T. A., 4
Coastal Plain: Clark, W. B., 3; Cooke, C. W., 21, 25; Desor, E., 1; Say, T., 1
Decatur Co.: Cooke, C. W., 20
Lee Co.: Conrad, T. A., 4; Cooke, C. W., 20
Mitchell Co.: Cooke, C. W., 20
Screven Co.: Lyell, C., Jr., 4
Washington Co.: Stefanini, G., 1
Foraminifera
Coastal Plain: Applin, E. E. R., 2; Applin, P. L., 1; Cushman, J. A., 1, 2, 3, 5, 7, 12; McLean, J. D., Jr., 1
Crawford Co.: Cushman, J. A., 4
Decatur Co.: Cushman, J. A., 4; Doville, J. H. F., 2; Vaughan, T. W., 13
Houston Co.: Cushman, J. A., 7
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Richmond Co.: Cushman, J. A., 8
Washington Co.: Cushman, J. A., 9
Gastropoda
Burke Co.: Lyell, C., Jr., 4
Clay Co.: Harris, G. D., 3
Coastal Plain: Bowies, E. O., 1; Conrad, T. A., 4; Dall, W. H., 2; Stenzel, H. B., 1
Richmond Co.: Dall, W. H., 5, 7
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Decatur Co.: Couper, J. H., 3
Effingham Co.: Meriwether, D., 1
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Crawford Co.: Furcron, A. S., 22
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Burke Co.: Howe, H. van W., 1
Clay Co.: Harris, G. D., 3
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Cephalopoda, Floyd Co.: Miller, A. K., 1
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Coastal Plain: Cooke, C. W., 8; Richards, H. G., 15
Decatur Co.: Dall, W. H., 11
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Anthozoa
Coastal Plain: Vaughan, T. W., 10
Decatur Co.: McGlamery, W., 1; Squires, D. F., 1; Vaughan, T. W., 2, 10
Crustacea, Decatur Co.: Rathbun, M. J., 1
Echinoids
Baker Co.: Bouvé, T. T., 1
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Clark, W. B., 2; Cooke, C. W., 21, 25
Foraminifera, Coastal Plain: Appin, E. E. R., 2; Appin, P. L., 1; Cushman, J. A., 2; McLean, J. D., Jr., 2
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Decatur Co.: Dall, W. H., 11
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Mollusca, Coastal Plain: Richards, H. G., 10
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Coastal Plain: Copc, E. D., 3
Macon Co.: Hay, O. P., 2

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Clarke Co.: Bailey, J. W., 2
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northwestern Ga.: Cope, E. D., 1
Walker Co.: Hitchcock, D., 1
Mollusca
Chatham Co.: Habersham, J. C., 1
Coastal Plain: Richards, H. G., 12

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Georgia: Berry, E. Willard, 1
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erosion surfaces: Wright, F. J., 5 swamps: Shaler, N. S., 2

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Cedar Grove Quad.; Dicns, J. M., 1 Cloudland Canyon Park: Croft, M. G., 1 Durham Quad.; Darling, R. W., 1 Ringgold Quad.; Hayes, C. W., 7 Stevenson Quad.; Hayes, C. W., 8 Floyd Co., Rome Quad.; Hayes, C. W., 18 Georgia, paleogeology: Leverson, A. L., 1 Haralson Co., Talladega Series: Webb, J. E., 1

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