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CHARLES D. WALCOTT, DIRECTOR

NORTH AMERICAN
GEOLOGIC FORMATION NAMES

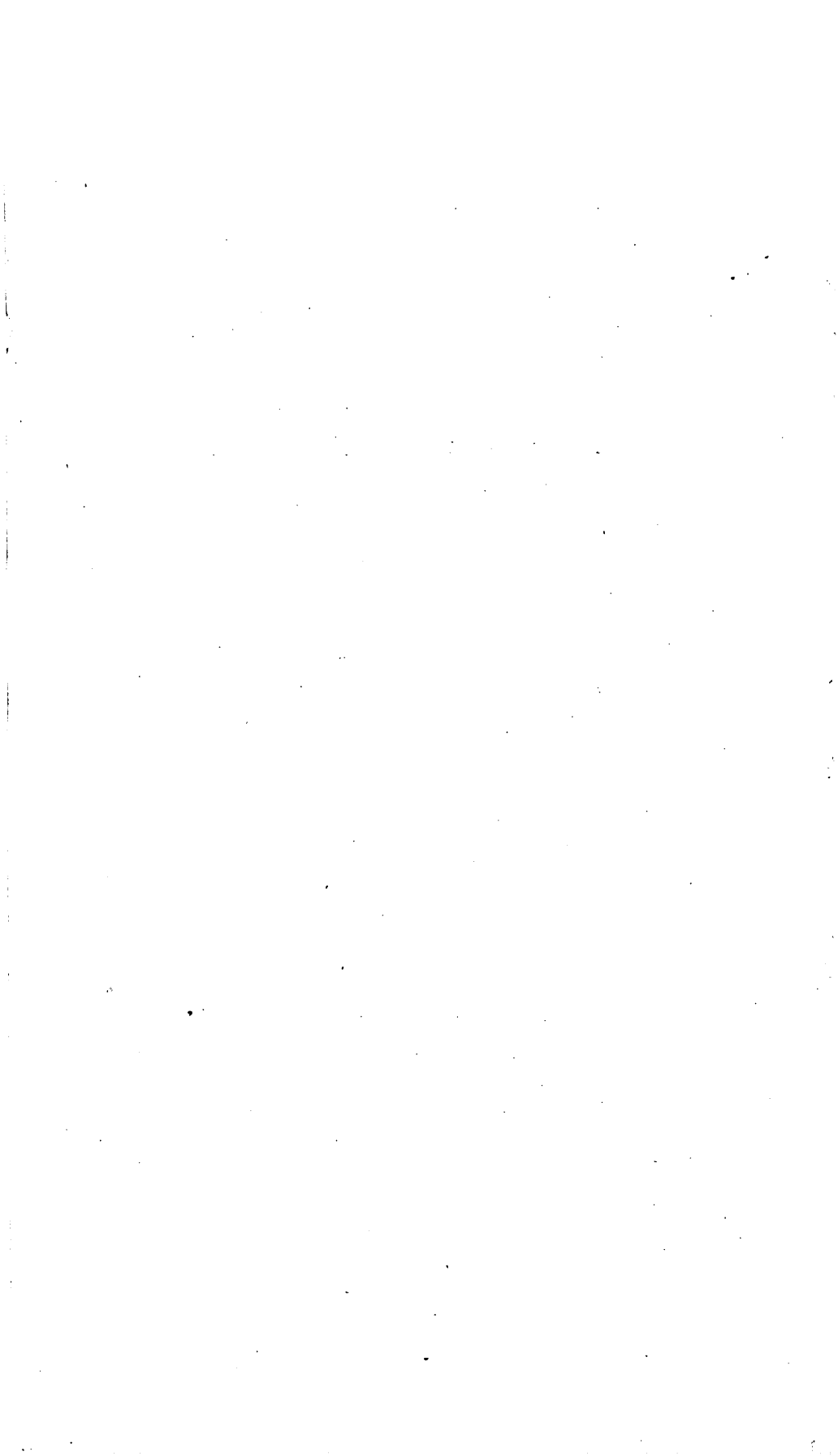
BIBLIOGRAPHY, SYNONYMY
AND DISTRIBUTION

BY

FRED BOUGHTON WEEKS

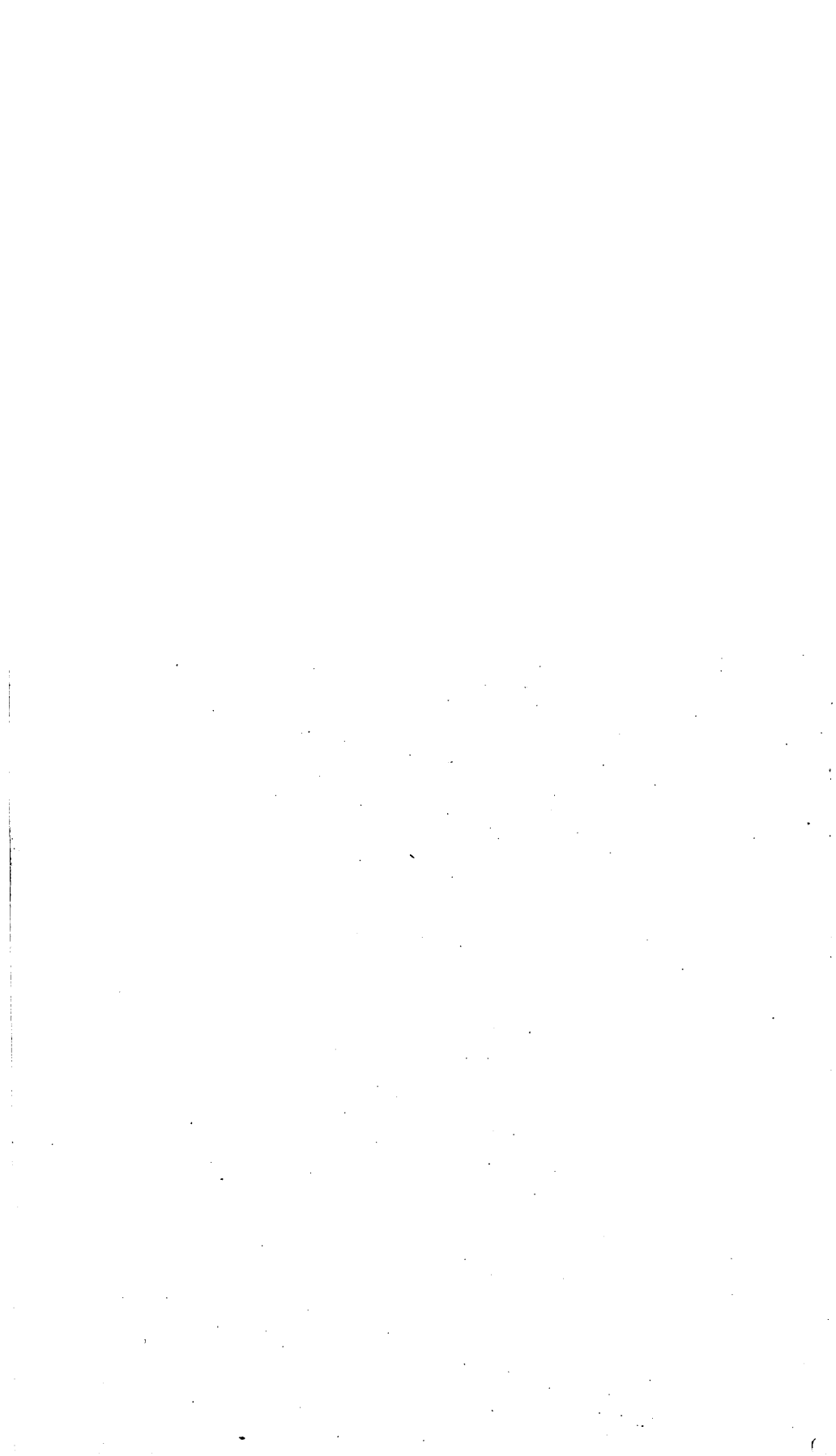


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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
UNITED STATES GEOLOGICAL SURVEY,
Washington, D. C., November 27, 1901.

SIR: I have the honor to transmit herewith a manuscript entitled North American Geologic Formation Names: Bibliography, Synonymy, and Distribution, and to request that it be published as a bulletin of the Survey.

Very respectfully,

F. B. WEEKS.

HON. CHARLES D. WALCOTT,
Director United States Geological Survey.



NORTH AMERICAN GEOLOGIC FORMATION NAMES: BIBLIOGRAPHY, SYNONYMY, AND DISTRIBUTION.

By F. B. WEEKS.

INTRODUCTION.

This publication contains:

(1) A list of all North American sedimentary formation names, arranged alphabetically by geographic provinces under each of the larger geologic subdivisions to which they have been assigned, in general, by various authors.

(2) A list of the names used to designate a particular stratum or aggregate of sedimentary strata within the area of North America. It is arranged alphabetically, and the references to each name are placed in chronological order. Each name appears in this list as it is used in the reference cited. The references refer only to the more important descriptions of formations or discussions of correlation, synonymy, or nomenclature. The geologic time-division to which a formation belongs, and the State, Territory, or country in which it occurs, form a part of each entry.

(3) A list of the geographic names that have been applied to masses of igneous rocks occurring in North America. Only those names that indicate that the rocks are of igneous origin have been included in this list. All names of metamorphic or other rocks of uncertain origin are included in the list of sedimentary formation names.

(4) An index list of formation names.

At the inception of this work it was seen that it would be necessary to read carefully every article or book on geology that had been published in order to be certain that every name that had been used to designate particular strata should be included in this catalogue. It was evident that the necessity for an early completion of the work and the limited time that could be devoted to it rendered it impossible to adopt such a plan. Furthermore, it is well known that during the early years of geologic literature names were employed so loosely that in very many cases it is impossible to determine whether it was intended to use the name merely in a descriptive sense or as a distinctive formation name. It may happen, therefore, that names are

included in this list which were not intended to be proposed as formation names, or that the first mention of a name subsequently used as a distinctive formation name has been omitted.

This work not only presents a list of formation names, and their synonymy and correlations as given by authors, but also serves as a bibliography of the literature describing each formation. Mere mentions of occurrence were not entered, but it was intended to include descriptions of a formation which defined it either wholly or in part. It is probably true that the discrimination as to what is a sufficient description to entitle the reference to be included in this catalogue has not been of such a uniform character as it would have been if the preparation of the catalogue had been wholly the work of one person; but it is not considered less valuable on this account, since all the really important descriptions are believed to have been included.

No attempt has been made to indicate the synonymy or taxonomic value of any formation except as it was given by the author of the reference cited. It is intended to refer the investigator to the literature of any North American geologic formation name, and he must exercise his own judgment as to its value and standing as a formation name.

The work of preparing this bulletin has been in progress for nearly three years. It has been interrupted from time to time by other office and field work of the author. During the winter of 1899-1900 it became evident that this work must be completed at once for the use of members of the United States Geological Survey in assigning names to the formations which were being delineated on the folios forming the Geologic Atlas of the United States. The Director of the Survey requested the following geologists to assist in completing the work: Messrs. M. R. Campbell, N. H. Darton, J. S. Diller, G. H. Girty, C. W. Hayes, F. H. Knowlton, F. L. Ransome, G. O. Smith, A. C. Spencer, T. W. Stanton, J. A. Taff, T. W. Vaughan, and David White. The literature that then remained to be examined was apportioned among these gentlemen, and since that time the material has been brought down to January 1, 1901, by the author. The methods of preparing this material, previously adopted, were followed with as much uniformity as was possible, and the author, as well as geologists in general, is greatly indebted to these gentlemen who assisted in bringing the work to an early completion.

In the discrimination of what constitutes a sufficient description of a formation and the determination of the problems of nomenclature, the following suggestions are offered. These represent, in brief, the conclusions of the author as the result of his studies of the geologic literature of North America.

A formation which is associated with other strata at the particular locality from which it takes its name should be defined, either by its

lithologic or its faunal characters, in such a manner that the reader, or the observer in the field, can differentiate it from the other strata with which it occurs. Where a name is given to a series of strata of varied lithologic character and of wide distribution, the general characters of the lithologic variations and the stratigraphic relations should be so given as to indicate, approximately, what are its relations to other formations of the same or related provinces.

In determining the names to be applied to formations the laws of priority and prescription (general usage) should be observed. The name first given to a definite formation or series of strata should hold, unless this name is superseded in literature by another which has come into general use. In the latter case the first name should be dropped for this formation; and, where there can be no question as to the general usage of the subsequent name, the first name might be used again for a different formation without causing serious trouble. Such reuse would certainly be very advantageous in regions where there are few geographic names.

As an illustration, the name Berkshire limestone was first applied to certain limestones in western Massachusetts. Subsequently the name Stockbridge limestone was employed to designate this formation and has since come into general usage for this subdivision of the Cambrian in that region. The name Berkshire limestone has therefore become obsolete, and the name might be used to designate some other formation without creating confusion.

The duplication of formation names has become a serious matter, as will be seen from an examination of this list. It seems very desirable that in the future there should be no further duplication; new names should replace those which can not hold their present varied definitions; thus in time all the present discrepancies in the nomenclature of formations would disappear from geologic literature.

It is the intention of the writer to continue this list in the yearly publication, *Bibliography and Index of North American Geology, etc.*, under the subheading, "Geologic formations described."

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**SYNONYMIC TABLE OF PERIOD NAMES USED BY AUTHORS AND THOSE
USED BY THE UNITED STATES GEOLOGICAL SURVEY.**

Names used by authors.	United States Geological Survey classification.
Glacial	} Pleistocene.
Quaternary	
Pleistocene	
Tertiary {	} Neocene.
	Pliocene
	Miocene
Oligocene	
Eocene	
Cretaceous	Cretaceous.
Jura	} Juratrias.
Trias	
Permian	} Carboniferous.
Carboniferous	
Devonian	Devonian.
Silurian	} Silurian.
Ordovician	
Cambrian	Cambrian.
Algonkian	Algonkian.
Archean	Archean.



LIST OF GEOLOGIC FORMATION NAMES, ARRANGED BY GEOGRAPHIC PROVINCES UNDER THE GEOLOGIC PERIODS TO WHICH THEY HAVE BEEN ASSIGNED.

PLEISTOCENE.

<i>Alaska.</i>	Saugeen.	<i>Mississippi Valley.</i>
Cook Inlet.	Saxicava.	Aftonian.
Ground Ice.	Syrtensian.	Altamont.
Kanektok.	Toronto.	Bluff.
Kowak.		Bottom Prairie.
Kuskokwim.	<i>Great Lakes region.</i>	Boulder.
Pinnacle.	Albertan.	Buchanan.
St. Elias.	Algoma.	Cerro Gordo.
Saskatchewan.	Arkona.	Delta.
Togiak.	Artemisia.	Forest.
Yukon.	Calumet Beach.	Fourth Moraine.
<i>Appalachian region.</i>	Gary.	Gravel.
Teay.	Grassmere.	Highland.
<i>Atlantic Coast region.</i>	Mesabi.	Illinoian.
Barnstable.	Van Wert.	Iowan.
Barrington.	Wisconsin.	Iroquois.
Bryn Mawr.		Itasca.
Cape May.	<i>Great Plains region.</i>	Loess.
Columbia.	Antelope.	Marseilles.
Cornfield Harbor.	Cache Valley.	Orange Sand.
Jamesburg.	Equus.	Peorian.
Middleboro.	Gentile Valley.	Sangamon.
Mohegan.	Kansan.	Shelbyville.
Mussel-bearing.	Lake Bonneville.	Silveria.
Packer.	Malade Valley.	Tolleston.
Philadelphia.	Marsh Creek.	Valley.
Queens River.	McPherson.	Valparaiso.
Sankaty.	Meade.	Vermilion.
Simmons Bluff.	Megalonyx.	Western Valley.
Terrace.	Salt Creek.	Yarmouth.
Tisbury.	Third Moraine.	<i>Pacific Coast region.</i>
Truro.	Wellington.	Admiralty.
Yellow.	<i>Gulf States.</i>	Coos.
<i>Canada.</i>	Biloxi.	Douty.
Galt.	Mobile.	Gale.
Leda.	Port Hudson.	Midland.
Kingston.		Orting.

PLEISTOCENE—continued.

Osceola.	<i>Southwestern region.</i>	Champlain.
Puyallup.	Coast.	Coastal.
San Pedro.	Guertie.	Falmouth.
Steilacoom.	Leona.	May Pen.
Superjacent.	Prairie d' Ane.	Montego.
Tehachipa.	Seymour.	Neudeckian.
Vashon.	White Prairie d' Ane.	Ozarkian.
Yakutat.		Warren.
	<i>West Indies.</i>	Zapata.
<i>Rocky Mountain region.</i>		
Hot Spring.	Barbican.	
Sheridan.	Bogue Island.	
Stanford.	Buff Bay.	

TERTIARY.

	<i>Alaska.</i>	Bryn Mawr.	Shell Bluff.
Hayes River.		Caloosahatchie.	Squanjum.
Kenai.		Cape Cod.	Tuscahoma.
Nulato.		Carolinian.	Vineyard.
Nushagak.		Chattahoochee.	Virginian.
Orca.		Chesapeake.	Waccamaw.
Palisades.		Cooper River.	Weyquosque.
Pinnacle.		Coralline.	Wilmington.
Saskatchewan.		Croatan.	Woodstock.
Tanana.		Duplin.	Yellow.
Tok.		Eo-Lignitic.	
Twelvemile.		Floridian.	<i>Canada.</i>
Tyonek.		Glassboro.	Carmanah Point.
Unga.		Gray.	Coldwater.
Yakutat.		Great Carolina.	Lawrencian.
Yentna.		Hawthorne.	Leda.
		Holocene.	Roche Percee.
<i>Appalachian region.</i>		Jacksonboro.	Saxicava.
Flatwoods.		Lafayette.	Sooke.
Hickman.		Lisbon.	Tranquille.
Irvine.		Manatee.	
		Marl.	<i>Central America.</i>
<i>Atlantic Coast region.</i>		Marlborough.	Brito.
Alachua.		Marylandinian.	
Altamaha.		Mont Alto.	<i>Great Basin region.</i>
Alum Bluff.		Mount Holly.	Amyzon.
Appomattox.		Nashaquitsa.	Bishop Mt.
Aquia Creek.		Orangeburg.	Bitter Creek
Archer.		Pamunkey.	Bridger.
Ashley.		Patuxent.	Cache Lake.
Aspalaga.		Pensauken.	Esmerelda.
Autocene.		Piscataway.	Estuary.
Beacon Hill.		Pulaski.	Fort Bridger.
Branditown.		Santee.	Green River.
Brandon.		Shark River.	

TERTIARY—continued.

Humboldt.	Jacksonian.	Yegua.
Idaho.	Jacksonville.	Zeuglodon.
Manti.	Lagarto.	<i>Hawaii.</i>
Para.	Lignite.	Pearl River.
Pink Cliff.	Lignitic.	<i>Mexico.</i>
Plant.	Lufkin.	Baucari.
Salt Lake.	Marine.	Coatzacoalcos.
Tower.	Matthews Landing.	Trincheras.
Truckee.	Middleton.	<i>Mississippi Valley.</i>
Uinta.	Midway.	Bloomfield.
White.	Midwayan.	Bluff.
<i>Great Lakes region.</i>	Miliolite.	Geneva.
Vermilion.	Moody's Branch.	La Grange.
<i>Great Plains region.</i>	Mount Selman.	Mansfield.
Equus.	Myrick.	Orangesand.
Kingsdown.	Naheola.	Port Hudson.
McPherson.	Nanafalia.	Porters Creek.
Megalonyx.	Navasota.	Portland.
Nebraska.	Nummulite.	Quitman-Muerto.
Pearlette.	Oak Grove.	<i>Pacific Coast region.</i>
Protoceras.	Oakville.	Arago.
White River.	Ocala.	Asphalto.
<i>Greenland.</i>	Ocheesee.	Astoria.
Atane.	Orbitoides.	Aturia.
<i>Gulf States.</i>	Orbitoitic.	Auriferous.
Arcadia.	Orbitolite.	Bituminous.
Bashi.	Orthaulax.	Carmelo.
Bells Landing.	Ostrea sellaeformis.	Carrizo Creek.
Black Bluff.	Palo Duro.	Chehalis.
Buhrstone.	Pascagoula.	Chico.
Chickasaw.	Peace Creek.	Coaledo.
Chipola.	Queen City.	Contra Costa.
Claiborne.	Reynosa.	Ellensburg.
Clayton.	Sabine River.	Empire.
Coal Bluff.	Shiloh.	Ione.
Cocksfield Ferry.	Sopchophy.	John Day.
Coral.	Sparta.	Johnson.
De Soto.	St. Stephens.	Kettleman.
Diablo-Davis.	Sucarnochee.	Kittitas.
Ephora.	Tallahatta.	Little Vein.
Fayette.	Tampa.	Merced.
Fleming.	Timber Belt.	Miohippus.
Frio.	Tule.	Mojave.
Grand Gulf.	Uvalde.	Monterey.
Greensand.	Vicksburg.	Mytilus.
Greggs Landing.	Vicksburgian.	Oakland.
Hatchetigbee.	Waldo.	Ocoya Creek.
Jackson.	Walnut.	
	Webb Bluff.	
	Wills Point.	
	Woods Bluff.	

TERTIARY—continued.

Paso Robles.	Florissant.	Bingen.
Pescadero.	Fort Ellis.	Blanco.
Puget.	Fort Union.	Blanco Canyon.
San Diego.	Galisteo.	Camden.
San Pablo.	High Park.	Cleveland County.
Santa Clara.	Huerfano.	Cooks Mountain.
Sespe.	Intermediate.	Fort Selden.
Similkameen.	Judith River.	Hueco.
Superjacent.	Laramie.	Lapara.
Swauk.	Loup Fork.	Llano Estacado.
Tassagara.	Loup River.	Marks Mills.
Tejon.	Monument Creek.	Plateau.
Ticholeptus.	North Park.	White Bluff.
Torregon.	Nussbaum.	<i>West Indies.</i>
Tunnel Point.	Oreodon.	
Tuscan.	Payette.	Antiguan.
Tyre.	Pinon.	Bowdan.
Roslyn.	Plihippus.	Cambridge.
Umpqua.	Poison Canyon.	Caroni.
Wallala.	Potosi rhyolite series.	Catadupa.
Wilbur.	Procamelus.	Chapelton.
Wildcat.	Puerco.	Cobre.
<i>Rocky Mountain region.</i>	San Juan.	Guallava.
	San Miguel.	Limon.
Alnwick.	Santa Fe.	Manchionell.
Arapahoe.	Smith River.	Manzanilla.
Bates Hole.	Sphinx.	Maruga.
Bozeman.	Sweetwater.	Matanzas.
Brontotherium.	Titanotherium.	May Pen.
Brown.	Wahsatch.	Moneague.
Browns Park.	Washakie.	Moruga.
Canyon.	West Elk.	Naparima.
Canyon City.	Wind River.	Nariva.
Coryphoden.	Wyoming.	Oceanic.
Cripple Creek.	<i>Southwestern region.</i>	Parian.
Cuchara.	Arkadelphia.	Pepino.
Deep River.	Basal.	Porus.
Denver.		

CRETACEOUS.

<i>Alaska:</i>	Lisbon.	Hazlet.
Holikunk.	Marietta.	Island.
Kolmakof.	<i>Atlantic Coast region.</i>	James River.
Matanuska.	Albirupean.	Lincoln.
Mission Creek.	Amboy.	Magothy.
Oklune.	Aquia Creek.	Manasquan.
Orca.	Baltimorean.	Marl.
Tordrillo.	Clay.	Matawan.
<i>Appalachian region.</i>	Eutaw.	Monmouth.
Brownstown.	Fish House.	Mount Vernon.
Eagle.		Navesink.

CRETACEOUS—continued.

Patapsco.
 Pedee.
 Potomac.
 Potters.
 Rancocas.
 Rappahannock.
 Raritan.
 Redbank.
 Sand Hill.
 Sassafras River.
 Severn.
 Sewell.
 Vincentown.
 Woodbridge.

Canada.

Belly River.
 Clearwater.
 Crosswicks.
 Dunvegan.
 Edmonton.
 Fort St. John.
 Grand Rapids.
 Jackass Mountain.
 Komooks.
 Kootanie.
 La Biche.
 Loon River.
 Nanaimo.
 Nicollet.
 Odanah.
 Paskapoo.
 Pelican.
 Porcupine.
 Queen Charlotte.
 Quesnel River.
 St. Marys.
 Smoky River.
 Tar.
 Wapiti.
 Willow Creek.

Great Basin region.

Bear River.
 Black Butte.
 Bluegate.
 Golden Wall.
 Henry's Fork.
 Hogback.
 Masuk.

Salt Wells.
 Sulphur.
 Tu-nunk.

Great Plains region

Arickaree.
 Bad Land.
 Barrett.
 Belvidere.
 Benton.
 Beulah.
 Black Hill.
 Blue Cut.
 Blue Hill.
 Champion.
 Cheyenne.
 Corral.
 Downs.
 Elk Creek.
 Fence-post.
 Fort Hays.
 Fort Pierre.
 Fort Union.
 Fullington.
 Greenleaf.
 Hay Creek.
 Kiowa.
 Kirby.
 Lanphier.
 Medicine.
 Mentor.
 Neocomian.
 Oak Creek.
 Osborne.
 Platte.
 Reeder.
 Smoky Hill.
 Stokes.
 Trego.
 Victoria.

Greenland.

Atane.
 Kome.
 Patoos.

Gulf States.

Arenaceous group.
 Arietna.
 Bayou Chicot.
 Calcareous.
 Coffee sand.

Prairie Bluff.
 Ripley.
 Tombigbee.
 Tuscaloosa.
 Winfield.

Mexico.

Cantera.
 Timpas.
 Todos Santos.

Mississippi Valley.

Fort Dodge.
 Glauconitic.
 Green sand.
 Inoceramus.
 Nishuabotany.
 Rockville.
 Rotten.
 Woodbury.

Pacific Coast region.

Chico.
 Chico-Tejon.
 Foraminiferal.
 Franciscan.
 Golden Gate.
 Horsetown.
 Knoxville.
 Mesa.
 Myrtle.
 Puget.
 Radiolarian.
 San Francisco.
 Shasta.
 Shasta-Chico.
 Similkameen.
 Suisure.
 Superjacent.
 Tejon.
 Whitsett.
 Winthrop.

Rocky Mountain region.

Animas River.
 Apishapa.
 Arapahoe.
 Bull Mountain.
 Canyon City.
 Carlile.
 Cascade.
 Ceratops.

CRETACEOUS—continued.

Colorado.	Caprina.	Navarro.
Cretaceous Nos. 1, 2, 3.	Caprotina.	Nerinaea.
Dakota.	Chalky.	North Denison.
Estuary.	Choctaw.	Paluxy.
Fort Benton.	Clark County.	Paw Paw.
Fox Hills.	Comanche.	Pinto.
Graneros.	Comanche Peak.	Ponderosa.
Great Falls.	Comet Creek.	Preston.
Green Mountain.	Coquina.	Pulliam.
Greenhorn.	Dallas.	Quitman.
Halymenites.	Danville.	Red River.
Laramie.	Delrio.	Requienia.
Livingston.	Denison.	Richland-Gordon.
Mancos.	Dexter.	Rocky Comfort.
Mesa Verde.	Dinosaur.	Shoal Creek.
Middle Park.	Duck Creek.	Taylor.
Montana.	Eagle Ford.	Texana.
Niobrara.	Eagle Pass.	Texanan.
Ohio Creek.	Edwards.	Timber Creek.
Pictured Cliff.	Escondido.	Travis Peak.
Pierre.	Etholen.	Trinity.
Piñon Mesa.	Exogyra arietina.	Tucumcari.
Point of Rocks.	Exogyra costata.	Upson.
Pteranodon.	Exogyra ponderosa.	Val Verde.
Puerco.	Flag.	Vicarya.
Ruby.	Fort Worth.	Vola.
Saliferous.	Fredericksburg.	Walnut.
San Miguel.	Georgetown.	Washita.
Trinidad.	Gillespie.	Webberville.
Yellowstone.	Glen Rose.	Yucca.
	Goodland.	
	Goodnight.	<i>West Indies.</i>
<i>Southwestern region.</i>	Grand Prairie.	
	Grayson.	Ballard.
Anacacho.	Gulf.	Blue Mountain.
Anoma.	Kiamitia.	Frankenfield.
Austin.	Lower Cross Timbers.	Jerusalem.
Big Decipher.	Main Street.	Logie Green.
Black Prairie.	Malone.	Minbo.
Bosque.	Marl Brook Columbus.	Yallahs.
Buda.		

JURATRIAS.

<i>Alaska</i>	Boscabel.	Long Meadow
Naknek.	Brunswick.	Mount Toby.
Skwentna.	Chesterfield.	New Red.
Terra Cotta.	Chicopee.	Newark.
	Connecticut River.	Otterdale.
<i>Atlantic Coast region</i>	Granby.	Patuxent.
Albirupian.	Gwynedd.	Perkasie.
Arundel.	Lansdale.	Pleurocoelus.
Baltimorean.	Lockatong.	Potomac.

JURATRIAS—continued.

Pottstown.	<i>Pacific Coast region.</i>	Como.
Red sand rock.	Auriferous slate.	Dolores.
Seneca.	Bicknell.	Ellis.
Stockton.	Cedar.	Gunnison.
Sugarloaf.	Foreman.	La Plata.
Trap Tuff.	Franciscan.	McElmo.
Tuckahoe.	Golden Gate.	Meekoceras.
Vinita.	Hardgrave.	Morrison.
	Hinchman.	Pentacrinus.
<i>Canada.</i>	Hosselkus.	Red.
Nicola.	Mariposa.	Shirley.
Vancouver.	Milton.	Sundance.
	Mineral King.	Teton.
<i>Great Basin region.</i>	Monte de Oro.	Unkpaps.
Flaming Gorge.	Mormon.	Wingate.
Gray Cliff.	Pitt.	Wyoming.
Koipato.	Radiolarian.	Zuni.
Shinarump.	Sailor Canyon.	<i>Southwestern region.</i>
Star Peak.	Santa Anna.	Bend.
Vermilion.	Swearinger.	Dockum.
	Thompson.	Lista Blanca.
<i>Mexico.</i>	Trail.	Malone.
Barranca.	<i>Rocky Mountain region.</i>	Norristown.
	Atlantosaurus.	
	Baptanodon.	

PERMIAN.

<i>Appalachian region.</i>	Cottonwood.	Kiger.
Dunkard Creek.	Curzon.	Kingfisher.
	Day Creek.	Manhattan.
<i>Great Plains region.</i>	Dog Creek.	Marietta.
Abilene.	Double Mountain.	Marion.
Alma.	Dry Bone.	Medicine Lodge.
Amphitheatre.	Flint.	Neosho.
Big Basin.	Flint Hill.	Red Bluff.
Big Blue.	Flower-pot.	Salt Fork.
Browntown.	Forest City.	Salt Plain.
Cave Creek.	Fort Riley.	Shimer.
Cedar Hills.	Geronimo.	Sumner.
Chapman.	Geuda.	Taloga.
Chase.	Glass Mountain.	Wellington.
Cimarron.	Harpers.	Wichita.
Clear Fork.	Jenkins.	Wreford.

CARBONIFEROUS.

<i>Alaska.</i>	<i>Appalachian region.</i>	Anthracite.
Cape Beaufort.	Alleghany River.	Bakerstown.
Tachatna.	Alton.	Bangor.
Tahkandit.	Ames.	Barren.
Wellesley.	Anderson.	Barton.

CARBONIFEROUS—continued.

Bayard.	Cuyahoga.	Marrisonville.
Bearwallow.	Dismal.	Mahoning.
Beaver River.	Dotson.	Marvin Creek.
Bedford.	Eagle.	Massilon.
Bee Spring.	Elk Lick.	Mauch Chunk.
Bellton.	Elk River.	Maxville.
Benezette.	Elkgarden.	Meadeville.
Berea.	Erie.	Mercer.
Big Clifty.	Ewing.	Middle Conglomerate.
Big Injun.	Fairfax.	Mill Creek.
Black Hand.	Fayette.	Millstone.
Blacksville.	Federal Creek.	Monongahela River.
Blackwater.	Ferriferous.	Morgantown.
Birmingham.	Fish Creek.	Mount Morris.
Bluefield.	Fishpot.	Mount Pleasant.
Bluestone.	Flint Ridge.	Mount Sand.
Bolivar.	Floyd.	Mountain.
Bonair.	Fort Payne.	New River.
Bradford.	Freeport.	Newman.
Braxton.	Frostburg.	Newtonville.
Breathitt.	Gallitzen.	Nineveh.
Briceville.	Garland.	Norton.
Broad Top.	Gilmore.	Oil Creek Lake.
Browntown.	Gladeville.	Oil Lake.
Brush Creek.	Great.	Olean.
Buffalo.	Great Conglomerate.	Olive.
Buhr.	Green County.	Orangeville.
Butler.	Greenbrier.	Oxmoor.
Cairo.	Griswold Gap.	Panther Creek.
Cambridge.	Harlan.	Pennington.
Canaan.	Hartselle.	Pennsylvanian.
Canal.	Hinton.	Pickens.
Cannelton.	Homewood	Pine Creek.
Caseyville.	Horsepen.	Pine Mountain.
Cassville.	Iowa.	Pithole.
Charleston.	Irondale.	Pittsburg.
Clarion.	Johnson River.	Pocahontas.
Clark.	Johnstown.	Pocono.
Clarksburg.	Jollytown.	Pomeroy.
Cleveland.	Kanawha.	Ponent.
Coal measures.	Kanawha Falls.	Pottsville.
Colvins Run.	Kinzua.	Powelton.
Conemaugh.	Kittanning.	Price.
Conglomerate.	Lauderdale.	Princeton.
Connellsville.	Lee.	Productive.
Connoquenessing.	Lehigh.	Pulaski.
Corbin.	Leitchfield.	Putnam Hill
Corry.	Licking.	Quakertown.
Crawford.	Logan.	Quinnemont.
Crinoidal.	Lookout.	Raccoon.
Curiew.	Lower Green.	Raleigh.
Cussewago.	Macksburg.	Redstone.

CARBONIFEROUS—continued.

Riceville.
 Royal.
 Rushville.
 Saltsburg.
 Sand Mountain.
 Savage.
 Schreyfogels.
 Scott.
 Scotts Creek.
 Sequoyah.
 Seral.
 Sewanee.
 Sewell.
 Sewickley.
 Sharon.
 Sharpsville.
 Shawnee.
 Shenango.
 Shinersville.
 Siliceous.
 South Carrolton.
 Subconglomerate.
 Sunbury.
 Tar Spring.
 Tellowa.
 Tionesta.
 Trough Creek.
 Tuscumbia.
 Umbral.
 Uniontown.
 Upshur.
 Vanport.
 Venango.
 Verdi.
 Vespertine.
 Walden.
 Wartburg.
 Washington County.
 Waverly.
 Waynesburg.
 Welch.
 White.
 Wildcat Mountain.
 Windy Gap.
 Wise.
 Wyoming Valley.
 Zoar.

New England.

Aquidneck.
 Attleboro.
 Coasters Harbor Island.

Conanicut.
 Cranston.
 Kingstown.
 Millers River.
 Natick.
 Pawtucket.
 Pelham.
 Pondville.
 Purgaton.
 Rose Island.
 Roxbury.
 Sachuest.
 Sockanosset.
 Sukonk.
 Tenmile River.
 Tiverton.
 Wamsutta.

Canada.

Albert.
 Banff.
 Bonaventure.
 Cache Creek.
 Campbell Creek.
 Cape John.
 Cascade.
 Hopewell.
 Marble Canyon.
 Mertgomist.
 New Glasgow.
 Perry.
 Pictou.
 Portland.
 Riversdale.
 Smalls Brook.
 Smelt Brook.
 Stellarton.
 Union.
 Windsor.
 Woodstock.

Great Basin region.

Aubrey.
 Godiva.
 Diamond Peak.
 Humbug.
 Lodore.
 Mammoth.
 Red Wall.
 Wahsatch.
 Weber.

Great Lakes region.

Coldwater.
 Grand Rapids.
 Marshall.
 Michigan salt.
 Napoleon.
 Parma.
 Richmondville.
 Rock Falls.
 Woodville.

Great Plains region.

Altoona.
 Americus.
 Atchison.
 Auburn.
 Bethany Falls.
 Burlingame.
 Calhoun.
 Carlyle.
 Cave.
 Cave Rock.
 Cave Spring.
 Chanute.
 Chase.
 Cherryvale.
 Cottonwood.
 Cottonwood Falls.
 Deer Creek.
 Douglas.
 Dover.
 Dun.
 Dunlap.
 Earlton.
 Einstine.
 Elgin.
 Elk Falls.
 Elmont.
 Emporia.
 Falls River.
 Florence.
 Fort Scott.
 Garnett.
 Gypsum.
 Hartford.
 Howard.
 Iola.
 Labette.
 Lane.
 Le Compton.
 Le Roy.

CARBONIFEROUS—continued.

Marion.	Clepsydrops.	North Vernon.
Marmaton.	Collinsville.	Orange Martin.
Maryville.	Concretionary.	Nodaway.
Neodesha.	Cooper.	Parkville.
Oread.	Coxville.	Pella.
Osage.	Cypress.	Platte.
Osage City.	Dekalb.	Plattsmouth.
Oswego.	Earlham.	Pottery.
Ottawa.	Encrinital.	Productal.
Pawnee.	English River.	Quarry Creek.
Plattsburg.	Ferruginous.	Quitman.
Pleasanton.	Forbes.	Redrock.
Pottawatomie.	Fragmental.	Rhomboida..
Robinett.	Fusulina.	Riverside.
Rossville.	Geode.	Rock Creek.
Sea Urchin.	Goniatite.	Rockcastle.
Severy.	Grand River.	Rockford.
Shunganunga.	Graydon.	St. Genevieve.
Silver Lake.	Graydon Springs.	St. Joe.
Soldier Creek.	Hanging Rock.	St. Louis.
Spring Rock.	Hannibal.	Salem.
Stanton.	Harrodsburg.	Spring River.
Strong.	Henrietta.	Springvale.
Swallow.	High Rock.	Summit.
Syntrialasina.	Jonesboro.	Thomas Hill.
Tecumseh.	Kansas City.	Unionville.
Thayer.	Kaskaskia.	Warrensburg.
Topeka.	Keokuk.	Warsaw.
Toronto.	Keosauqua.	Wassonville.
Victoria.	Kinderhook.	West Franklin.
Vilas.	Knob.	Westerville.
Wabausee.	Knobstone.	Weston.
Wakarusa.	Lady Washington.	Winterset.
Well Rock.	Lagonda.	Wyckoff.
Willard.	Lawrence.	<i>Pacific Coast region.</i>
Winfield.	Lawrence-Crawford.	Baird.
<i>Mississippi Valley.</i>	Le Grand.	Bed Rock.
Anvil Rock.	Lithographic.	Blue Canyon.
Appanoose.	Livingston.	Calaveras.
Archimedes.	Louisiana.	Cape Horn.
Ardmore.	Macon City.	Clipper Gap.
Augusta.	Mansfield.	Delhi.
Aux Vases.	Maple Hill.	Eureka.
Baden.	Marais des Cygnes.	Little Grizzly Creek.
Bevier.	Marshalltown.	McCloud.
Bituminous.	Merom.	Martinez.
Burlington.	Miller.	Pitt.
Carlinville.	Mississippian.	Relief.
Chaelites.	Missouri.	Robinson.
Chariton.	Missourian.	Shoo Fly.
Cherokee.	Mitchell.	<i>Rocky Mountain region.</i>
Chester.	Moberly.	Arkansas.
Chouteau.	Monroe-Harrison.	Badito.
	Mound Valley.	

CARBONIFEROUS—continued.

Blue.	Burnet Branch.	McAlester.
Castle.	Camp Colorado.	Milburn.
Eryops.	Camp Creek.	Milburn-Strawn.
Fountain.	Campophyllum.	Norristown.
Hermosa.	Canyon.	Novaculite.
Kibbey.	Carrollton.	Paint Rock.
Leadville.	Cavaniol.	Parks Mountain.
Madison.	Cedarton.	Pawhuski.
Maroon.	Chaffin.	Pentremital.
Millsap.	Cherry.	Poteau.
Monarch.	Cisco.	Richland.
Otter.	Coleman.	Ricker.
Otter Creek.	Coon Mountain.	Rochelle.
Paine.	Cottonwood Creek	Rough Creek.
Quadrant.	Cross Plains.	Russellville.
Rico.	Elliott Creek.	Saddle Creek.
Wood River.	Elm Creek.	Santa Anna.
Woodhurst.	Fayetteville.	Savanna.
	Fox Ford.	Sebastian.
	Frickham.	Shadrick Mill.
	Genevieve.	Shoal Creek.
	Granville.	Spadra.
	Grape Creek.	Speck Mountain.
	Greenwood.	Spring Creek.
	Hanna Valley.	Stöckwether.
	Hartshorne.	Strawn.
	Hartwell.	Sylamore.
	Hog Creek.	Talpa.
	Home Creek.	Thurman.
	Hordes Creek.	Tomlinson.
	Horse Creek.	Valera Bend.
	Indian Creek.	Waldrip.
	Jagger Bend.	Washburn.
	Kessler.	Washington.
	Lohn.	Watts Creek.
	Lost Creek.	Wilbarger Creek.
	Lynch Creek.	Wyman.

Southwestern region.

Adams Branch.
 Albany.
 Antelope Creek.
 Appleton.
 Atoka.
 Batesville.
 Bead Mountain.
 Belva.
 Bend.
 Big Valley.
 Boggy.
 Boone.
 Booneville.
 Boston group.
 Brown Creek.
 Brownwood.
 Buffalo Creek.
 Bull Creek.

DEVONIAN.

	Cadent.	Columbus.
	Camden.	Corniferous.
	Cardiola.	Cuboides.
	Cascade.	Delaware.
	Cashaqua.	Dellville.
	Catskill.	Dorset.
	Cauda-Galli.	Elk.
	Chapman.	Elk Mountair.
	Chattanooga.	Ellicottsville.
	Chautauquan.	Encrinal.
	Chemung.	Erian.
	Cherry Ridge.	Erie.
	Cleveland.	Esopus.
	Coeymans.	Falls Creek.

Alaska.

Tachatna.
 Tahkandit.
 Wellesley.
 West Fork.

Appalachian region.

Allegrippus.
 Becraft.
 Bellvale.
 Bernardston.
 Black shale.
 Blossburg.
 Burlington.

DEVONIAN—continued.

Flagstone.	Seneca.	Grand Tower.
Frog Mountain.	Senecan.	Grassy Creek.
Gardeau.	Sherburne.	Gyroceras.
Genesee.	Skaneateles.	Hackberry.
Girard.	Skunnemunk.	Hannibal.
Grainger.	Stafford.	Huron.
Great Bend.	Starucca.	Independence.
Green Pond.	Stony Brook.	Kenwood.
Hamilton.	Stormville.	Kinderhook.
Helderberg.	Styliolina.	King.
Helderbergian.	Sweetland.	Lime Creek.
Honesdale.	Tentaculite.	Louisian.
Hosmer.	Towanda.	Louisville-Delphi.
Ithaca.	Tully.	Montpelier.
Jennings.	Tuna.	New Albany.
Kimberling.	Ulsterian.	New Providence.
Kings Mill.	Venango.	North Vernon.
Lackawaxen.	Vergent.	Otis.
Leboeuf.	West Jefferson.	Phelps.
Little Genesee	Wolf Creek.	Riverside.
Louisville.		Rockford.
Ludlowville.	<i>Canada.</i>	Sac.
McKean.	Bloomsbury.	Sellersburg.
Manlius.	Gaspe.	Shelby.
Marcellus.	Intermediate.	Snyder Creek.
Monteballo.	Kingston.	Spirifera pennata.
Monterey.	Lambton.	State Quarry.
Montrose.	Little River.	Sylamore.
Moscow.	Manitoban.	Vernicular.
Mount Pleasant.	Mispec.	Walker Block.
Naples.	Winnipegosan.	Wapsipinicon.
New Milford.		Warren.
New Scotland.	<i>Great Basin region</i>	
Nunda.	Nevada.	<i>New England.</i>
Ohio.	Ogden.	
Old Red.	Temple Butte.	Moose Island.
Olentangy.	White Pine.	Moose River.
Oneonta.		Newport.
Onondaga.	<i>Great Lakes region.</i>	Paupack.
Oriskany.	Dundee.	<i>Pacific Coast region.</i>
Panama.	Little Traverse Bay.	Arlington.
Panola.	St. Clair.	Kennett.
Perry.	Thunder Bay.	Sacramento.
Peru.	Traverse.	
Pontent.		<i>Rocky Mountain region.</i>
Portage.	<i>Mississippi Valley.</i>	Jefferson.
Postmedial.	Brown.	Monarch.
Romney.	Bunker Hill.	Ouray.
Salamanca.	Callaway.	Parting.
Sandusky.	Cedar Valley.	Three Forks.
Schoharie.	Clear Creek.	
Scioto.	Davenport.	<i>Southwestern region.</i>
Selinsgrove.	Delphi.	
	Fayette.	Eureka.

SILURIAN.

Appalachian region.

Athens.
 Barree.
 Bastard.
 Bays.
 Beavertown.
 Bloomfield.
 Bloomsburg.
 Blue.
 Blue Shell.
 Bossardville.
 Bridgeport.
 Cacapon.
 Cedarville.
 Clarkes Mill.
 Cliff.
 Clinch.
 Clinch Mountain.
 Clinton.
 Cove.
 Crab Orchard.
 Cumberland.
 Damourite.
 Dayton.
 Decker Ferry.
 Delthyris.
 Dyestone.
 Garrard.
 Giles.
 Grand Rapids.
 Green Pond.
 Hampshire.
 Hancock.
 Harpeth.
 Helderberg.
 Highbridge.
 Hillsboro.
 Holland.
 Hydraulic.
 Juniata.
 Levant.
 Lewistown.
 Lexington.
 Longwood.
 Lowville.
 McCoytown.
 Manlius.
 Massanutten.
 Medina.
 Meniscus.
 Meridian.

Mifflintown.
 Moccasin.
 Monclova.
 Monterey.
 Montgomery.
 Neeleytown.
 Niagara.
 Niagaran.
 Oneida.
 Onondaga.
 Oswegan.
 Oswego.
 Panola.
 Pentamerus.
 Postmeridian.
 Poxono Island.
 Pre-Meridian.
 Primedial.
 Proteau.
 Red Mountain.
 Rensselaer.
 Rockwood.
 Rondout.
 Salina.
 Salmon River.
 Scalent.
 Scutella.
 Shawangunk.
 Siliceous.
 Sneedville.
 Springfield.
 Stormville.
 Surgent.
 Taylors Ridge.
 Tellico.
 Tuscarora.
 Tymochtee.
 Waldron.
 Waterlime.
 West Union.
 White Oak Mountain.

Canada.

Anticosti.
 Arisaig.
 Bertie.
 Cayuga.
 Cobequid.
 Gaspé.
 Guelph.
 Halysites.
 Mascarene.

Great Basin region.

Eureka.
 Lone Mountain.

Great Lakes region.

Byron.
 Coralline.
 Gray.
 Mayville.
 Monroe.
 Racine.
 Sylva.
 Waukesha.

Mississippi Valley.

Anamosa.
 Bertram.
 Bowling Green.
 Cape Girardeau.
 Clear Creek.
 Coggan.
 Coral.
 Glencoe.
 Gower.
 Grand Tower.
 Joliet.
 Laurel.
 Le Claire.
 Noix.
 Osgood.

New England.

Amherst.
 Aroostook.
 Ashland.
 Bellowspipe.
 Brimfield.
 Cobscook.
 Greylock.
 Sheridan.
 Vinal Haven.
 Whitmores Ferry.

Pacific Coast region.

Grizzly.
 Taylorsville.

Rocky Mountain region.

Parting.
 White.
 Yule.

SILURIAN—continued.

Southwestern region.

Beaver.
Burnet.
Cason.
Deep Creek.

Glens Falls.
Hinton.
Hoover.
Izard.
Leon.

St. Clair.
San Saba.
Wyo.

ORDOVICIAN.

Appalachian region.

Auroral.
Avondale.
Barnegate.
Beekmantown.
Belfast.
Berkshire.
Bird Mountain.
Birdseye.
Black River.
Calciferous.
Canadian.
Capitol.
Carters Creek.
Central.
Champlain.
Chazy.
Chester Valley.
Chickamauga.
Cincinnati.
Codorus.
College Hill.
Conasauga.
Dayton.
Eolian.
Everett.
Flanagan.
Fossiliferous.
Frankfort.
Glade.
Hudson.
Hudson River.
Inwood.
Isle Lamotte.
Kentucky.
Knox.
Lancaster.
Lebanon.
Lenoir.
Lorraine.
Manhattan.
Martinsburg.
Matinal.
Moduria.
Mohawk.

Mohawkian.
Nashville.
Normandy.
Ontarian.
Ontaric.
Ontario.
Peach Bottom.
Pelham.
Pierce.
Point Pleasant.
Ridley.
Rochdale.
Rockmart.
Sevier.
Shenandoah.
Siliceous.
Sparry.
Stones River.
Trenton.
Utica.
Wappinger Valley.
Westfield.
Whateley.
Winchester.

Canada.

Cat Head.
Citadel.
Farnham.
Lauzon.
Levis.
Marsouin.
Mottled.
Phillipsburg.
Quebec.
St. Jean.
Winnipeg.

Great Basin region.

Pogonip.
Ute.

Great Lakes region.

Bluff.
Eastern.

Elevator.
Jordan.
Lake Superior.
St. Croix.
St. Lawrence.
St. Peters.

Mississippi Valley.

Beloit.
Bryant.
Buff.
Buffalo.
Cap-au-Grés.
Charette.
Crystal.
Folley.
Galena.
Girardeau.
Joachim.
McCum.
Magnesian.
Maquoketa.
Marble.
Marble Hill.
Receptaculites.
Richmond.
St. François.
St. Thomas.
Sandstone.
Shakopee.
Thebes.
Willow River.
Wykoff.

New England.

Canaan.
Chester.
Conway.
Egremont.
Goshen.
Granville.
Hardwick.
Hawley.
Hoosac.

ORDOVICIAN—continued.

Leyden.	<i>Rocky Mountain region.</i>	<i>Southwestern region.</i>
Riga.	Fremont.	Macluria.
Rowe.	Harding.	Polk Bayou.
Savoy.	Madison.	Rainy Mountain.
Mount Washington.	Manitou.	Saccharoidal.
Waterville.		St. Clair.

CAMBRIAN.

<i>Appalachian region.</i>	Unicoi.	Keweenawan.
Aldrich.	Wallkill.	Lake Superior.
Antietam.	Wappinger Valley.	Mendota.
Apison.	Weisner.	<i>Mississippi Valley.</i>
Ashley Hill.	Weverton.	
Beaver.	Wiltons Run.	Cole Camp.
Chikis.	York.	Crystal City.
Chilhowee.	<i>Canada.</i>	Dresbach.
Chiques.	Acadian.	Elevator B.
Cochran.	Adams Lake.	Fredericktown.
Cohulta.	Athabasca.	Gasconade.
Coosa.	Barachois.	Grand Portage.
Deer Creek.	Belle Isle.	Gritstone.
Graysonton.	Bow River.	Hinckley.
Hampton.	Bretonian.	Jordan.
Hardistonville.	Castle Mountain.	La Motte.
Harpers.	Churchill.	Le Seur.
Harpers Ferry.	Copper-bearing.	Moreau.
Hellem.	Etcheminian.	New Richmond.
Hesse.	Johannian.	Pipestone.
Honaker.	Kaministiquia.	Pokegama.
Kentucky.	Nisconlith.	Potosi.
Knox.	Phillipsburg.	Proctor.
Loudon.	Pointe Levis.	Puckwunge.
Maryville.	Quebec.	Roubidoux.
Montevallo.	St. John.	St. Croix.
Murray.	Selkirk.	St. François.
Nebo.	Sillery.	St. Joseph.
Nichols.	<i>Great Basin region.</i>	St. Lawrence.
Nolichucky.	Hamburg.	Waswangoning.
North Valley Hill.	Prospect Mountain.	Western.
Oostanala.	Secret Canyon.	White River.
Potsdam.	Tintic.	<i>New England.</i>
Primal.	Tonto.	Becket.
Reading.	<i>Great Lakes region.</i>	Berkshire.
Rogersville.	Eastern.	Cheshire.
Rome.	Eau Claire.	Coos.
Russell.	Fond du Lac.	Dalton.
Rutledge.	Hermansville.	Eolian.
Sandsuck.		Georgia.
Shenandoah.		Granular.
South Valley Hill.		Kendall Green.
Starr.		Lincoln.

CAMBRIAN—continued.

Lingua.
 Little Compton.
 Monson.
 Nahant.
 Newport Neck.
 Pelham.
 Poughquag.
 Quartzrock.
 St. Albans.
 Stockbridge.
 Stony Brook.
 Swiftwater.

Taconic.
 Taconyte.
 Vermont.
 Winooski.

Rocky Mountain region.

Barker.
 Dry Creek.
 Flathead.
 Gallatin.
 Meagher.

Park.
 Pilgrim.
 Sawatch.
 Yogo.

Southwestern region.

Blue Creek.
 Hickory.
 Katemcy.
 Ozark.
 Riley.

ALGONKIAN.

Appalachian region.

Catoctin.
 Citico.
 Courtland.
 Edison.
 Franklin.
 Hamburg Mountain.
 Hazel.
 Hemlock.
 Losee Pond.
 Manhattan.
 Monroe.
 Pigeon.
 Sandpond.
 Taconic.
 Talladega.
 Thunderhead.
 Wilhite.

Canada.

Anorthosite.
 Aspidella.
 Avalon.
 Conception.
 Huronian.
 Kaministiquia.
 Kingston.
 Momable.
 Ontarian.
 Random.
 Signal Hill.
 Thessalon.
 Torbay.

Great Lakes region.

Ajibik.
 Antoine.
 Baraboo.
 Bijiki.
 Black River Falls.
 Bohemia.

Bone Lake.
 Chippewa.
 Clarksburg.
 Eastern.
 Felch Mountain.
 Goodrich.
 Groveland.
 Hanbury.
 Ishpeming.
 Kona.
 Mansfield.
 Maquethian.
 Marquette.
 Marquette-Menominee.
 Marquettian.
 Menominee.
 Mesnard.
 Michiganme.
 Mount Mesnard.
 Negaunee.
 Ogishke.
 Penokee.
 Penokee-Gogebic.
 Quartz slate.
 Randville.
 St. Louis.
 Siamo.
 Stuntz.
 Sturgeon.
 Thompson.
 Vulcan.
 Wewe.

Great Basin region.

Chuar.
 Grand Canyon.
 Unkar.
 Vishnu.

Mississippi Valley.

Pilot Knob.
 Sioux.

New England.

Ashton.
 Blackstone.
 Coles Brook.
 Cumberland.
 East Lee.
 Goose Pond.
 Hinsdale.
 Hop Brook.
 Kearsarge.
 Mendon.
 Merrimack.
 Mount Holly.
 Rockingham.
 Smithfield.
 Stamford.
 Tyringham.
 Washington.
 White Mountain.

Rocky Mountain region.

Belt.
 Chamberlin.
 Cherry Creek.
 Empire.
 Greyson.
 Helena.
 Marsh.
 Neihart.
 Newland.
 Salida.
 Sheridan.
 Spokane.

Southwestern region.

Llano.
 Mason.
 Packsaddle.
 Texan.
 Texian.

ARCHEAN.

<i>Appalachian region.</i>	<i>Great Lakes region.</i>	<i>New England.</i>
Broad Branch.	Animikie.	Atlantic.
Chestnut Hill.	Clover Canyon.	Franconia.
Highland.	Glacian.	Greylock.
Manayunk.	Holyoke.	Labrador.
Orchard.	Kewatin.	Labradorian.
Piedmont.	Keweenawan.	Lake Winnepesaukee.
Pochuck.	Keweenian.	Lisbon.
South Mountain.	Kewenan.	Lyman.
	Kitchi.	Montalban.
<i>Canada.</i>	Mareniscan.	Pemigewasset.
Arvonian.	Minnesota River Valley.	Pequawket.
Atic Oban.	Mona.	Terranovan.
Coast.	Necedah.	Worcester.
Coastal.	Ophian.	
Coldbrook.	Palmer.	<i>Southwestern region.</i>
Coutchiching.	Pelodian.	Bodeville.
Dore.	Porphyrian.	Burnetan.
Grenville.	Portland.	Click.
Hastings.	Quinnesec.	Fernandan.
Huronian.	Republic.	Long Grove.
Kingston.	Siderian.	Long Mountain.
Laurentian.	Vermilion.	Iron Mountain.
Norian.	Waterloo.	Valley Spring.
Quesnel Lake.		
Shuswap.	<i>Mexico.</i>	
Steep Rock.	Volcan.	

FORMATIONS OF UNDETERMINED AGE.

<i>Alaska.</i>		
Bettles.	Cades.	Caribou.
Birch Creek.	Cherokee slates.	George River.
Bristol Bay.	Clingman.	Hunker.
Cantwell.	Cockeysville.	Indian River.
Copper River.	Conshohocken.	Manitonnuck.
Fortymile.	Cortlandt.	Menevian.
Greenstone.	Eaton.	Mott Haven.
Klondike.	Fairmount.	Nehacco.
McCarthy Creek.	Frankford.	Nipigon.
Nasina.	Kennett.	Sault St. Mary.
Nilkoka.	Kings Mountain.	
Nutzotin.	Linnville.	<i>Great Basin region.</i>
Rampart.	Moose Hide.	Arizonaian.
Rapids.	New York.	Mesa.
Shushitna.	Ocoee.	Red Creek.
Sunrise.	Oswegatchie.	
Tanana.	Peach Bottom.	<i>Great Lakes region.</i>
Valdes.	Pope Hollow.	Cupriferous.
	Setters.	L'Anse.
<i>Appalachian region.</i>	Yonkers.	Lqgan.
Bridgeton.	<i>Canada.</i>	Mackinac.
Buncombe.	Anderson River.	New Ulm.
	Boston Bar.	

FORMATIONS OF UNDETERMINED AGE—continued.

Pewabic.
Point aux Gres.
Trappean.

Mississippi Valley.

Brownsville.
Cannelton.
Flat Rock.
Fort Knox.
Geneva.
Golconda.
Grandad.
Greensburg.
Harris City.
Hawpatch.
Hindustan.
Huntingdon.
Lake Huron.
Lamont.
Lost River.
Pendleton.

Pine Creek.
Putnamville.
St. Anthony.
Sedalia.
Williamsport.

New England.

Bar Harbor.
Bartletts Island.
Blanford.
Bolton.
Calderwood Neck.
Cambridge.
Chitistone.
Chloritic.
Cranberry Island.
Greenwich.
Klutena.
Kotlo.
Lake.
Mapleton.

Phipsburg.
Schooner Head.
Suttons Island.
Swanton.
Taunton.
Winnepesaukee.

Pacific Coast region.

Tolenas.
Ventura.

Rocky Mountain region.

Minnelusa.
Nampa.

Southwestern region.

Plymouth.
Polk County.

West Indies.

Caribbean.

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Cretaceous. Texas. Included in Upper Cretaceous.
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Silurian. Pennsylvania. Included in Siluro-Cambrian.
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- Badito** formation, Hills. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 68. 1900.
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- Baird** shale, Smith. Jour. of Geol., vol. ii, pp. 594-599. 1894.
Carboniferous. California. Included in McCloud formation.
- Bakerstown** sandstone, White. 2d Pa. Geol. Surv., Rept. Q, p. 307. 1878.
Carboniferous. Pennsylvania.
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Cretaceous. Jamaica. Included in Blue Mountain series.
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Carboniferous. Alabama. Included in Mississippian series.
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Carboniferous. Georgia, Tennessee, Alabama.
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Carboniferous. Alabama. Included in Upper Sub-Carboniferous.
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Cambrian? Wisconsin.
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- Barbican**, Hill. Harvard Coll. Mus. of Comp. Zool., Bull., vol. xxxiv, p. 42. 1899.
Pleistocene. Jamaica. Included in Coastal series.
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Maine.
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New York.
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Silurian. New York. Included in Calciferous group.
- Barnstable series**, Shaler. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, pp. 539-541. 1898.
Pleistocene? Massachusetts. Included in Cape Cod series.
- Barranca division**, Dumble. Am. Inst. Mg. Engrs., Trans., vol. xxix, p. 139. 1900.
Included in Trias. Mexico.
- Barree**, White. 2d Pa. Geol. Surv., Rept. T³, pp. 132-133. 1885.
Silurian. Pennsylvania. Exact. Syn. Niagara?
- Barree group, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 825-827. 1892.
Silurian. Pennsylvania. Included in No. v, Clinton.
- Barren group**, Upper, Rogers. Geol. of Pa., vol. ii, p. 20 et seq. 1858.
Carboniferous. Pennsylvania.
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Carboniferous. Pennsylvania.
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Indiana.
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Carboniferous. Tennessee. Included in Lower Carboniferous.
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Carboniferous. Ohio. Included in Lower Coal Measures.

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Carboniferous. West Virginia. Included in Coal Measures.
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Carboniferous. West Virginia. Included in Lower Carboniferous.
- Barren group, Upper, White. Lyceum of Nat. Hist. of N. Y., Annals, vol. xi, pp. 46-57. 1876.
West Virginia, Pennsylvania.
- Barren Measures, Upper, Stevenson. 2d Pa. Geol. Surv., Rept. K, pp. 34-56. 1876.
Carboniferous. Pennsylvania. Includes Washington and Green Counties groups.
- Barren series, Lower, Stevenson. 2d Pa. Geol. Surv., Rept. K, pp. 75-83. 1876.
Carboniferous. Pennsylvania. Includes Morgantown sandstone, Birmingham shale.
- Barren series, Lower, White. 2d Pa. Geol. Surv., Rept. A², pp. 23-26. 1877.
Carboniferous. Pennsylvania.
- Barren series, Upper, Stevenson. 2d Pa. Geol. Surv., Rept. K², pp. 25-29. 1877.
Carboniferous. Pennsylvania.
- Barren series, Lower, Stevenson. 2d Pa. Geol. Surv., Rept. K², pp. 64-72. 1877.
Carboniferous. Pennsylvania. Includes Barton group.
- Barren Measures, Lower, Newberry. Ohio Geol. Surv., vol. iii, p. 723. 1878.
Carboniferous. Ohio. Included in Coal Measures.
- Barren Measures, Platt. 2d Pa. Geol. Surv., Rept. H⁴, pp. 167-174. 1878.
Carboniferous. Pennsylvania.
- Barren series, Lower, Stevenson. 2d Pa. Geol. Surv., Rept. K³, pp. 18-26. 1878.
Carboniferous. Pennsylvania.
- Barren Group, Lower, Stevenson. Ohio Geol. Surv., vol. iii, pp. 203, 221. 1878.
Carboniferous. Ohio. Included in Coal Measures.
- Barren series, Lower, White. 2d Pa. Geol. Surv., Rept. Q, pp. 23-38. 1878.
Carboniferous. Pennsylvania. Includes Pittsburg limestone, Morgantown sandstone, Elk Lick limestone, Pine Creek limestone, Buffalo sandstone, Brush Creek limestone.
- Barren Measures, Chance. 2d Pa. Geol. Surv., Rept. V, pp. 13-15. 1879.
Carboniferous. Pennsylvania.
- Barren Measures, Platt. 2d Pa. Geol. Surv., Rept. H⁵, p. 311. 1880.
Carboniferous. Pennsylvania.
- Barren group, Upper, Stevenson. The Virginias, vol. ii, p. 70. 1881.
Carboniferous. West Virginia. Included in Coal Measures.
- Barren group, Lower, Stevenson. The Virginias, vol. ii, pp. 98, 122. 1881.
Carboniferous. West Virginia.
- Barren Measures, Lower, Platt. 2d Pa. Geol. Surv., Rept. H⁶, pp. xxviii-xxix. 1881.
Carboniferous. Pennsylvania.
- Barren Coal Measures, White. 2d Pa. Geol. Surv., Rept. T³, pp. 48 et seq. 1885.
Carboniferous. Pennsylvania.
- Barren Measures, D'Inwilliers. 2d Pa. Geol. Surv., Ann. Rept. 1885, pp. 177-181. 1886.
Carboniferous. Pennsylvania. Includes Connellsville and Morgantown sandstones. Crinoidal limestone No. 19.
- Barren Measures, D'Inwilliers. 2d Pa. Geol. Surv., Ann. Rept. 1886, pp. 74-79, 208, 265, 295-296. 1887.
Carboniferous. Pennsylvania. Exact Syn. Pittsburg series.
- Barren Measures, Upper, D'Inwilliers. 2d Pa. Geol. Surv., Ann. Rept. 1886, pp. 58-63, 202-206, 262-263, 234-336. 1887.
Carboniferous. Pennsylvania. Includes Green County group and Washington County group.

- Barren Measures, Upper, Carll. 2d Pa. Geol. Surv., Rept. I⁵, p. 122. 1890.
Carboniferous. Pennsylvania. Exact Syn. Washington County group.
- Barren Measures, Lower, Carll. 2d Pa. Geol. Surv., Rept. I⁵, pp. 123-125. 1890.
Includes Crinoidal limestone = Ames limestone of Ohio and West Virginia. Exact Syn. Pittsburg series.
- Barren Measures, White. U. S. Geol. Surv., Bull., No. 65, p. 70. 1891.
Carboniferous. Ohio, Pennsylvania, West Virginia. Exact Syn. Elk River series.
- Barren Measures, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2406-2447. 1895.
Carboniferous. Pennsylvania. Exact Syn. No. xiv, Pittsburg series, Elk River series of West Virginia.
- Barren Measures, Upper, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2565-2588. 1895.
Carboniferous. Pennsylvania. Includes Green County group, Washington County group.
Exact Syn. No. xvi, Permo-Carboniferous or Dunkard Creek series.
- Barrett shales**, Jenney. U. S. Geol. Surv., 19th Ann. Rept., pt. ii, pp. 568-587, 593. 1899.
Cretaceous. South Dakota. Included in Dakota group.
- Barrett shales, Ward. U. S. Geol. Surv., 19th Ann. Rept., pt. ii, p. 593. 1899.
Cretaceous. South Dakota.
- Barrington clays**, Woodworth. U. S. Geol. Surv., 17th Ann. Rept. pt. i, p. 987. 1896.
Pleistocene. Rhode Island.
- Bartletts Island series**, Shaler. U. S. Geol. Surv., 8th Ann. Rept., pt. ii, p. 1038. 1889.
Maine.
- Barton group**, Stevenson. 2d Pa. Geol. Surv., Rept. K², pp. 67-68. 1877.
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- Bashi series, Dall. U. S. Geol. Surv., 18th Ann. Rept, pt. ii, p. 345. 1898.
Tertiary. Alabama. Included in Eocene. Exact Syn. Woods Bluff series.
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Silurian. Pennsylvania. Included in Lower Helderberg, or No. VI.
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Silurian. Pennsylvania. Included in No. VI. Stormville series.
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Silurian. Kentucky, Virginia, Tennessee.
- Bays sandstone, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 16, 25, 27. 1895, 1896.
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- Bays limestone, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 33. 1896.
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Pleistocene. New Jersey. Included in Yellow gravel.
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- Beaver limestone**, Hayes. Geol. Soc. Am., Bull., vol. v, p. 467. 1894.
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Cambrian. Tennessee, North Carolina.
- Beaver River group**, White. 2d Pa. Geol. Surv., Rept. Q, pp. 65-71. 1878.
Carboniferous. Pennsylvania. Includes **Homewood sandstone**, **Mercer limestone**, **Connoquenessing sandstone**, and **Sharon shales**.
- Beaver River series**, Chance. 2d Pa. Geol. Surv., Rept. V, p. 221 et seq. 1879.
Carboniferous. Pennsylvania.
- Beaver River group**, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, p. 1912. 1895.
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- Beavertown marl**, Foerste. Denison Univ. Sci. Lab., Bull., vol. i, p. 65. 1885.
Ohio.
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- Becraft** limestone, Darton. N. Y. State Geol., 13th Ann. Rept., pp. 245-246, 304.
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Silurian. New York. Included in Lower Helderberg.
- Becraft limestone, Clarke and Schuchert. Science, new ser., vol. x, pp. 876-877.
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- Becraft limestone, Weller. N. J. Geol. Surv., Rept. 1899, p. 39. 1900.
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Carboniferous. Indiana.
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Ohio.
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Carboniferous. Ohio.
- Bedford stone, Collett. Indiana Geol. Surv., 5th Ann. Rept. for 1873, pp. 276, 280,
283. 1874.
Indiana.
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- Bedford shale, Lesley. 2d Pa. Geol. Surv., Rept. I, pp. 73-74. 1875.
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Carboniferous. Ohio. Included in Waverly group.
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Carboniferous. California. Includes Calaveras.
- Bed Rock series, Lindgren. U. S. Geol. Surv., Geol. Atlas of U. S., Folio 66. 1900.
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Carboniferous. Kentucky. Included in Coal Measures.
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Silurian. Ohio. Included in Lower Silurian.
- Belfast bed, Foerste. Ind. Dept. Geol. and Nat. Hist., 24th Ann. Rept., pp. 67-68. 1900.
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- Belle Isle** shale, Jukes. Gen. Rept. on Geol. of Newfoundland, pp. 51 et seq. 1843.
Cambrian? Newfoundland.
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- Bell's Landing, Langdon. Geol. Soc. Am., Bull., vol. ii, p. 588. 1891.
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Dunkard Creek series. Includes Nineveh, Dunkard, and Jollytown coals.
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- Belt formation, Weed. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 56. 1899.
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- Belt terrane, Weed. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 56. 1899.
Algonkian. Montana. Includes Neihart quartzite and Belt formation.
- Belt terrane, Walcott. Geol. Soc. Am., Bull., vol. x, pp. 199, 201. 1899.
Algonkian? Pre-Cambrian. Montana.
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Algonkian. Montana. Includes Neihart quartzite, Chamberlain shale, Newland
limestone, Greyson shale, and Spokane shale.
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Cretaceous. Kansas. Includes Kiowa shales, Champion shell bed, Cheyenne
sandstone.
- Bend**, Dumble. Texas Geol. Surv., 1st Ann. Rept., pl. iii, pp. lxiii-lxv. 1890.
Carboniferous. Texas. Included in Lower Carboniferous.
- Bend formation, Cummins. Texas Geol. Surv., 2d Ann. Rept., pp. 360-367, 372.
1891.
Carboniferous. Texas. Included in Coal Measures.
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Carboniferous. Ohio. Included in Waverly group.
- Berea grit, Read. Ohio Geol. Surv., Rept. Prog. 1870, p. 468. 1871.
Ohio.
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- Berea grit, Read. Ohio Geol. Surv., vol. i, pt. i, pp. 483, 504, 512, 523. 1873.
Carboniferous. Ohio.
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- Berea grit, Winchell. Ohio Geol. Surv., vol. ii, pp. 240, 259, 280. 1874.
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- Berea grit, Lesley. 2d Pa. Geol. Surv., Rept. I, pp. 69-72. 1875.
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Carboniferous. Ohio. Included in Waverly.
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Carboniferous. Ohio.
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- Berea grit, Orton. Ohio Geol. Surv., Prelim. Rept. Petroleum and Inflammable Gas, pp. 25, 54. 1886.
Ohio. Included in Waverly series.

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Carboniferous. Ohio. Included in Waverly.
- Berea grit, Orton. Ohio Geol. Surv., vol. vi, pp. 3, 35. 1888.
Carboniferous. Ohio. Included in Waverly group.
- Berea series, Herrick. Denison Univ. Sci. Lab., Bull., vol. iv, p. 106. 1888.
Ohio. Includes Waverly shale, Berea shale, Berea grit, Bedford shale, Cleveland shale.
- Berea shale, Orton. Ohio Geol. Surv., vol. vi, pp. 3, 36. 1888.
Carboniferous. Ohio. Included in Waverly group. Exact Syn. Waverly black slate.
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Carboniferous. Ohio, Pennsylvania. Included in Pocono.
- Berea grit and shale, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept., pp. 35-37, 249-258. 1890.
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- Berea grit, Cooper. Denison Univ. Sci. Lab., Bull., vol. v, p. 25. 1890.
Ohio. Included in Waverly group.
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Carboniferous. Ohio. Included in Waverly group.
- Berea grit, Orton. Ohio Geol. Surv., vol. vii, pp. 4, 28. 1893.
Carboniferous. Ohio. Included in Waverly group.
- Berkshire** limestone, Hitchcock. Mass. Geol. Surv. Rept., p. 297 (2d ed., p. 296); also Econ. Geol. Rept., 1838, p. 71. 1833.
Massachusetts.
- Berkshire limestone, Hitchcock. Geol. of Mass., Final Rept., pp. 567-587. 1841.
Massachusetts.
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- Berkshire schist, Dale. U. S. Geol. Surv., 13th Ann. Rept., pt. ii, p. 303. 1893.
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- Berkshire schist, Dale. U. S. Geol. Surv., 14th Ann. Rept., pt. ii, pls. 67, 69, 71. 1894.
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- Berkshire schist, Dale. U. S. Geol. Surv., 20th Ann. Rept., pt. ii, pp. 15-23. 1900.
Silurian. Vermont. Included in Ordovician.
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- Bernardston series, Emerson. U. S. Geol. Surv., Geol. Atlas of U. S., Hawley sheet. 1892.
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Silurian. Canada. Includes Water lime and Tentaculite. Exact Syn. Cayuga dolomite.
- Bertram** beds, Norton. Iowa Geol. Surv., vol. iv, pp. 135-138. 1895.
Silurian. Iowa.

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Oneonta sandstones, No. 9 Pennsylvania survey.

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Devonian. Pennsylvania. Includes Mount Pleasant and Elk Mountain shales, Cherry Ridge group, Honesdale sandstone, Montrose shale, Paupack sandstone, New Milford group, Starucca shale. Exact syn. No. ix.
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Paleozoic. New York. Included in New York system. Includes Cocktail grit.
- Cauda-Galli grit, Mather. Geol. of New York, pt. i, pp. 341-342. 1843.
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Devonian. New Jersey.
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Silurian. New York. Includes Salina beds, Rondout Water lime, Manlius limestone.
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California. Includes Hosselkus limestone.
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Trias. California. Includes Swearinger shale and Hosselkus limestone.
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Permian. Kansas, Oklahoma. Included in Glass Mountain formation of Cimarron series.
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- Chester Valley** limestone, Lesley. 2d. Pa. Geol. Surv., Rept. C⁴, pp. 113-135. 1883.
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- Chickamauga limestone**, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 33. 1896.
Silurian. Tennessee. Part. syns. Trenton and Nashville groups.
- Chickamauga limestone**, Hayes. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 35. 1896.
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- Chickamauga limestone**, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 59. 1899.
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- Chicopee shale, Emerson. U. S. Geol. Surv., Atlas of U. S., Folio No. 50. 1898.
Juratrias. Massachusetts.
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Carolina.
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- Chilhowee sandstone, Bradley. Am. Jour. Sci., 3d ser., vol. ix, p. 283. 1875.
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- Chilhowee sandstone, Little. Handbook of Ga., Com. of Agric. 1876, p. 41. 1876.
Silurian. Georgia. Included in Lower Primordial.
- Chilhowee sandstone series, Spencer. Ga. Geol. Surv., 1st Rept. of Prog., 1890-91.
1891.
Cambrian. Georgia. Exact syn. Weisner quartzite.
- Chilhowee, Walcott. U. S. Geol. Surv., Bull., No. 81, p. 251, 300. 1891.
Cambrian. Appalachian region. Included in Lower Cambrian. Exact syn.
Granular quartz.
- Chilhowee, Spencer. Ga. Geol. Surv., The Paleozoic group, pp. 35, 77. 1893.
Cambrian. Georgia. Included in Lower Cambrian.
- Chilhowee group, Keith. Wash. Phil. Soc., Bull., vol. xii, pp. 72, 75. 1895.
Tennessee. Included in Cambrian.
- Chilhowee series, Hayes. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 20.
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Cambrian. Tennessee. Includes Sandsuck shale, Starr conglomerate, Cochran
conglomerate, Nichols shale, Nebo sandstone, Murray shale.
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syn. Tampa group.

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Algonkian. Wisconsin. Included in Upper Huronian. Part. syns. Penokee, Upper Marquette, Animikie.
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Connecticut.
- Choctaw** limestone, Cragin. Colo. College Stud., vol. v, p. 41. 1894.
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- Chouteau limestone, Shumard. St. Louis Acad. Sci., Trans., vol. i, p. 408. 1857.
Missouri. Included in Chemung group.
- Chouteau limestone, Meek and Worthen. Am. Jour. Sci., 2d ser., vol. xxxii, p. 174. 1861.
Carboniferous? Illinois.
- Chouteau limestone, Shumard. Mo. Geol. Surv. Repts., 1855-1871, pp. 45, 295. 1873.
Carboniferous. Missouri. Included in Chemung group. Lower Carboniferous.
- Chouteau limestone, Meek. Mo. Geol. Surv. Repts., 1855-1871, p. 174. 1873.
Carboniferous. Missouri. Included in Lower Carboniferous.
- Chouteau group, Broadhead. Mo. Geol. Surv. Rept., 1873-74, pp. 26-65. 1874.
Carboniferous. Missouri. Included in Lower Carboniferous, Mountain limestone.
Includes Chouteau limestone, Vernicular sandstone, Lithographic limestone.
Exact syns. Chemung group, Kinderhook group.
- Chouteau group, Broadhead. St. Louis Acad. Sci., Trans., vol. iii, pp. 219, 220. 1878.
Carboniferous. Missouri. Includes Chouteau limestone, Vernicular sandstone, and the Lithographic limestone. Exact syn. Kinderhook group.
- Chouteau, Rowley. Am. Geol., vol. iii, pp. 111-116. 1889.
Carboniferous. Missouri.
- Chouteau, Ladd. Mo. Geol. Surv., Bull. No. 3, pp. 14, 15. 1890.
Lower Carboniferous. Missouri. Exact syn. Waverly.
- Chouteau group, Williams. U. S. Geol. Surv., Bull., No. 80, p. 170. 1891.
Carboniferous. Included in Mississippian series. Includes Chouteau limestone, Vernicular sandstone, and Lithographic limestone.
- Chouteau, Miller. Mo. Geol. Surv., Bull. No. 4, p. 6. 1891.
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- Chouteau limestone, Keyes. Geol. Soc. Am., Bull., vol. iii, p. 283. 1892.
Lower Carboniferous. Missouri. Included in Kinderhook beds.
- Chouteau limestone, Keyes. Iowa Geol. Surv., vol. i, p. 56. 1893.
Carboniferous. Iowa. Included in Kinderhook.

- Chouteau group, Broadhead. *Am. Geol.*, vol. xii, p. 82. 1893.
Carboniferous. Missouri. Included in Mississippian series. Includes Chouteau limestone, Vernicular sandstone, Lithographic limestone.
- Chouteau limestone, Keyes. *Mo. Geol. Surv.*, vol. iv, pp. 30, 50, 57, 76. 1894.
Lower Carboniferous. Missouri. Included in Kinderhook stage.
- Chouteau limestone, Keyes. *Mo. Geol. Surv.*, vol. vii, pt. ii, pp. 390, 395. 1894.
Lower Carboniferous. Missouri. Included in Kinderhook stage.
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- Chouteau limestone, Stewart. *Kan. Univ. Quart.*, vol. iv, pp. 161-162. 1896.
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- Chouteau limestone, Keyes. *St. Louis Acad. Sci., Trans.*, vol. vii, p. 359. 1897.
Carboniferous. Missouri.
- Chouteau limestone, Shepard. *Mo. Geol. Surv., Rept.*, vol. xii, pp. 49, 92-100. 1898.
Lower Carboniferous. Missouri. Included in Kinderhook stage.
- Chouteau limestone, Keyes. *Jour. of Geol.*, vol. viii, p. 318. 1900.
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- Chuar, Walcott. *U. S. Geol. Surv., 14th Ann. Rept.*, pt. ii, p. 506. 1894.
Algonkian. Grand Canyon of Colorado. Included in Grand Canyon series.
- Chuar terrane, Walcott. *Jour. of Geol.*, vol. iii, pp. 319-322. 1895.
Algonkian. Grand Canyon region. Included in Grand Canyon series.
- Chuar terrane, Walcott. *Geol. Soc. Am., Bull.*, vol. x, p. 215. 1899.
Algonkian. Arizona. Included in Grand Canyon series.
- Chuar, Crosby. *Geol. Soc. Am., Bull.*, vol. x, p. 158. 1899.
Algonkian. Colorado. Included in Grand Canyon group.
- Churchill Arkose sandstone, Tyrrell.** *Can. Geol. Surv., new ser.*, vol. ix, p. 174F. 1898.
Cambrian. Hudson Bay region.
- Cimarron series, Cragin.** *Colo. College Stud.*, vol. vi, pp. 3, 18-48. 1896.
Permian. Kansas. Includes Kiger division above and Salt Fork below, 10 formations.
- Cimarron series, Prosser. *Kan. Univ. Quart.*, vol. vi, pp. 150-151, 175. 1896.
Permian or Triassic? Kansas.
- Cimarron series, Prosser. *Kan. Univ. Geol. Surv.*, vol. ii, pp. 75-95. 1897.
Carboniferous. Kansas. Included in Permian? Includes Kiger and Salt Fork divisions, comprising Big Basin sandstone, Hackberry shales, Day Creek dolomite, Red Bluff sandstones, Dog Creek shales, Cave Creek gypsum, Flower-pot shales, Cedar Hill sandstones, Salt Plain measures and Harper sandstones.
Upper Permian.
- Cimarron series, Grimsley. *Geol. Soc. Am., Bull.*, vol. viii, p. 228. 1897.
Permian. Kansas.
- Cimarron series, Cragin. *Am. Geol.*, vol. xix, pp. 351-363. 1897.
Permian. Indian Territory, Kansas, Oklahoma. Includes Kiger and Salt Fork divisions.
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Ohio.
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- Cincinnati group, Worthen. *Ill. Geol. Surv.*, vol. i, pp. 136-141. 1866.
Silurian. Illinois. Included in Lower Silurian. Includes Cape Girardeau limestone, and Thebes sandstone in southern Illinois.

- Cincinnati group, Whitney. Ill. Geol. Surv., vol. i, pp. 172-177. 1866.
Silurian. Illinois.
- Cincinnati group, Worthen. Ill. Geol. Surv., vol. iii, pp. 26-27, 117. 1868.
Silurian. Illinois.
- Cincinnati limestone, Haymond. Indiana Geol. Surv., 1st Ann. Rept., 1869, p. 192.
1869.
Indiana.
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Silurian. Illinois.
- Cincinnati group, Bradley. Ill. Geol. Surv., vol. iv, pp. 200, 216, 233. 1870.
Silurian. Illinois.
- Cincinnati group, Worthen. Ill. Geol. Surv., vol. iv, p. 5. 1870.
Silurian. Illinois.
- Cincinnati group, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, p. 19. 1870.
Silurian. Ohio. Exact syn. Blue Limestone group.
- Cincinnati group, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, pp. 12, 14. 1870.
Silurian. Ohio. Exact syn. Blue limestone.
- Cincinnati group, Newberry. Ohio Geol. Surv., Rept. Prog., p. 14. 1871.
Silurian. Ohio.
- Cincinnati group, Shaw. Ill. Geol. Surv., vol. v, pp. 35-56, 65-66, 77-78, 98-99,
110-111, 131-132, 152-154. 1873.
Silurian. Illinois.
- Cincinnati group, Orton. Ohio Geol. Surv., vol. i, pt. i, pp. 367, 437. 1873.
Silurian. Ohio. Includes Lebanon, Cincinnati, and Point Pleasant beds. Exact
syns. Blue limestone, Hudson River.
- Cincinnati, Newberry. Ohio Geol. Surv., vol. i, pt. i, pp. 103, 116. 1873.
Silurian. Ohio. Includes Lebanon, Cincinnati, and Point Pleasant beds.
- Cincinnati group, Miller. Cin. Quart. Jour. Sci., vol. i, pp. 97-115. 1874.
Silurian. Ohio Valley. Included in Ordovician.
- Cincinnati group, Borden. Indiana Geol. Surv., 5th Ann. Rept. 1873, p. 137. 1874.
Indiana.
- Cincinnati group, Broadhead. Mo. Geol. Surv., Rept., 1873-74, p. 28. 1874.
Silurian. Missouri. Included in Lower Silurian. Exact syns. Hudson River
and Utica shales.
- Cincinnati, Orton. Ohio Geol. Surv., vol. ii, p. 662. 1874.
Silurian. Ohio.
- Cincinnati group, Bradley. Am. Jour. Sci., 3d ser., vol. ix, p. 281. 1875.
Silurian. Tennessee.
- Cincinnati group, Shaler. Ky. Geol. Surv., new ser., vol. iii, pp. 149-159. 1877.
Silurian. Kentucky.
- Cincinnati shales and limestone, Chamberlin. Geol. of Wisconsin, vol. ii, p. 314.
1877.
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- Cliff limestone, Daniels. Wis. Geol. Surv., Rept., 1853, p. 12. 1854.
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- Cliff limestone, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, p. 20. 1870.
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Silurian. Ohio.
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 Included in Lower Silurian.
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 Paleozoic. New York. Includes Pentamerus limestone of Clinton group. Exact syn. Protean, Ferriferous slate and sand rock.
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 New York. Included in Ontario division of New York system.
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 Silurian. Michigan.
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 Silurian. Canada (Western). Included in Anticoste group.
- Clinton formation, Bell. Can. Geol. Surv., Rept. 1866-69, pp. 127-128. 1871.
 Silurian. Canada.
- Clinton, Newberry. Ohio Geol. Surv., vol. i, pt. i, pp. 62, 103, 126. 1873.
 Silurian. Ohio.
- Clinton, Orton. Ohio Geol. Surv., vol. i, pt. i, p. 463. 1873.
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 Silurian. Pennsylvania. Exact syn. Surgent.

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Miguel, Coal series, Escondido beds.
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Carboniferous. Kansas. Included near summit of Thayer shale.
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1892.
Algonkian. Massachusetts. Part. syn. Stamford gneiss.
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- Eastern** sandstone, Hubbard. Mich. Geol. Surv., vol. vi, pt. ii, p. 110. 1878.
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1885.
Cambrian. Michigan. Exact syn. Potsdam.
- Eastern sandstone, James. Cin. Soc. Nat. Hist., Jour., vol. xvii, No. ii, p. 127.
1894.
Ordovician.
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Ohio.

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Tertiary. Florida. Included in Miocene.
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Exact syn. Caprina limestone, Barton Creek limestone.
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- Eistine** sandstone, Swallow and Hawn. Geol. of Miami County, Kans. 1865.
Carboniferous. Kansas. Included in Coal Measures.
- Elevator B** sandstone, Hall. Minn. Acad. Nat. Sci., Bull., vol. ii, no. i, p. 132. 1889.
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- Elevator** sandstone, Hall and Sardeson. Geol. Soc. Am., Bull., vol. iii, p. 341. 1892.
Ordovician(?). Minnesota. Included in Magnesian series.
- Elgin** sandstone, Haworth. Kan. Univ. Geol. Surv., vol. iii, p. 64. 1898.
Carboniferous. Kansas.
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- Elk Creek** beds, Cragin. Am. Geol., vol. xvi, p. 366. 1895.
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- Elk Falls** limestone, Haworth. Kan. Univ. Geol. Surv., vol. iii, pp. 65-66, 105. 1898.
Carboniferous. Kansas. Includes Lecompton and Deer Creek limestone.
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Carboniferous. West Virginia and Maryland.
- Elkgarden** formation, Clark. Md. Geol. Surv., vol. i, p. 156, 187. 1897.
Carboniferous. Maryland.
- Elk Lick** limestone, White. 2d Pa. Geol. Surv., Rept. Q, p. 29. 1878.
Carboniferous. Pennsylvania. Included in Lower Barren series.
- Elk Lick** limestone, White. U. S. Geol. Surv. Bull. No. 65, p. 90. 1891.
Carboniferous. Pennsylvania. Included in Barren Measures, Elk River series.
- Elk Lick** Coal, White. U. S. Geol. Surv., Bull. No. 65, p. 89. 1891.
Carboniferous. Ohio, Pennsylvania, West Virginia. Included in Barren Measures, Elk River series.
- Elk Mountain** shale, White. 2d Pa. Geol. Surv., Rept. G⁵, p. 64. 1881.
Devonian. Pennsylvania. Included in Catskill.
- Elk Mountain** gray shale, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, p. 1579. 1892.
Devonian. Pennsylvania. Included in Catskill, No. ix.

- Elk Mountain sandstone and shale, Prosser. U. S. Geol. Surv., Bull. No. 120, p. 78. 1894.
- Devonian. New York, Pennsylvania. Included in Catskill (Upper Devonian).
- Elk River** series, White. U. S. Geol. Surv., Bull. No. 65, p. 70. 1891.
- Carboniferous. Ohio, Pennsylvania, and West Virginia. Includes Pittsburg limestone, Connellsville sandstone, Clarksburg limestone, Morgantown sandstone, Elk Lick limestone, Crinoidal, Green fossiliferous or Ames limestone, Red Shale beds, Cambridge limestone, Irondale limestone, Mahoning sandstone and limestone, and Kanawha black flint. Exact syn. Barren Measures.
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- Elk River series, White. West Virginia Geol. Surv., vol. i, p. 201. 1899.
- Carboniferous. West Virginia. Exact syn. Barren Measures.
- Ellensburg** sandstone, Russell. U. S. Geol. Surv., 20th Ann. Rept., pt. ii, pp. 127-128. 1900.
- Tertiary. Washington. Included in Miocene.
- Ellicottsville** conglomerate, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, p. 1531. 1892.
- Devonian. Pennsylvania. Included in Venango.
- Elliott Creek** bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 376. 1893.
- Carboniferous. Texas. Included in Strawn division.
- Ellis** limestone, Iddings and Weed. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 1. 1894.
- Juratrias. Montana.
- Ellis, Weed. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 30. 1896.
- Juratrias. Wyoming.
- Ellis, Peale. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 24. 1896.
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- Ellis formation, Weed. U. S. Geol. Surv., 18th Ann. Rept., pt. iii, pp. 477-478. 1898.
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- Ellis formation, Iddings and Weed. U. S. Geol. Surv., Mon., vol. xxxii, pt. ii, pp. 149-164. 1899.
- Juratrias. Yellowstone Park.
- Elm Creek** bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 424. 1893.
- Carboniferous. Texas. Included in Albany division.
- Elmont** limestone, Beede. Kan. Acad. Sci., Trans., vol. xv, p. 30. 1898.
- Carboniferous. Kansas.
- Empire** beds, Dall. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 308. 1898.
- Tertiary. Oregon. Included in Miocene. Exact syn. Astoria sandstones.
- Empire formation, Diller. U. S. Geol. Surv., 19th Ann. Rept., pt. iii, p. 319. 1899.
- Tertiary. Oregon. Included in Miocene.
- Empire shale, Walcott. Geol. Soc. Am., Bull., vol. x, pp. 199, 207. 1899.
- Algonkian, Pre-Cambrian. Montana. Included in Belt terrane.
- Emporia** limestone, Kirk. Kan. Univ. Geol. Surv., vol. i, p. 80. 1896.
- Carboniferous. Kansas.
- Encrinal** limestone, Hall. N. Y. Geol. Surv., 3d Ann. Rept., p. 298. 1839.
- Devonian. New York.
- Encrinal limestone, Hall. Geol. of New York, pt. iv, 4th Geol. Dist., pp. 18, 187. 1843.
- Paleozoic. New York. Included in Hamilton group.

- Encrinal limestone, Hall. Geol. of New York, pt. iv, 4th Geol. Surv., pp. 18, 145. 1843.
 Paleozoic. New York. Included in New York system. Includes Scutella limestone. Part. syn. No. 6, Pennsylvania survey.
- Encrinal limestone, Emmons. Agriculture of New York, vol. i, p. 168. 1846.
 New York. Included in Helderberg division of New York system.
- Encrinal limestone, Hopkins. Ark. Geol. Surv., 1890, vol. iv, p. 52. 1890.
 Silurian. Arkansas. Included in Lower Helderberg.
- Encrinal limestone, Grabau. Buffalo Soc. Nat. Hist., Bull., vol. vi, pp. 30-32. 1898.
 Devonian. New York.
- Encrinital** limestone, Shumard. Mo. Geol. Surv., 1st and 2d Ann. Repts., pt. ii, pp. 171, 181, 1855.
 Carboniferous. Missouri.
- Encrinital limestone, Swallow. Mo. Geol. Surv., 1st and 2d Ann. Repts., pp. 97, 175, 194. 1855.
 Carboniferous. Missouri. Included in Mountain or Lower Carboniferous limestone.
- Encrinital limestone, Meek. Mo. Geol. Surv., 1st and 2d Ann. Repts., pt. ii, p. 98. 1855.
 Carboniferous. Missouri.
- Encrinital limestone, Shumard. Mo. Geol. Surv., Repts., 1855-1871, pp. 294, 305. 1873.
 Carboniferous. Missouri. Included in Lower Carboniferous.
- Encrinital limestone, Broadhead. Mo. Geol. Surv., Rept., 1855-1871, pp. 43, 71. 1873.
 Carboniferous. Missouri. Included in Lower Carboniferous. Exact syn. Burlington limestone.
- Encrinital limestone, Meek. Mo. Geol. Surv., Repts., 1855-1871, pp. 140, 173. 1873.
 Carboniferous. Missouri. Included in Lower Carboniferous.
- Encrinital limestone, Broadhead. Mo. Geol. Surv., Repts., 1873-74, pp. 25, 67, 183. 1874.
 Carboniferous. Missouri. Included in Lower Carboniferous, Mountain limestone. Exact syn. Burlington.
- Encrinital limestone, Broadhead. Mo. Geol. Surv., Repts., 1873-74, pp. 25, 67. 1874.
 Lower Carboniferous. Missouri. Exact syn. Burlington limestone.
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 Carboniferous. Iowa. Included in Mississippian series, Kinderhook.
- English River gritstones, Bain. Iowa Geol. Surv., vol. v, p. 134. 1896.
 Carboniferous. Iowa. Included in Kinderhook.
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 Cambrian. Vermont. Exact syns. Granular limestone, Berkshire limestone, Stockbridge limestone, Dorset limestone.
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- Eolian limestone, Hitchcock. Geol. of Maine, Prelim. Rept., vol. ii, pp. 245-259. 1862.
 Cambrian. Maine. Exact syn. Stockbridge limestone.
- Eolian limestone, Crosby. Rept. on Geol. Map of Mass., p. 40. 1876.
 Pre-Cambrian.
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 Silurian. Vermont. Part. syns. Lower Calciferous, Quebec, Chazy, Black River, Trenton.
- Eolian limestone, Hitchcock. Geol. Soc. Am., Bull., vol. i, p. 513. 1889.
 Ordovician(?). Vermont.
- Eolian, Walcott. Geol. Soc. Am., Bull., vol. ii, p. 502. 1891.
 Ordovician(?). Quebec. Included in Quebec group.

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Included in Eocene.
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Included in Tertiary-Eocene. Exact syns. Marlborough and Piscataway beds of Maryland(?). Shark River deposits of New Jersey.
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Tertiary. Included in Pliocene.
- Equus** beds, Dumble. Jour. of Geol., vol. ii, pp. 563-564. 1894.
Pleistocene. Texas.
- Equus** beds, Scott. Geol. Soc. Am., Bull., vol. v, p. 594. 1894.
Pleistocene. Nebraska.
- Equus** beds, Dall. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 336. 1898.
Pleistocene.
- Erian**, Clarke and Schuchert. Science, new ser., vol. x, pp. 876-877. 1899.
Devonian. New York. Includes Marcellus shale, Hamilton beds.
- Erie** division, Vanuxem. Geol. of New York, pt. iii, pp. 170-171. 1842.
Paleozoic. New York. Included in New York system.
- Erie** division, Mather. Geol. of New York, pt. i, pp. 317-323. 1843.
Paleozoic. New York. Included in New York system. Includes Ithaca and Chemung group, Hamilton group, Marcellus shales, 3d graywacke, No. viii, Olive shale, Skaneateles shale, Ludlowville shale, Encrinal limestone, Moscow shale, Apulia and Sherburne shales, Cazenovia group.
- Erie**, Emmons. Agriculture of New York, vol. i, pp. 180-186. 1846.
Devonian. New York. Included in New York system. Includes Marcellus, Hamilton.
- Erie** clay, Logan. Can. Geol. Surv., Repts., 1843-1863, pp. 887, 896-907. 1863.
Canada. Included in Drift (upper stratified portion).
- Erie** clays, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, p. 26. 1870.
Carboniferous. Ohio.
- Erie** shale, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, p. 20. 1870.
Devonian. Ohio.
- Erie** shale, Newberry. Ohio Geol. Surv. Rept. Prog., 1869, p. 27. 1870.
Devonian. Ohio. Part. syn. Chemung group of New York.
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Pleistocene. Great Lakes region. Included in Drift deposit.
- Erie** shale, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, p. 21. 1871.
Devonian. Ohio.
- Erie** shale, Newberry. Ohio Geol. Surv., vol. i, pt. i, pp. 163, 190. 1873.
Devonian. Ohio.
- Erie** shale, Read. Ohio Geol. Surv., vol. i, p. 486. 1873.
Devonian. Ohio.
- Erie** clay, Gilbert. Ohio Geol. Surv., vol. i, pt. i, p. 544. 1873.
Pleistocene. Ohio.
- Erie** clay, Newberry. Ohio Geol. Surv., vol. i, pt. i, p. 174. 1873.
Pleistocene. Ohio.
- Erie** muck, Collett. Ind. Geol. Surv., 5th Ann. Rept., for 1873, p. 408. 1874.
Indiana.
- Erie** shale, Newberry. Ohio Geol. Surv., vol. ii, pp. 188, 213. 1874.
Carboniferous. Ohio.
- Erie** shale, Winchell. Ohio Geol. Surv., vol. ii, pp. 242, 264. 1874.
Carboniferous. Ohio.
- Erie** shale, Lesley. 2d Pa. Geol. Surv., Rept. I, pp. 76-82. 1875.
Silurian. Pennsylvania and Ohio. Exact. syn. No. vii.

- Erie clay, Newberry. Ohio Geol. Surv., vol. iii, p. 32. 1878.
Pleistocene. Ohio.
- Erie shale, Read. Ohio Geol. Surv., vol. iii, p. 306. 1878.
Carboniferous. Ohio.
- Erie, Newberry. Ohio Geol. Surv., vol. iii, p. 18. 1878.
Carboniferous. Ohio.
- Erie shale, Herrick. Denison Univ. Sci. Lab., Bull., vol. iv, p. 106. 1888.
Devonian. Ohio.
- Erie shale, Orton. Ohio Geol. Surv., vol. vi, pp. 4, 23. 1888.
Devonian. Ohio. Included in Ohio shale.
- Erie shale, Orton. Ohio Geol. Surv., vol. vii, pp. 4, 21. 1893.
Devonian. Ohio. Included in Ohio shale.
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Carboniferous. Kansas.
- Erie limestone, Haworth and Piatt. Kan. Univ. Quart., vol. ii, p. 116. 1894.
Carboniferous. Kansas. Exact syn. Altoona limestone.
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Carboniferous. Kansas.
- Erie limestone, Haworth. Am. Jour. Sci., 3d ser., vol. i, p. 458. 1895.
Carboniferous. Kansas. Included in Coal Measures.
- Erie limestone, Kirk. Kan. Univ. Geol. Surv., vol. i, p. 76. 1896.
Carboniferous. Kansas.
- Erie limestone, Haworth. Kan. Univ. Geol. Surv., vol. i, pp. 45-47. 1896.
Carboniferous. Kansas.
- Erie limestone, Haworth. Kan. Univ. Geol. Surv., vol. i, pp. 154-157, 165. 1896.
Carboniferous. Kansas. Includes Bethany Falls limestone.
- Erie limestone, Bennett. Kan. Univ. Geol. Surv., vol. i, pp. 95-97. 1896.
Carboniferous. Kansas.
- Erie limestone, Haworth. Kan. Univ. Geol. Surv., vol. iii, pp. 44-47, 88, 94, 101-102. 1898.
Carboniferous. Kansas. Included in Pottawatomie formation. Includes Bethany Falls rock and the Winterset limestone.
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Upper Carboniferous. Kansas.
- Eryops** beds, Cope. U. S. Geol. and Geog. Surv. of Terr., Bull., vol. v, p. 51-52. 1879.
Carboniferous. Included in Permian.
- Escondido**, Dumble. Geol. Soc. Am., Bull., vol. iii, pp. 219, 227. 1892.
Cretaceous. Texas. Included in Upper Cretaceous, Eagle Pass division.
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Cretaceous. Texas. Included in Eagle Pass formation.
- Esmeralda** formation, Turner. U. S. Geol. Surv., 21st Ann. Rept., pt. ii, pp. 191-224. 1900. Am. Geol., vol. xxv, pp. 168-170. 1900.
Tertiary. Nevada.
- Esopus** slate, Darton. N. Y. State Geol., 13th Ann. Rept., pp. 209-210, 244-245, 302. 1894.
Devonian. New York. Exact syn. Cauda-galli grit.
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Devonian. New York. Exact syn. Cauda-galli grit.
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Silurian. New York.
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Devonian. New York. Included in Ulsterian.
- Esopus grit, Weller. N. J. Geol. Surv., Rept. 1899, p. 44. 1900.
Devonian. New Jersey.

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Cretaceous or Tertiary. Wyoming and Utah.
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- Etcheminian, Walcott. Geol. Soc. Am., Bull., vol. x, p. 232. 1899.
Algonkian (?). New Brunswick.
- Etcheminian series, Matthew. Can. Rec. Sci., vol. iii, p. 72. 1889.
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- Etcheminian, Walcott. Wash. Acad. Sci., Proc., vol. i, p. 338. 1900.
Cambrian. Newfoundland.
- Etholen** bed, Taff. Texas Geol. Surv., 2d Ann. Rept., pp. 723-725. 1891.
Cretaceous. Texas. Included in Washita division.
- Eureka** quartzite, Hague. U. S. Geol. Surv., 3d Ann. Rept., pp. 253, 262. 1883.
Silurian. Nevada.
- Eureka shale, Simonds. Ark. Geol. Surv., 1888, vol. iv, pp. 26, 27. 1888.
Devonian (?). Arkansas.
- Eureka shale, Hopkins. Am. Assoc. Adv. Sci., Proc., vol. xl, p. 256. 1891.
Devonian (?). Arkansas.
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Silurian. Nevada.
- Eureka fire clay, Wheeler. Mo. Geol. Surv., Sheet Rept. No. ii, p. 59. 1893.
Upper Carboniferous. Missouri. Included in Lower Coal Measures.
- Eureka shale, Drake. Am. Phil. Soc., Proc., vol. xxxvi, p. 347. 1897.
Carboniferous. Indian Territory. Included in Lower Carboniferous.
- Eureka limestone, Haworth. Kan. Univ. Geol. Surv., vol. iii, pp. 67, 73. 1898.
Carboniferous. Kansas. Exact syn. Burlingame limestone of Wabaunsee formation.
- Eureka shale, Williams. Am. Jour. Sci., 4th ser., vol. viii, pp. 139-149. 1898.
Carboniferous. Arkansas. Part. syn. Kinderhook.
- Eureka shale, Shepard. Mo. Geol. Surv., vol. xii, pp. 67-71. 1898.
Devonian. Missouri. Included in Hamilton stage.
- Eureka limestone, Tower and Smith. U. S. Geol. Surv., 19th Ann. Rept., pt. iii, pp. 622-624. 1899.
Carboniferous. Utah.
- Eutaw** group, Hilgard. Rept. on Geol. and Agric. Miss., pp. 61, 62-68. 1860.
Cretaceous. Mississippi. Exact syn. Lower Cretaceous.
- Eutaw group, Hilgard. Am. Jour. Sci., 3d ser., vol. ii, pp. 391-394. 1871.
Cretaceous. Mississippi, Alabama, Georgia, Texas, Arkansas. Exact syns. Coffee group, Dakota group. Part. syn. Fort Benton group.
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Cretaceous. Alabama.
- Eutaw series, Spencer. Ga. Geol. Surv., 1st Rept. of Prog., p. 30. 1891.
Cretaceous. Georgia.
- Eutaw series, Langdon. Ga. Geol. Surv., 1st Rept. of Prog., p. 91. 1891.
Tertiary. Georgia.
- Eutaw, White. U. S. Geol. Surv., Bull. No. 82, p. 106. 1891.
Cretaceous. Gulf region. Includes Lower Eutaw and Tuscaloosa.
- Eutaw series, Spencer. Ga. Geol. Surv., 1st Rept. of Prog. 1891.
Cretaceous. Georgia.
- Eutaw, Langdon. Geol. Soc. Am., Bull., vol. ii, p. 588. 1891.
Cretaceous. Alabama. Included in Tuscaloosa group.

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1837.
Silurian. Virginia. Exact syn. Lower Helderberg pre-Meridian of Pennsylvania.
- Formation No. 7**, Rogers. Rept. for 1837 and Geol. of Virginias, p. 179. 1884.
Silurian. Virginia. Exact syns. Oriskany, Meridian of Pennsylvania.
- Formation No. 8**, Rogers. Rept. for 1837 and Geol. of Virginias, p. 179. 1884.
1837.
Devonian. Virginia. Includes Marcellus, Hamilton, Genesee, Portage, and Chemung. Part. syns. Cadent and Vergent of Pennsylvania.
- Formation No. 9**, Rogers. Rept. for 1837 and Geol. of Virginias, p. 182. 1884.
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- Formation No. 10**, Rogers. Repts. for 1837 and 1839 and Geol. of Virginias, pp. 183, 335. 1884.
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New Jersey.
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- Formation No. 15**, Rogers. Rept. for 1840 and Geol. of Virginias, pp. 498, 513. 1884.
Carboniferous. Virginia. Exact syn. Upper Coal group. Part. syn. Seral of Pennsylvania.
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Maryland.
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- Formation No. 15b**, Tyson. Md. State Agric. Chemist, 1st Rept., p. 38. 1860.
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- Formation No. 18b**, Tyson. Md. State Agric. Chemist, 1st Rept., p. 40. 1860.
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- Formation No. 19**, Tyson. Md. State Agric. Chemist, 1st Rept., p. 40. 1860.
Carboniferous. Maryland. Exact syn. Seral series of Pennsylvania.
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Juratrias. Maryland
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Cretaceous. Maryland.
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Tertiary. Maryland.
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Lower Silurian. Minnesota.
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- Galena limestone**, Harrington. Minn. Geol. and Nat. Hist. Surv., 4th Ann. Rept., p. 91. 1876.
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Silurian. Pennsylvania. Includes Stormville shales, Decker Ferry limestone, Bossardville limestone, and Poxono Island shales. Exact syn. No. vi.
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Silurian. Arkansas. Includes Pentamerus, Catskill, Encrinal, and Upper Pentamerus limestones. Part syn. Water-lime group.
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Devonian. Ohio. Includes Columbus and Delaware limestones.
- Helderberg, Lower, Phinney. U. S. Geol. Surv., 11th Ann. Rept., pt. i, p. 633. 1891.
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Silurian. Pennsylvania. Includes Lewistown limestone. Exact syn. No. vi.
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- High Rock sandstone**, Ashley. Indiana Dept. Geol. and Nat. Resources, 23d Ann. Rept., 1898, p. 113. ° 1899.
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Ohio. Included in Niagara series.
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Carboniferous. Virginia, West Virginia.
- Hinton formation**, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 44. 1897.
Carboniferous. Virginia and West Virginia. Part syns. No. xi, Greenbrier shale.
- Hog Creek bed**, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 397. 1893.
Carboniferous. Texas. Included in Canyon division.
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Silurian. Ohio. Exact syns. Monclova sandstone, Sylvania sandstone.
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New England. Included in Tertiary.
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Archean. Michigan. Included in Marquette.
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Carboniferous. Texas. Included in Canyon division.
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Cambrian. Virginia and West Virginia.
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Devonian. Pennsylvania. Included in Catskill.
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Devonian. Pennsylvania. Included in Catskill.
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Silurian. Massachusetts.
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Silurian. Texas.
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Paleozoic. New York. Included in New York system. Includes Frankfort slate, Green slate, Pulaski shale, Graywacke of Eaton, and No. iii, Pa. Survey.

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Hudson River group, Mather. Geol. of N. Y., pt. i, pp. 369-389. 1843.

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Hudson River, Swallow. Mo. Geol. Surv., 1st and 2d Ann. Repts., p. 110. 1855.

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Silurian. Iowa.

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 Silurian. Missouri. Included in Hudson River group.
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 Silurian. New York, Pennsylvania, and Ohio valley. *Exact syn. Cincinnati.*
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 285. 1881.
 Ordovician.
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 Cambrian. Wisconsin. Included in Potsdam sandstone.
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 Silurian. Pennsylvania.
- Hudson River group, Linney. *Ky. Geol. Surv., Geol. of Garrard Co.*, pp. 15-19.
 1883.
 Silurian. Kentucky. Includes Lower, Middle, and Upper.
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Archean. New Brunswick.
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- Magnesian limestone, Second, Meek. Mo. Geol. Surv., Rept., 1855-1871, pp. 118, 143. 1873.
 Silurian. Missouri. Included in Lower Silurian.
- Magnesian limestone, Third, Meek. Mo. Geol. Surv., Rept., 1855-1871, pp. 123, 145. 1873.
 Silurian. Missouri. Included in Lower Silurian.
- Magnesian limestone, Fourth, Meek. Mo. Geol. Surv., Rept., 1855-1871, pp. 127, 148. 1873.
 Silurian. Missouri. Included in Lower Silurian.
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- Magnesian limestone, Third, Broadhead. Mo. Geol. Surv., Rept., 1855-1871, pp. 15, 32. 1873.
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1895.
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Gwynedd, and Norristown shales. Exact syn. Newark.
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conglomerate series. Includes Sharon coal, Fire Creek and Quinnemont beds.
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Paleozoic. New York. Includes all subdivisions from Potsdam to Catskill,
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- Newman limestone**, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 33. 1896.
Carboniferous. Tennessee.
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Carboniferous. Kentucky.
- Newman limestone**, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 53. 1899.
Carboniferous. Tennessee. Included in Mississippian series.
- Newman limestone**, U. S. Geol. Surv., Geol. Atlas of U. S. Folio No. 59. 1899.
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Ohio. Exact syn. Maxville limestone.
- Newtonville limestone**, Andrews. Ohio Geol. Surv., Rept. Prog., 1869, p. 96. 1871.
Ohio. Exact syn. Maxville limestone.
- Newtonville limestone**, Andrews. Ohio Geol. Surv., vol. i, pt. i, p. 314. 1873.
Carboniferous. Ohio. Included in Coal Measures. Exact syn. Maxville limestone.
- Newtonville limestone**, Orton. Ohio Geol. Surv., vol. vi, pp. 3, 43. 1888.
Carboniferous. Ohio. Exact syn. Maxville limestone and Subcarboniferous limestone.
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Middle Silurian.
- Niagara sandstone**, Conrad. Phil. Acad. Nat. Sci., Jour., vol. viii, p. 230. 1842.
Lower Silurian.
- Niagara group**, Vanuxem. Geol. of N. Y., pt. iii, pp. 90-94. 1842.
Paleozoic. New York. Included in New York system. Includes Lockport group, Upper part Proteau group, Geodiferous limerock, and Calciferous slate.
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Silurian. Canada and New York.

- Niagara group, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 80-117. 1843.
Paleozoic. New York. Included in New York system. Includes Geodiferous limerock and Calciferous slate, Lockport limestone, Rochester shale, Niagara shale, and Niagara limestone. Part. syn. Proteau group, No. 6 of Pennsylvania Survey.
- Niagara shale, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 81-83. 1843.
Paleozoic. New York. Included in Niagara group.
- Niagara limestone, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 84-97. 1843.
Paleozoic. New York. Included in Niagara group.
- Niagara group, Emmons. Agric. of N. Y., vol. i, pp. 150-152. 1846.
New York. Included in Ontario division of New York system. Includes Niagara shale and Niagara limestone. Exact syn. Geodiferous limerock and Calciferous slate, Lockport limestone and Rochester slate. Part. syn. Proteau group of Ann. Repts. of New York.
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Silurian. Tennessee.
- Niagara limestone, Murray. Can. Geol. Surv., Rept., 1847-1848. 1849.
Silurian. Ontario.
- Niagara group, Hale. Foster and Whitney's Rept. on Geol. of Lake Superior district, pt. ii, p. 156. 1851.
Silurian. Lake Superior region.
- Niagara group, Hall. Pal. of New York, vol. ii, pp. 2-4, 106-108. 1852.
Silurian. New York.
- Niagara group, Hall. Am. Jour. Sci., 2d ser., vol. xvii, p. 192. 1854.
Silurian. Michigan.
- Niagara limestone, Hall. Iowa Geol. Surv., vol. i, p. 71. 1858.
Silurian. Iowa.
- Niagara limestone, Whitney. Iowa Geol. Surv., vol. i, pt. i, pp. 292-295, 362-368. 1858.
Silurian. Iowa.
- Niagara, Safford. Am. Jour. Sci., 2d ser., vol. xxxi, p. 207. 1861.
Silurian. Tennessee. Includes Variegated limestone, and glade-forming limestones and shales, or Gray limestones and shales.
- Niagara limestone, Whitney. Rept. on Upper Mississippi lead region, p. 186. 1862.
Silurian. Wisconsin.
- Niagara formation, Logan. Can. Geol. Surv., Rept. 1843-63, pp. 321-336. 1863.
Middle Silurian. Canada. Included in Anticosti group.
- Niagara group, Chapman. Can. Inst., new ser., vol. viii, pp. 208-216. 1863.
Silurian. Canada. Included in Middle Silurian. Includes Medina and Clinton, Niagara and Guelph formations. Part. syn. Anticosti group (+ Guelph).
- Niagara limestone, Worthen. Ill. Geol. Surv., vol. i, pp. 129-136. 1866.
Silurian. Illinois.
- Niagara formation, Bell. Can. Geol. Surv., Rept. 1863-66, pp. 174, 176. 1866.
Middle Silurian. Canada.
- Niagara formation, Bell. Rept. 1866-69, pp. 128-131. 1866, 1871.
Silurian. Canada.
- Niagara limestone, Whitney. Ill. Geol. Surv., vol. i, pp. 177-186. 1866.
Silurian. Illinois. Exact syns. Upper Magnesian, Corraline and Pentamerus beds, and Mound limestone. Part. syn. Cliff limestone.

- Niagara group, Bannister. Ill. Geol. Surv., vol. iii, pp. 245-253. 1868.
Silurian. Illinois.
- Niagara limestone, Worthen. Ill. Geol. Surv., vol. iii, pp. 116-117. 1868.
Silurian. Illinois.
- Niagara group, Safford. Geol. of Tennessee, by Safford, pp. 291-322. 1869.
Silurian. Tennessee. Includes Meniscus limestone, Dyestone group, White Oak
Mount sandstone, and Clinch Mount sandstone. Exact syn: Dana's Niagara
period. Part. syns. Medina, Clinton, and Niagara epochs.
- Niagara group, Bannister. Ill. Geol. Surv., vol. iv, pp. 114, 131, 139. 1870.
Silurian. Illinois.
- Niagara limestone, Bradley. Ill. Geol. Surv., vol. iv, pp. 213, 232. 1870.
Silurian. Illinois.
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Silurian. Illinois.
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Silurian. Illinois.
- Niagara group, White. Iowa Geol. Surv., vol. i, pp. 182-184. 1870.
Silurian. Iowa. Includes Niagara limestone. Part. syn. Le Claire limestone.
- Niagara limestone, Hunt. Am. Jour. Sci., 3d ser., vol. i, pp. 420-424. 1871.
Silurian. Illinois.
- Niagara, Hall. Am. Assoc. Adv. Sci., Proc., vol. xxii, p. 321. 1873.
Silurian. New York, Mississippi Valley. Exact syn. Coralline limestone.
- Niagara, Newberry. Ohio Geol. Surv., vol. i, pt. i, pp. 62, 104, 128. 1873.
Silurian. Ohio.
- Niagara, Orton. Ohio Geol. Surv., vol. i, pt. i, p. 464. 1873.
Silurian. Ohio.
- Niagara, Winchell. Ohio Geol. Surv., vol. i, pt. i, pp. 596, 613, 627, 741. 1873.
Silurian. Ohio.
- Niagara, Shumard. Mo. Geol. Surv., Rept., 1855-1871, pp. 261, 281, 296. 1873.
Silurian. Missouri. Included in Upper Silurian.
- Niagara limestone, Worthen. Ill. Geol. Surv., vol. v, p. 223. 1873.
Silurian. Illinois.
- Niagara limestone, Shaw. Ill. Geol. Surv., vol. v, pp. 15-16, 33-35, 64-65, 78-79,
132-134, 149-152, 187. 1873.
Silurian. Illinois.
- Niagara, Orton. Ohio Geol. Surv., vol. ii, p. 667. 1874.
Silurian. Ohio. Included in Upper Silurian. Includes Guelph or Cedarville
beds, Springfield beds, West Union beds, Niagara beds, Niagara shale, and
Dayton stone.
- Niagara, Winchell. Ohio Geol. Surv., vol. ii, pp. 229, 316, 354, 359, 370, 398. 1874.
Silurian. Ohio.
- Niagara limestone, Killebrew and Safford. Resources of Tenn., pp. 38-39. 1874.
Silurian. Tennessee. Included in Niagara period.
- Niagara, Hall. Regents Univ. of N. Y., 27th Ann. Rept., pp. 117-131. 1875.
Silurian. New York. Includes Coralline limestone of New York.
- Niagara limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., 4th Ann. Rept.,
p. 53. 1876.
Lower Silurian. Minnesota.
- Niagara, Smith. Ala. Geol. Surv., Rept., 1875, pp. 26, 99. 1876.
Silurian. Alabama. Included in Upper Silurian.
- Niagara, Hotchkiss. A Geographical and Political Summary of Virginia, p. 22. 1876.
Upper Silurian. Virginia. Exact syns. Surgent, Levant (Formation iv, Rogers).
- Niagara, Ashburner. Am. Phil. Soc. Proc., vol. xvi, p. 556. 1877.
Silurian. Pennsylvania.

- Niagara limestone, Chamberlin. Geol. of Wis., vol. ii, pp. 335-371. 1877.
Upper Silurian. Wisconsin.
- Niagara group, Shaler. Ky. Geol. Surv., vol. iii, new ser., pp. 35, 163-169. 1877.
Silurian. Kentucky. Exact syn. includes all New York formations from top of Medina sandstone to top of Niagara period.
- Niagara, Newberry. Ohio Geol. Surv., vol. iii, p. 7. 1878.
Silurian. Ohio. Included in Upper Silurian.
- Niagara, Hussey. Ohio Geol. Surv., vol. iii, pp. 443, 447. 1878.
Silurian. Ohio.
- Niagara, Orton. Ohio Geol. Surv., vol. iii, pp. 386, 408. 1878.
Silurian. Ohio.
- Niagara, St. John. U. S. Geol. and Geog. Surv. of Terr., 11th Ann. Rept., p. 484. 1879.
Silurian. Idaho.
- Niagara group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, no. iv, pp. 268, 290. 1881.
Silurian.
- Niagara, Chamberlin. Geol. of Wis., vol. i, pp. 178, 181-196. 1883.
Upper Silurian. Wisconsin. Includes Mayville beds, Waukesha beds, Racine beds, Byron beds, Lower and Upper Coral beds, and Guelph beds.
- Niagara, Hall. Am. Assoc. Adv. Sci., Proc., vol. xxxi, p. 46. 1883.
Silurian. Eastern U. S., Mississippi Valley.
- Niagara limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, p. 302. 1884.
Minnesota.
- Niagara group, Linney. Ky. Geol. Surv. (Proctor), Geol. of Clark and Montgomery Cos. 1884.
Silurian. Kentucky. Included in Upper Silurian.
- Niagara, Linney. Ky. Geol. Surv., Geol. of Spencer and Nelson Cos., pp. 36-45. 1884.
Silurian. Kentucky.
- Niagara, Knott. Ky. Geol. Surv., Geol. of Marion Co., p. 15. 1885.
Silurian. Kentucky.
- Niagara, Linney. Ky. Geol. Surv., Geol. of Bath Co., p. 21. 1886.
Silurian. Kentucky.
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- Niagara group, Miller. N. A. Geol. and Pal., p. 50. 1889.
- Niagara group, Orton. U. S. Geol. Surv., 8th Ann. Rept., pt. ii, p. 561. 1889.
Silurian. Ohio, Indiana.
- Niagara group, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept., pp. 18-20. 1890.
Silurian. Ohio. Includes Niagara limestone and shale, Guelph limestone and Hillsboro sandstone. Part. syn. Guelph limestone.
- Niagara limestone, Hopkins. Ark. Geol. Surv., 1890, vol. iv, pp. 51, 60, 81, 213.
Silurian. Arkansas. Includes Meniscus (Tenn.), Galt or Guelph (Canada), and Leclaire (Iowa) limestone, and Athens (Ill.) marble. Part. syn. Cliff limestone (Ohio).
- Niagara, Phinney. U. S. Geol. Surv., 11th Ann. Rept., pt. i, p. 632. 1891.
Silurian. Indiana.
- Niagara limestone, McGee. U. S. Geol. Surv., 11th Ann. Rept., pt. i, p. 323. 1891.
Silurian. Iowa.
- Niagara, Prosser. Roch. Acad. Sci., Proc., vol. ii, pp. 50-124. 1892.
Silurian. New York.

- Niagara limestone, Keyes. Iowa Geol. Surv., 1st Ann. Rept., vol. i, p. 30. 1893.
Silurian. Iowa. Included in Upper Silurian.
- Niagara, Houser. Iowa Geol. Surv., 1st Ann. Rept., vol. i, pp. 199-207. 1893.
Silurian. Iowa.
- Niagara, Brumell. Geol. Soc. Am., Bull., vol. iv, pp. 227, 231. 1893.
Silurian. Ontario.
- Niagara, Prosser. Geol. Soc. Am., Bull., vol. iv, pp. 100, 108. 1893.
Silurian. New York.
- Niagara, Darton. N. Y. State Geol., 13th Ann. Rept., pp. 206-207, 218. 1894.
Silurian. New York.
- Niagara limestone, Udden. U. S. Geol. Surv., 17th Ann. Rept., pt. ii, p. 834. 1896.
Silurian. Illinois.
- Niagara series, Calvin. Iowa Geol. Surv., vol. v, pp. 48-60. 1896.
Silurian. Iowa. Includes Delaware, Leclair, Anamosa, and Bertram stages.
- Niagara limestone, Luther. N. Y. State Geol., 15th Ann. Rept., pp. 247-250. 1897.
Silurian. New York.
- Niagara formation, Buckley. Wis. Geol. and Nat. Hist. Surv., Bull. No. 4, Econ. ser., No. 2, pp. 298-348. 1898.
Wisconsin.
- Niagara limestone, Calvin. Iowa Geol. Surv., vol. viii, pp. 144-159, 216-220. 1898.
Silurian. Iowa. Includes Delaware stage.
- Niagara, Barlow. Can. Geol. Surv., Rept. new ser., vol. x, p. 123I. 1898.
Silurian. Ontario and Quebec.
- Niagara group, Luther. N. Y. State Geol., 16th Ann. Rept., p. 204. 1899.
Silurian. New York.
- Niagaran, Clarke and Schuchert. Science, new ser., vol. x, pp. 876-877. 1899.
Silurian. New York. Includes Clinton beds, Rochester shale, Lockport limestones, and Guelph dolomite.
- Niagara, Clark. Md. Geol. Surv., vol. iii, p. 97. 1899.
Silurian. Maryland. Included in Silurian. Exact syn. Lewiston (Helderberg).
- Niagara limestone, Calvin and Bain. Iowa Geol. Surv., vol. x, p. 445. 1900.
Silurian. Iowa.
- Niagara formation, O'Harra. Md. Geol. Surv., Allegany County, p. 91. 1900.
Silurian. Maryland.
- Nichols shale, Hayes.** U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 20. 1895.
Cambrian. Tennessee. Included in Chilhowee series.
- Nichols shale, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folios 16, 25. 1895, 1896.
Cambrian. Tennessee and North Carolina.
- Nicola series, Dawson.** Can. Geol. Surv., Rept., 1877-78, pp. 74B-81B, 171B. 1879.
Triassic(?). British Columbia. Red Beds (E. of Wahsatch) and Star Peak group (W. of Wahsatch) of 40th Par. Survey.
- Nicola, Dawson. Can. Geol. Surv., new ser., vol. vii, pp. 26B, 49B-58B, 112B-114B, 130B-146B. 1896.
Juratrias. British Columbia.
- Nicollet clay, Harris.** Phil. Acad. Nat. Sci., Proc., vol. ii, pp. 235-237. 1846.
Cretaceous.
- Nilkoka beds, Brooks.** U. S. Geol. Surv., 20th Ann. Rept., pt. vii, pp. 472, 480. 1900.
Alaska.
- Nineveh limestone, White.** U. S. Geol. Surv., Bull. No. 65, p. 32. 1891.
Carboniferous. Pennsylvania, West Virginia. Included in Permo-Carboniferous, Dunkard Creek. Exact syn. Limestone No. 10.

- Niobrara** division, Meek and Hayden. Phil. Acad. Nat. Sci., Proc., vol. xiii, pp. 419, 422. 1862.
- Lower Cretaceous. Nebraska. Exact syn. Formation No. iii.
- Niobrara, Hayden. Am. Phil. Soc., Trans., new ser., vol. xii, p. 1, et seq. 1863.
Cretaceous. Northwest.
- Niobrara, Hayden. U. S. Geol. Surv. of Wyoming, pp. 87, 90. 1871.
Cretaceous. Included in Lower Cretaceous. Exact syn. Formation No. 3.
- Niobrara, Hayden. U. S. Geol. Surv. of Terr., 1-3d Ann. Repts., pp. 49, 54. 1873.
Cretaceous. Exact syn. Formation No. 3.
- Niobrara, Cope. U. S. Geol. and Geog. Surv., Mon., vol. ii, pp. 16-24. 1875.
Cretaceous.
- Niobrara, Mudge. U. S. Geol. and Geog. Surv. of Terr., Bull., vol. ii, p. 214. 1876.
Cretaceous. Kansas.
- Niobrara group, Meek. U. S. Geol. and Geog. Surv. of Terr., Mon., vol. ix, pp. xxx-xxxiii. 1876.
Cretaceous.
- Niobrara, Mudge. U. S. Geol. and Geog. Surv. of Terr., 9th Ann. Rept., p. 281. 1877.
Cretaceous. Kansas. Includes Niobrara and Fort Hays.
- Niobrara, Hague. U. S. Geol. Expl. of 40th Parallel, vol. ii, pp. 42, 67-71. 1877.
Tertiary. Wyoming. Included in Pliocene.
- Niobrara, King. U. S. Geol. Expl. of 40th Parallel, vol. i, p. 425. 1878.
Tertiary. Colorado, Wyoming. Included in Pliocene.
- Niobrara group, Newton. Geol. of Black Hills., pp. 173-174. 1880.
Cretaceous. South Dakota.
- Niobrara, Stevenson. U. S. Geog. and Geol. Surv. W. of 100th M., vol. iii, Suppl., p. 97. 1881.
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- Niobrara, Dawson. Science, vol. i, p. 429. 1883.
Cretaceous. Canada.
- Niobrara, Stevenson. Am. Geol., vol. iii, p. 393. 1889.
Cretaceous. Colorado and New Mexico.
- Niobrara, Williston. Kansas Acad. Sci., Trans., vol. xiii, pp. 107-111. 1893.
Upper Cretaceous. Kansas.
- Niobrara group, Calvin. Iowa Geol. Surv., vol. i, pp. 149-161. 1893.
Cretaceous. Iowa. Exact syn. Inoceramus beds.
- Niobrara limestone, Eldridge. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 9. 1894.
Cretaceous. Colorado.
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Cretaceous. Nebraska and Dakota. Included in Upper Cretaceous.
- Niobrara chalk, Calvin. Am. Assoc. Adv. Sci., Proc., vol. xliii, p. 197. 1894.
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Cretaceous. Colorado. Included in Colorado group.
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Cretaceous. Colorado. Includes Timpas formation and Apishapa formation.

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Upper Cretaceous. Kansas.
- Niobrara group, Logan. Kansas Univ. Geol. Surv., vol. ii, pp. 219-221. 1897.
Upper Cretaceous. Kansas. Includes Fort Hays limestone, and Pteranodon beds in Smoky Hill chalk.
- Niobrara formation, Gilbert. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 36. 1897.
Cretaceous. Colorado.
- Niobrara, Adams. Kan. Univ. Geol. Surv., vol. iv, pp. 24-27. 1898.
Upper Cretaceous. Kansas. Includes Pteranodon beds (Herperornis and Rudistes beds) and Fort Hays beds.
- Niobrara formation, Hills. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 58. 1899.
Cretaceous. Colorado. Apishapa and Timpas formations.
- Niobrara, Logan. Jour. of Geol., vol. vii, pp. 89-91. 1899.
Cretaceous. Kansas, Nebraska. Includes Fort Hays limestone, Pteranodon beds.
- Nipigon** group, Spencer. Can. Nat., 2d ser., vol. viii, pp. 55-70. 1878.
Canada. Exact syn. Copper-bearing series.
- Nipigon series, Bell. Can. Geol. Surv., Rept. 1876-77, pp. 213-215. 1878.
Canada. Exact syn. Upper Copper-bearing series.
- Nipigon group, Selwyn. Can. Geol. Surv., Rept. 1877-78, p. 15A. 1879.
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- Nipigon, Walcott. Geol. Soc. Am., Bull., vol. x, p. 222. 1899.
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- Nisconlith** series, Dawson. Can. Geol. Surv., new ser., vol. iv, pp. 31B-32B. 1890.
Paleozoic. British Columbia.
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Cambrian. British Columbia.
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Cambrian. British Columbia.
- Nisconlith slate, McConnell. Can. Geol. Surv., new ser., vol. x, p. 30A. 1898.
British Columbia.
- Nishnabotany** sandstone, White. Iowa Geol. Surv., vol. i, pp. 289-291. 1870.
Cretaceous. Iowa.
- Nishnabotany sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, p. 308. 1884.
Minnesota.
- Nishnabotany sandstone, Keyes. Iowa Geol. Surv., vol. i, pp. 134-135. 1893.
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Cretaceous. Iowa.
- Nishnabotany sandstone, White. Am. Jour. Sci., 2d ser., vol. xlv, pp. 27, 119. 1898.
Cretaceous. Iowa. Exact syn. Dakota (?).
- Nodaway** limestone, Gallager. Mo. Geol. Surv., Bien. Rept., p. 53. 1898.
Upper Carboniferous. Missouri. Included in Upper Coal Measures.
- Nogales** division, Dumble. Am. Inst. Mg. Engrs., Trans., vol. xxix, p. 128. 1900.
Tertiary. Mexico.
- Noix** oölite, Keyes. Iowa Acad. Sci., Proc., vol. v, p. 62. 1898.
Silurian. Iowa.
- Nolichucky** shale, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 12. 1894.
Cambrian. Kentucky, Virginia, and Tennessee.

- Nolichucky shale, Walcott. Geol. Soc. Am., Bull., vol. v, p. 195. 1894.
Cambrian. Virginia.
- Nolichucky shale, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 16, 25, 27. 1895, 1896.
Cambrian. Tennessee and North Carolina.
- Nolichucky shale, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 33. 1896.
Cambrian. Tennessee. Included in Conasauga shale.
- Nolichucky shale, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 44, 1897.
Cambrian. Virginia, West Virginia.
- Nolichucky shale, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 59. 1899.
Cambrian. Virginia, Tennessee.
- Norian**, Hitchcock. Am. Assoc. Adv. Sci., Proc., vol. xxi, p. 136. 1872.
Archean. New Hampshire.
- Norian, Crosby. Report on Geol. Map of Mass., pp. 7-11. 1876.
Massachusetts.
- Norian series, Hunt. 2d Pa. Geol. Surv., Rept. F, pp. 161-164. 1878.
Archean. Canada.
- Norian series, Selwyn. Can. Geol. Surv., Rept. 1877-78, pp. 10A, 12A-13A. 1879.
Canada.
- Norian, Hunt. Smithsonian Inst. Ann. Rept., 1882, p. 336. 1884.
Eozoic. N. E. America. Included in Archean. Includes Upper Laurentian or Labradorian.
- Norian, Whitney and Wadsworth. Harvard Coll. Mus. Comp. Zool., Bull., vol. vii, 1880-84, pp. 561, 562. 1884.
Azoic.
- Norian, Pumpelly. Geol. Soc. Am., Bull., vol. iv, p. 383. 1893.
Archean. Canada (?).
- Normandy** limestone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S. Folio No. 53. 1899.
Silurian. Tennessee. Exact syns. Chickamauga limestone, Nashville series.
- Norristown** shale, Lyman. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2612-2616. 1895.
Juratrias, Permian (?). Pennsylvania. Included in New Red.
- Norristown stage, Stevenson. N. Y. Acad. Sci., Trans., vol. xv, p. 51. 1896.
Carboniferous. Arkansas, Indian Territory.
- North Denison**, Hill. Geol. Soc. Am., Bull., vol. v, p. 302. 1894
Cretaceous. Indian Territory. Included in Denison beds, Washita division.
- North Haven** greenstone, Smith. Geol. of the Fox Islands, pp. 13-17. 1896.
Pre-Silurian. Maine.
- North Park** group, King. U. S. Geol. Expl. of 40th Parallel, vol. i, p. 431. 1878.
Tertiary. Wyoming. Included in Pliocene.
- North Valley Hill** sandstone, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. i, p. 166 et seq. 1892.
Cambrian. Pennsylvania.
- North Vernon** limestone, Borden. Indiana Geol. Surv., 7th Ann. Rept., 1875, pp. 148, 160. 1876.
Devonian. Indiana.
- North Vernon bluestone, Cox. Indiana Geol. Surv., 8th, 9th, and 10th Ann. Repts., 1876, 1877, 1878, p. 88. 1879.
Indiana.
- North Vernon stone, Elrod. Indiana Dept. Geol. and Nat. Hist., 11th Ann. Rept., 1881, pp. 174, 186. 1882.
Carboniferous. Indiana.

- Norton** formation, Campbell. U. S. Geol. Surv., Bull. No. 111, p. 34. 1893.
Carboniferous. Virginia. Included in Coal Measures. Exact syn. Lower Coal Measures.
- Norton, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 12. 1894.
Carboniferous. Kentucky, Virginia, Tennessee.
- Norton zone, Williston. Kan. Univ. Quart., vol. iv., p. 251. 1896.
Upper Cretaceous. Kansas. Included in Smoky Hill chalk.
- Norton formation, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 59. 1899.
Carboniferous. Virginia and Tennessee.
- Novaculite** series, Ashley. Am. Phil. Soc., Proc., vol. xxxvi, pp. 228 et seq. 1897.
Carboniferous. Arkansas.
- Nulato** sandstone, Spurr. U. S. Geol. Surv., 18th Ann. Rept., pt. iii, p. 196. 1898.
Tertiary. Alaska. Included in Miocene.
- Nulato beds, Becker. U. S. Geol. Surv., 18th Ann. Rept., pt. iii, pl. i. 1898.
Alaska.
- Numbers I, II, III, IV**, Meek and Hayden. Am. Jour. Sci., 2d ser., vol. xxviii, pp. 219-226. 1859.
Cretaceous. Kansas and Nebraska.
- Number I**, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 20-23. 1838.
Cambrian. Pennsylvania.
- Number I, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 38, 46. 1840.
Cambrian. Pennsylvania.
- Number I, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. i, pp. 165-186. 1892.
Cambrian. Pennsylvania. Includes Chiques sandstone, Hellam quartz, North Valley, Hill sandstone, Potsdam, and Upper Cambrian quartzite. Exact syn. Primal sandstone.
- Number II**, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 23-30. 1838.
Silurian. Pennsylvania.
- Number II, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 41, 44, 53, 99, 134. 1840.
Silurian. Pennsylvania.
- Number II, Prime. 2d Pa. Geol. Surv., Rept. D, pp. 7-15. 1875.
Silurian. Pennsylvania. Includes Calciferous, Chazy, Birdseye, and Black River of New York.
- Number II, Prime. 2d Pa. Geol. Surv., Rept. D², pp. 11-22. 1878.
Silurian. Pennsylvania. Exact syn. Siluro-Cambrian.
- Number II, Hall. 2d Pa. Geol. Surv., Rept. C⁶, pp. 34-38. 1881.
Silurian. Pennsylvania.
- Number II, Prime. 2d Pa. Geol. Surv., Rept. D³, pt. i, pp. 161-201. 1883.
Silurian. Pennsylvania.
- Number II, D'Invilliers. 2d Pa. Geol. Surv., Rept. D³, pt. ii, pp. 137-196. 1883.
Silurian. Pennsylvania. Includes Auroral and Matinal of Rogers, Calciferous, Chazy, etc., of New York.
- Number II, Ewing. 2d Pa. Geol. Surv., Rept. T⁴, pp. 401-424. 1884.
Silurian. Pennsylvania. Includes Trenton, Chazy, Calciferous, etc. Exact syn. Great Valley limestone.
- Number III**, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 30-36. 1838.
Silurian. Pennsylvania.
- Number III, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 64, 101, 104. 1840.
Silurian. Pennsylvania.
- Number III, Sanders. 2d Pa. Geol. Surv., Rept. D³, pt. i, pp. 83-85. 1883.
Silurian. Pennsylvania. Exact syn. Hudson River.
- Number III, Lesley. 2d Pa. Geol. Surv., Rept. D³, pt. i, pp. 32-35. 1883.
Silurian. Pennsylvania. Exact syn. Hudson River.

- Number III, Ewing. 2d Pa. Geol. Surv., Rept. T⁴, pp. 424-427. 1884.
Silurian. Pennsylvania. Includes Hudson River and Utica.
- Number III, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. i, pp. 525-624. 1892.
Silurian. Pennsylvania. Includes Utica and Hudson River slate.
- Number IV**, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 36-39. 1838.
Silurian. Pennsylvania.
- Number IV, Rogers. Pa. State Geol., 3d Ann. Rept., pp. 47-49. 1839.
Silurian. Pennsylvania.
- Number IV, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 69, 102, 105, 137. 1840.
Silurian. Pennsylvania.
- Number IV, Ewing. 2d Pa. Geol. Surv., Rept. T⁴, pp. 427-429. 1884.
Silurian. Pennsylvania. Includes Oneida and Medina.
- Number IV, D'Inwilliers. 2d Pa. Geol. Surv., Rept. F⁴, pp. 78-79. 1891.
Silurian. Pennsylvania. Includes Medina and Oneida.
- Number IV, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. i, pp. 625-719. 1892.
Silurian. Pennsylvania. Includes Oneida and Medina.
- Number V**, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 39-46. 1838.
Silurian. Pennsylvania.
- Number V, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 78, 140. 1840.
Silurian. Pennsylvania.
- Number V, Ewing. 2d Pa. Geol. Surv., Rept. T⁴, p. 429. 1884.
Silurian. Pennsylvania. Exact syn. Clinton group.
- Number V, D'Inwilliers. 2d Pa. Geol. Surv., Rept. F⁴, pp. 62-78. 1891.
Silurian. Pennsylvania. Includes Salina and Clinton.
- Number V, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 721-897. 1892.
Silurian. Pennsylvania. Includes Clinton, Niagara, Salina, Barree group, McCoy-town sandstone, Lost Creek limestone, Bloomsburg shale, and Bridgeport sandstone.
- Number VI**, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 46-50. 1838.
Silurian. Pennsylvania.
- Number VI, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 84-143. 1840.
Silurian. Pennsylvania. Exact syn. Fossiliferous limestone.
- Number VI, Ewing. 2d Pa. Geol. Surv., Rept. T⁴, pp. 429-430. 1885.
Silurian. Pennsylvania. Exact syn. Lower Helderberg.
- Number VI, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 898-1033. 1892.
Silurian. Pennsylvania. Includes Stormville shale, Bossardville limestone, Poxono Island shale, Bastard limestone, Lewistown limestone, and Clarks Mill shale.
Exact syn. Lower Helderberg.
- Number VII**, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 50-52. 1838.
Devonian. Pennsylvania.
- Number VII, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 88-143. 1840.
Devonian. Pennsylvania. Exact syn. Fossiliferous sandstone.
- Number VII, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1034-1142. 1892.
Devonian. Pennsylvania. Includes Oriskany, Canda-Galli and Schoharie grits.
- Number VIII**, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 52-59. 1838.
Devonian. Pennsylvania. Exact syn. Olive slate.
- Number VIII, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 91, 146. 1840.
Devonian. Pennsylvania. Exact syn. Olive slate.
- Number VIII, Chance. 2d Pa. Geol. Surv., Rept. G⁴, pp. 105-106. 1880.
Devonian. Pennsylvania. Includes Chemung and Portage.
- Number VIII, Stevenson. 2d Pa. Geol. Surv., Rept. T², pp. 75-84. 1882.
Devonian. Pennsylvania. Includes Chemung, Portage, Genesee, Hamilton, and Marcellus.

- Number VIII, D'Invilliers. 2d Pa. Geol. Surv., Rept. F⁴, pp. 45-50. 1891.
Devonian. Pennsylvania. Includes Chemung, Portage, Genesee, Hamilton, and Marcellus.
- Number VIIIA**, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1143-1193. 1892.
Devonian. Pennsylvania. Includes Upper Helderberg, Onondaga, and Corniferous limestones.
- Number VIIIB**, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1194-1236. 1892.
Devonian. Pennsylvania. Exact syn. Marcellus, black shale.
- Number VIIIC**, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1236-1307. 1892.
Devonian. Pennsylvania. Exact syn. Hamilton.
- Number VIID**, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1307-1322. 1892.
Devonian. Pennsylvania. Exact syn. Tully limestone.
- Number VIIIE**, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1323-1335. 1892.
Devonian. Pennsylvania. Exact syns. Genesee black slate, Cadent Upper black slate.
- Number VIIIF**, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1337-1370. 1892.
Devonian. Pennsylvania. Includes Cashaqua shale and Gardeau shale. Exact syn. Portage.
- Number VIIIG**, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1371-1566. 1892.
Devonian. Pennsylvania. Exact syn. Chemung.
- Number IX**, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 59-63. 1838.
Devonian. Pennsylvania.
- Number IX, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 97, 147. 1840.
Devonian. Pennsylvania.
- Number IX, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1567-1627. 1892.
Devonian. Pennsylvania. Exact syn. Catskill.
- Number X**, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 63-65. 1838.
Carboniferous. Pennsylvania.
- Number X, Rogers. Pa. State Geol., 4th Ann. Rept., p. 98. 1840.
Carboniferous. Pennsylvania.
- Number X, Platt. 2d Pa. Geol. Surv., Rept. H⁴, p. 311. 1878.
Carboniferous. Pennsylvania. Exact syns. Pocono-Verpertine.
- Number X, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, pp. 1629-1789. 1895.
Carboniferous. Pennsylvania. Exact syn. Pocono formation.
- Number XI**, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 65-68. 1838.
Carboniferous. Pennsylvania.
- Number XI, Rogers. Pa. State Geol., 4th Ann. Rept., p. 98 et seq. 1840.
Carboniferous. Pennsylvania.
- Number XI, Platt. 2d Pa. Geol. Surv., Rept. H⁴, p. 311. 1878.
Carboniferous. Pennsylvania. Exact syns. Mauch Chunk red shale, Umbral.
- Number XI, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, pp. 1805-1853. 1895.
Carboniferous. Pennsylvania. Exact syns. Mauch Chunk red shale, Umbral.
- Number XII**, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 68-71. 1838.
Carboniferous. Pennsylvania.
- Number XII, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 123-132, 199. 1840.
Carboniferous. Pennsylvania.
- Number XII, Lesley. 2d Pa. Geol. Surv., Rept. I, pp. 63-66. 1875.
Carboniferous. Pennsylvania and Ohio.
- Number XII, White. 2d Pa. Geol. Surv., Rept. Q², pp. 51-70. 1877.
Carboniferous. Pennsylvania. Includes Piedmont or Tionesta sandstone, Mercer limestone, Connoquenessing sandstone, and Quakertown shale.
- Number XII, Platt. 2d Pa. Geol. Surv., Rept. H⁴, p. 310. 1878.
Carboniferous. Pennsylvania. Exact syn. Pottsville conglomerate.

- Number XII, Chance. 2d Pa. Geol. Surv., Rept. G⁴, pp. 91-95. 1880.
Carboniferous. Pennsylvania.
- Number XII, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, pp. 1857-1915. 1895.
Carboniferous. Pennsylvania. Includes Homewood or Johnson Run sandstone, Connoquenessing or Kinzua sandstone, and Sharon, Olean or Garland conglomerate. Exact syns. Pottsville conglomerate, Seral conglomerate.
- Number XII, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2155-2405. 1895.
Carboniferous. Pennsylvania. Exact syn. Lower Productive Measures, Allegheny River series.
- Number XII, Smith. 2d Pa. Geol. Surv., Final Rept., vol. ii, pt. i, pp. 1853-1855, 1920-1923, 1949-1951, 1953, 1959, 1966, 1975, 1984, 2000, 2009, 2025, 2031-2032, 2050, 2054. 1895.
Carboniferous. Pennsylvania. Exact syn. Pottsville conglomerate.
- Number XIII**, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 71-79. 1838.
Carboniferous. Pennsylvania. Exact syn. Anthracite Coal Measures.
- Number XIII, Rogers. Pa. State Geol., 3d Ann. Rept., pp. 82-87. 1839.
Carboniferous. Pennsylvania. Included in Coal Measures.
- Number XIV**, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2406-2447. 1895.
Carboniferous. Pennsylvania. Exact syns. Barren Measures, Pittsburg series, and Elk River series of West Virginia.
- Number XV**, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2448-2564. 1895.
Carboniferous. Pennsylvania. Exact syns. Upper Productive or Monongahela River series.
- Number XVI**, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2565-2588. 1895.
Carboniferous. Pennsylvania. Includes Greene Co. group and Washington Co. group. Exact syns. Upper Barren Measures, and Permo-Carboniferous or Dunkard Creek series.
- Nummulite limestone**, Lyell. Am. Jour. Sci., 2d ser., vol. iv, pp. 186-191. 1847.
Eocene. Alabama. Exact syn. Orbitolite limestone.
- Nunda group**, Vanuxem. Geol. of N. Y., pt. iii, p. 172. 1842.
Paleozoic. New York. Included in New York system. Exact syn. Portage group.
- Nunda group**, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 224-241. 1843.
Paleozoic. New York. Included in New York system. Exact syn. Portage group.
- Nushagak beds**, Spurr. U. S. Geol. Surv., 20th Ann. Rept., pt. vii, pp. 173-174, 184. 1900.
Tertiary. Alaska. Included in Neocene.
- Nussbaum formation**, Gilbert. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 36. 1897.
Colorado. Included in Neocene.
- Nussbaum formation**, Hills. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 58. 1899.
Colorado. Included in Neocene(?).
- Nussbaum formation**, Hills. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 68. 1900.
Colorado. Included in Neocene.
- Nutzotin series**, Brooks. U. S. Geol. Surv., 21st Ann. Rept., pt. ii, p. 359. 1900.
Alaska.

- Oak Creek** beds, Ward. U. S. Geol. Surv., 19th Ann. Rept., pt. ii, p. 593. 1899.
Cretaceous. South Dakota.
- Oak Creek** beds, Jenney. U. S. Geol. Surv., 19th Ann. Rept., pt. ii, pp. 568-587, 593. 1899.
Cretaceous. South Dakota. Included in Dakota group.
- Oak Grove** sands, Dale. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 340. 1898.
Tertiary. Florida.
- Oakland** limestone lentils, Diller. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 49. 1898.
Oregon. Included in Eocene.
- Oakville**, Dumble. Jour. of Geol., vol. ii, pp. 556-559. 1894.
Tertiary. Texas. Included in Miocene.
- Oakville** beds, Dall. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 339. 1898.
Tertiary. Texas. Included in Miocene. Part. syn. Fayette beds.
- Ocala** group, Dall. Wagner Free Inst. Sci., Trans., vol. iii, pt. ii, p. 209. 1892.
Eocene. Florida. Included in Later Eocene. Exact syn. Nummulite beds of Florida.
- Ocala** limestone, Dall and Harris. U. S. Geol. Surv., Bull. No. 84, p. 103. 1892.
Tertiary. Florida. Exact syn. Nummulitic beds.
- Oceanic** series, Hill. Harvard Coll. Mus. Comp. Zool., Bull., vol. xxxiv, pp. 69-85. 1899.
Tertiary. Jamaica. Included in Oligocene. Includes Cobre, Moneague, and Montpelier formations.
- Ocheesee** beds, Dall and Harris. U. S. Geol. Surv., Bull. No. 84, p. 105. 1892.
Tertiary. Florida. Included in Miocene, Chattahoochee group.
- Ocheesee** beds, Dall. Wagner Free Inst. Sci., Trans., vol. iii, pt. ii, p. 209. 1892.
Miocene. Florida. Included in Chipola epoch, Chattahoochee group. Part. syn. Chattahoochee group.
- Ocoee** conglomerate and slates, Safford. Geol. Recon. of the State of Tenn., 1st Rept., pp. 151-152. 1856.
Tennessee. Included in Metamorphic Rocks.
- Ocoee** conglomerate and slates, Safford. Geol. of Tenn., by Safford, pp. 183-198. 1869.
Silurian. Tennessee. Included in Potsdam group.
- Ocoee** group, Killebrew and Safford. Resources of Tennessee, pp. 28-29. 1874.
Silurian. Tennessee. Included in Potsdam period.
- Ocoee** group, Bradley. Am. Jour. Sci., 3d ser., vol. ix, p. 283. 1875.
Cambrian. Tennessee. Exact syn. Lower Potsdam (Acadian).
- Ocoee**, Little. Hand-book of Ga., Com. of Agric., 1876, p. 41. 1876.
Silurian. Georgia. Included in Lower Primordial. Part. syn. Acadian.
- Ocoee** conglomerate, Walcott. U. S. Geol. Surv., Bull. No. 81, pp. 143, 252, 299. 1891.
Cambrian. Appalachian region.
- Ocoee**, Spencer. Ga. Geol. Surv., The Paleozoic Group, p. 34. 1893.
Cambrian. Georgia. Included in Lower Cambrian(?).
- Ocoee** series, Hayes. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 20. 1895.
Algonkian(?). Tennessee. Includes Wilhite slate, Citico conglomerate, Pigeon slate, and Thunderhead conglomerate and slate.
- Ocoee** group, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 16, 25. 1895, 1896.
Algonkian(?). Tennessee, North Carolina. Includes Wilhite slate, Citico conglomerate, Pigeon slate, Cades conglomerate, Thunderhead conglomerate, Hazel slate, and Clingman conglomerate.

- Ocoee, Smith. Ala. Geol. Surv., Bull. No. 5, p. 110. 1896.
Algonkian. Alabama. Exact syn. Talladega.
- Ocoya Creek**, Turner. Am. Geol., vol. xiii, p. 239. 1894.
Tertiary. California. Included in Miocene.
- Ocoya Creek beds, Turner. U. S. Geol. Surv., 14th Ann. Rept., pt. ii, p. 461. 1894.
Tertiary. California. Included in Miocene.
- Odanaah** series, Tyrrell. Can. Geol. Surv., new ser., vol. v, pt. i, pp. 83E, 84E, 85E, 199 E, 212E-215E. 1893.
Cretaceous. British Columbia. Included in Pierre.
- Ogallala** formation, Darton. U. S. Geol. Surv., 19th Ann. Rept., pt. iv, pp. 734-735, 741-742. 1899.
Tertiary. Nebraska. Included in Pliocene(?).
- Ogden quartzite**, King. Am. Jour. Sci., 3d ser., vol. xi, p. 478. 1876.
Devonian. Nevada.
- Ogden quartzite, Emmons. U. S. Geol. Expl. of 40th Parallel, vol. ii, p. 343, et seq. 1877.
Devonian. Utah.
- Ogden quartzite, Hague. U. S. Geol. Expl. of 40th Parallel, vol. ii, p. 400. 1877.
Devonian. Utah.
- Ogden quartzite, King. U. S. Geol. Expl. of 40th Parallel, vol. i, pp. 127-248. 1878.
Devonian. Utah, Nevada.
- Ogden flint, Prosser. Geol. Soc. Am., Bull., vol. vi, p. 48. 1894.
Carboniferous, Permian. Kansas.
- Ogishke conglomerate**, Winchell. Minn. Geol. and Nat. Hist. Surv., 16th Ann. Rept., pp. 344-350, 359. 1888.
Minnesota.
- Ogishke conglomerate, Winchell. Am. Assoc. Adv. Sci., Proc., vol. xxxviii, p. 234. 1889.
Algonkian. Lake Superior region. Included in Vermilion series.
- Ogishke conglomerate, Grant. Am. Geol., vol. x, p. 4. 1892.
Archean. Minnesota.
- Ohio black slate**, Andrews. Ohio Geol. Surv., Rept. Prog., 1869, p. 62. 1870.
Ohio.
- Ohio shale, Shaler. Ky. Geol. Surv., new ser., vol. iii, pp. 169-175. 1877.
Devonian. Kentucky. Exact syns. Huron shale. Includes all from top of Oriskany to top of Chemung.
- Ohio shale, Orton. Rev. of Strat. Geol. of eastern Ohio, p. 4. 1880.
Devonian. Ohio. Exact syn. Black shale.
- Ohio shale, Orton. Ohio Geol. Surv., vol. vi, pp. 4, 23. 1888.
Carboniferous. Ohio. Includes Cleveland shale, Erie shale, and Huron shale.
- Ohio shale, Herrick. Denison Univ. Sci. Lab., Bull., vol. iii, p. 26. 1888.
Devonian. Ohio.
- Ohio shale, Orton. U. S. Geol. Surv., 8th Ann. Rept., pt. ii, p. 570. 1889.
Devonian. Ohio, Indiana. Includes Cleveland, Huron, and Erie shales.
- Ohio shale, Orton. Ohio Geol. Surv., Prelim. Rept. Petroleum and Inflammable Gas, pp. 23, 62. 1886.
Ohio.
- Ohio shale, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept., pp. 27-33, pp. 248-249. 1890.
Devonian. Ohio. Includes Cleveland shale, Erie shale, and Huron shale. Part. syn. Genesee slate, Portage and Chemung groups.
- Ohio shale, Orton. Ohio Geol. Surv., vol. vii, pp. 4, 21. 1893.
Devonian. Ohio. Includes Cleveland shale, Erie shale, and Huron shale.

- Ohio, Eldridge. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 9. 1894.
Cretaceous. Colorado.
- Ohio Creek, Cross. U. S. Geol. Surv., Mon., vol. xxvii, p. 219. 1896.
Cretaceous. Colorado. Part. syns. Arapahoe.
- Ohio shale, Bownocker. Denison Univ. Sci. Lab., Bull., vol. ii, art. ii, p. 14. 1898.
Ohio.
- Oil Creek Lake** group, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, p. 1767. 1895.
Carboniferous. Pennsylvania. Included in No. 10, Pocono. Includes Corry sandstone, 3d Mountain sandstone, Cussewago shale, limestone, and sandstone.
Exact syn. Berea group of Ohio.
- Oil Lake** group, White. 2d Pa. Geol. Surv., Rept. Q⁴, pp. 91-98. 1881.
Carboniferous. Pennsylvania. Includes Corry and Cussewago sandstone and shales. Exact syns. Berea grit, Pithole grit. Part. syn. Pocono.
- Oklune** series, Spurr. U. S. Geol. Surv., 20th Ann. Rept., pt. vii, pp. 163-169, 181. 1900.
Cretaceous. Alaska.
- Old Red** sandstone, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 278-283. 1843.
Paleozoic. New York. Includes Catskill group, Montrose and Oneonta sandstone, No. 11, Pennsylvania Survey.
- Old Red sandstone, Lesley. 2d Pa. Geol. Surv., Rept. I, pp. 97-102. 1875.
Devonian. Pennsylvania and New York. Exact syn. No. IX.
- Olean** conglomerate, Sub-, Carll. 2d Pa. Geol. Surv., Rept. I⁴, pp. 189-195. 1883.
Carboniferous. Pennsylvania. Exact syn. Shenango sandstone.
- Olean conglomerate, Ashburner. 2d Pa. Geol. Surv., Rept. R², pp. 396-397. 1885.
Carboniferous. Pennsylvania.
- Olean conglomerate, Sub-, Ashburner. 2d Pa. Geol. Surv., Rept. R², p. 402. 1885.
Carboniferous. Pennsylvania.
- Olean Conglomerate, Sub-, Carll. 2d Pa. Geol. Surv., Rept. I³, pp. 105-110. 1890.
Carboniferous, Pennsylvania. Included in Pocono. Exact syns. Shenango sandstone and Logan sandstone.
- Olean conglomerate, Randall. Regents Univ. of N. Y., 47th Ann. Rept., p. 715. 1894.
New York.
- Oleon, Sub-, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, p. 1733 et seq. 1895.
Carboniferous. Pennsylvania. Included in No. 10, Pocono.
- Olean conglomerate, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, pp. 1861, 1873, 1892. 1895.
Carboniferous. Pennsylvania. Included in No. 12, Pottsville conglomerate.
- Olentangy** shale, Winchell. Ohio Geol. Surv., vol. ii, pp. 243, 287. 1874.
Devonian. Ohio.
- Olentangy shale, Orton. Ohio Geol. Surv., vol. vi, pp. 4, 22. 1888.
Devonian. Exact syn. Hamilton shale (?).
- Olentangy shale, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept., pp. 26-27. 1890.
Devonian. Ohio. Exact syn. Hamilton shale.
- Olentangy shale, Orton. Ohio Geol. Surv., vol. vii, pp. 4, 20. 1893.
Devonian. Ohio. Exact syn. Hamilton shale.
- Oley Valley** slate, D'Invilliers. 2d Pa. Geol. Surv., Rept. D³, pt. ii, pp. 102-103. 1883.
Cambrian (?). Pennsylvania. Included in Potsdam (?).

- Olive shale**, Read. Ohio Geol. Surv., vol. iii, pp. 337, 523. 1878.
Carboniferous. Ohio. Included in Waverly.
- Oneida conglomerate**, Vanuxem. Geol. of N. Y., pt. iii, pp. 71-74. 1842.
Paleozoic. New York. Included in New York system. Includes Shawangunk conglomerate, Millstone grit, Gray band of Rochester, and No. 5, Pennsylvania Survey.
- Oneida conglomerate, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 31. 1843.
Paleozoic. New York. Included in New York system. Exact syn. Shawangunk conglomerate.
- Oneida conglomerate, Emmons. Agric. of N. Y., vol. i, pp. 125-126. 1846.
Silurian. New York. Included in Champlain division of New York system.
- Oneida conglomerate, Jewett. Am. Jour. Sci., 2d ser., vol. xxxviii, p. 121. 1864.
Silurian. New York.
- Oneida conglomerate, Cook. Geol. of N. J., pp. 146-149. 1868.
Silurian. New Jersey. Exact syn. Shawangunk conglomerate or grit.
- Oneida conglomerate, Newberry. Ohio Geol. Surv., vol. i, pt. i, p. 61. 1873.
Silurian. Ohio.
- Oneida, Ashburner. Am. Phil. Soc., Proc., vol. xvi, pp. 532, 558. 1877.
Silurian. Appalachian region. Part. syn. Levant in part.
- Oneida, Platt. 2d Pa. Geol. Surv., Rept. T, pp. 44-48. 1881.
Silurian. Pennsylvania. Included in No. 4.
- Oneida conglomerate, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, no. iv, p. 288. 1881.
Silurian. Included in Medina group.
- Oneida conglomerate, White. 2d Pa. Geol. Surv., Rept. G⁶, pp. 150-152. 1882.
Silurian. Pennsylvania. Included in No. 4, Medina.
- Oneida, White. 2d Pa. Geol. Surv., Rept. T³, pp. 143-147. 1885.
Silurian. Pennsylvania.
- Oneida conglomerate, White. N. Y. State Mus., 51st Ann. Rept., vol. i, p. r36. 1899.
Ordovician. New York.
- Oneonta sandstone**, Hall. N. Y. State Geol., Rept. for 1885, p. 11. 1886.
Devonian. New York.
- Oneonta sandstone, Prosser. Geol. Soc. Am., Bull., vol. iv, pp. 93, 108. 1893.
Devonian. New York. Included in Portage.
- Oneonta, Prosser. Am. Jour. Sci., 3d ser., vol. xlvi, pp. 213-215. 1893.
Devonian. New York.
- Oneonta formation, Darton. Am. Jour. Sci., 3d ser., vol. xlv, pp. 203-209. 1893.
Devonian. New York.
- Oneonta, Darton. N. Y. State Geol., 13th Ann. Rept., pp. 238-240. 1894.
Devonian. New York.
- Oneonta, Clarke. N. Y. State Geol., 13th Ann. Rept., p. 557. 1894.
Devonian. New York. Exact syn. Portage.
- Oneonta sandstones, Clarke. N. Y. State Geol., 15th Ann. Rept., pp. 27-82. 1897.
Devonian. New York.
- Oneota limestone**, McGee. U. S. Geol. Surv., 11th Ann. Rept., pt. i, p. 331. 1891.
Silurian. Iowa.
- Oneota limestone, Hall. Geol. Soc. Am., Bull., vol. iii, p. 464. 1892.
Ordovician. Minnesota. Exact syn. Lower Magnesian.
- Oneota, Hall and Sardeson. Geol. Soc. Am., Bull., vol. iii, p. 341. 1892.
Ordovician (?). Minnesota. Included in Magnesian series.
- Oneota, Keyes. Iowa Geol. Surv., vol. i, pp. 21-24. 1893.
Silurian. Iowa. Included in Lower Silurian. Exact syn. Lower Magnesian limestone.

- Oneota, Hall and Sardeson. Geol. Soc. Am., Bull., vol. vi, pp. 167, 176. 1895.
Upper Cambrian. Minnesota. Included in Magnesian series.
- Oneota limestone, Norton. Iowa Geol. Surv., vol. iii, pp. 182-184. 1895.
Silurian. Iowa.
- Oneota limestone, Calvin. Iowa Geol. Surv., vol. iv, pp. 61-68. 1895.
Silurian. Iowa. Included in Ordovician. Exact syns. Lower Magnesian limestone, Calciferous.
- Onondaga** group, Hall. N. Y. Geol. Surv., 3d Ann. Rept., pp. 290-293, 304. 1839.
Silurian. New York.
- Onondaga limestone, Hall. N. Y. Geol. Surv., 3d Ann. Rept., pp. 309-310. 1839.
Devonian. New York. Exact syn. Gray crinoidal limestone.
- Onondaga salt group, Vanuxem. N. Y. Geol. Surv., 4th Ann. Rept., pp. 375-376. 1840.
Silurian. New York.
- Onondaga limestone, Hall. N. Y. Geol. Surv., 4th Ann. Rept., pp. 418-420, 427. 1840.
Devonian. New York.
- Onondaga limestone, Hall. N. Y. Geol. Surv., 5th Ann. Rept., pp. 156-158. 1841.
New York.
- Onondaga salt group, Mather. N. Y. Geol. Surv., 5th Ann. Rept., pp. 89-90. 1841.
Silurian. New York.
- Onondaga salt group, Hall. Am. Jour. Sci., 1st ser., vol. xlii, p. 58. 1842.
New York.
- Onondaga system, Conrad. Phil. Acad. Nat. Sci., Jour., vol. viii, pp. 233-234. 1842.
Includes Upper Silurian.
- Onondaga limestone, Vanuxem. Geol. of N. Y., pt. iii, pp. 132-138. 1842.
Paleozoic. New York. Included in New York system. Includes Gray sparry limestone.
- Onondaga salt group, Vanuxem. Geol. of N. Y., pt. iii, pp. 94-110. 1842.
Paleozoic. New York. Included in New York system. Includes Calciferous slate, Second graywacke with shell lime rock of Eaton.
- Onondaga salt group, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 117-140. 1843.
Paleozoic. New York. Included in New York system. Includes Calciferous slate, Second graywacke with shell lime rock of Eaton. Gypseous marls and slates.
- Onondaga limestone, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 151-157. 1843.
Paleozoic. New York. Included in New York system. Corniferous lime rock. Includes Gray sparry limestone.
- Onondaga limestone, Mather. Geol. of N. Y., pt. i, p. 339. 1843.
Paleozoic. New York. Included in Helderberg division.
- Onondaga salt group, Owen. Am. Jour. Sci., 2d ser., vol. i, pp. 43, 57. 1846.
Silurian. New York. Included in Helderberg series (or division) of the New York system. Includes Magnesian deposits and Vermicular lime rock.
- Onondaga salt group, Emmons. Agric. of N. Y., vol. i, pp. 153-166. 1846.
New York. Included in Helderberg division of New York system. Includes Manlius water-lime group.
- Onondaga limestone, Emmons. Agric. of N. Y., vol. i, pp. 174-179. 1846.
New York. Included in Helderberg division of New York system. Includes Selenurus limerock, Seneca limestone, and Corniferous limestone.
- Onondaga salt group, Hall. Pal. of New York, vol. ii, p. 339. 1852.
Silurian. New York.
- Onondaga limestone, Meek. Mo. Geol.-Surv., 1st and 2d Ann. Repts., pt. ii, p. 103. 1855.
Devonian. Missouri.

- Onondaga limestone, Swallow. Mo. Geol. Surv., 1st and 2d Ann. Repts., pp. 107, 178, 196. 1855.
Devonian. Missouri.
- Onondaga salt group, Hall. Iowa Geol. Surv., vol. i, pt. i, pp. 76-80. 1858.
Silurian. Iowa.
- Onondaga salt group, Hall and Whitney. Am. Jour. Sci., 2d ser., vol. xxvii, p. 112. 1859.
Silurian. Iowa.
- Onondaga formation, Logan. Can. Geol. Surv., Rept. 1843-63, pp. 345-352. 1863.
Upper Silurian. Canada.
- Onondaga formation, Chapman. Can. Inst., new ser., vol. viii, pp. 437-439. 1863.
Silurian. Canada. Included in Upper Silurian.
- Onondaga group, Worthen. Ill. Geol. Surv., vol. iii, pp. 23-24, 39-40, 62-63. 1868.
Devonian. Illinois.
- Onondaga limestone, Cook. Geol. of N. J., pp. 165-166. 1868.
Devonian. New Jersey.
- Onondaga, Winchell. Am. Assoc. Adv. Sci., Proc., vol. xxii, p. 103. 1873.
Devonian. Ohio.
- Onondaga, Winchell. Ohio Geol. Surv., vol. ii, p. 340. 1874.
Devonian. Ohio. Included in Corniferous.
- Onondaga limestone, Broadhead. Mo. Geol. Surv., Rept. 1873-1874, p. 27. 1874.
Devonian. Missouri.
- Onondaga, Ashburner. Am. Phil. Soc., Proc., vol. xvi, pp. 530, 555. 1877.
Silurian. Appalachian region. Exact syns. Salina and Scalent.
- Onondaga salt group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, no. iv, pp. 290, 291. 1881.
Silurian.
- Onondaga group, Englemann and Worthen. Econ. Geol. of Ill., vol. i, pp. 461-462. 1882.
Silurian (?). Illinois.
- Onondaga salt, Hall. Am. Assoc. Adv. Sci., Proc., vol. xxxi, p. 47. 1883.
Silurian. Eastern United States.
- Onondaga, Claypole. Am. Phil. Soc., Proc., vol. xxi, p. 497. 1884.
Silurian. Pennsylvania. Exact syn. Gypseous group.
- Onondaga, White. 2d Pa. Geol. Surv., Rept. T³, pp. 128-131. 1885.
Silurian. Pennsylvania. Exact syn. Salina.
- Onondaga, Claypole. 2d Pa. Geol. Surv., Rept. F², pp. 52-58. 1885.
Silurian. Pennsylvania. Includes Bridgeport sandstone.
- Onondaga group, Miller. N. A. Geol. and Pal., p. 54. 1889.
- Onondaga salt group, Hopkins. Ark. Geol. Surv., 1890, vol. iv, p. 52. 1890.
Silurian. Arkansas. Part. syn. Salina.
- Onondaga limestone, Hopkins. Ark. Geol. Surv., 1890, vol. iv, pp. 52, 53. 1890.
Devonian. Arkansas.
- Onondaga salt group, Prosser. Roch. Acad. Sci., Proc., vol. ii, pp. 50-124. 1892.
Silurian. New York.
- Onondaga limestone, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, p. 1143 et seq. 1892.
Devonian. Pennsylvania. Included in No. 8a.
- Onondaga, Brumell. Geol. Soc. Am., Bull., vol. iv, pp. 227, 230. 1893.
Silurian. Ontario.
- Onondaga salt group, Prosser. Geol. Soc. Am., Bull., vol. iv, pp. 97, 108, 116. 1893.
Upper Silurian. New York.

- Onondaga limestone, Darton. N. Y. State Geol., 13th Ann. Rept., pp. 203, 207-208, 242-243, 301. 1894.
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Silurian. Pennsylvania. Includes Cauda-galli and Schoharie grits, and Upper Helderberg or Corniferous. Cliff limestone in part.

Poteau stage, Stevenson. N. Y. Acad. Sci., Trans., vol. xv, p. 51. 1896.

Carboniferous. Arkansas.

Poteau group, Drake. Am. Phil. Soc., Proc., vol. xxxvi, p. 378. 1897.

Carboniferous. Indian Territory. Included in Upper Coal Measures.

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Cretaceous. Maryland.

Potomac formation, McGee. Am. Jour. Sci., 3d ser., vol. xxxv, pp. 126-143. 1888.

Cretaceous. Atlantic Coastal region.

Potomac formation, Ward. Am. Jour. Sci., 3d ser., vol. xxxvi, pp. 119-131. 1888.

Jurassic(?). Atlantic Coastal Plain.

Potomac, Fontaine. U. S. Geol. Surv., Mon., vol. xv, pp. 33-62. 1889.

Cretaceous. Atlantic Coastal Plain.

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Mesozoic. Virginia, Maryland.

Potomac, White. U. S. Geol. Surv., Bull. No. 82, pp. 89, 251. 1891.

Cretaceous. Atlantic coast.

Potomac, McGee. Smithsonian Inst., Rept. 1890, p. 73. 1891.

Cretaceous. District of Columbia.

Potomac, Darton. U. S. Geol. Surv., Baltimore, Md., Geologic sheet. 1892.

Cretaceous. Maryland.

Potomac, Uhler. Md. Acad. Sci., Trans., vol. i, p. 194. 1892.

Cretaceous. Maryland.

Potomac, McGee, Williams and Darton. Int. Cong. of Geol., 5th Sess., pp. 237-239, 248. 1893.

Cretaceous. Maryland, District of Columbia, and Virginia.

- Potomac, Williams and Clark. Maryland; Its Resources, Industries, and Institutions, pp. 74-75. 1893.
Cretaceous. Maryland. Included in Lower Cretaceous.
- Potomac, Darton. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 13, 23. 1894, 1896.
Cretaceous. Virginia and Maryland.
- Potomac, Ward. U. S. Geol. Surv., 15th Ann. Rept., p. 318. 1895.
Cretaceous. Atlantic Coastal Plains. Includes James River series, Rappahannock, Mount Vernon, Aquia Creek, Iron ore, and Albirupean series.
- Potomac formation, Bibbins. Johns Hopkins Univ. Circ., vol. xv, pp. 17-18. 1895.
Mesozoic. Maryland.
- Potomac, Darton. U. S. Geol. Surv., Bull. No. 138, pp. 125, 162. 1896.
Cretaceous. Atlantic Coastal Plain.
- Potomac, Hollick. Science, new ser., vol. iv, p. 571. 1896.
Cretaceous. Rhode Island and Maryland.
- Potomac, Ward. Science, new ser., vol. iv, pp. 757-760. 1896.
Cretaceous. Atlantic Coastal Plain.
- Potomac, Gilbert. Science, new ser., vol. iv, pp. 875. 1896.
Cretaceous. Atlantic Coastal Plain.
- Potomac, Marcou. Science, new ser., vol. iv, p. 945. 1896.
Juratrias, Cretaceous. Atlantic Coastal Plain.
- Potomac, Hill. Science, new ser.; vol. iv, p. 918. 1896.
Cretaceous. Atlantic Coastal Plain, Texas.
- Potomac, Fontaine. U. S. Geol. Surv., Bull. 145. 1896.
Cretaceous. Virginia. Exact syn. Neocomian.
- Potomac, Marsh. Science, new ser., vol. iv, p. 805. 1896.
Cretaceous. Atlantic Coastal Plain.
- Potomac, Marsh. Am. Jour. Sci., 4th ser., vol. ii, pp. 436-437. 1896.
Maryland. Part. syn. Alantosaurus.
- Potomac group, Clark. Md. Geol. Surv., vol. i, p. 156. 1897.
Cretaceous, Jurassic(?). Maryland. Includes Raritan, Patapsco, Arundel, and Patuxent.
- Potomac formation, Stanton. Jour. of Geol., vol. v, pp. 587-592. 1897.
Cretaceous. Included in Lower Cretaceous.
- Potomac marble, Hopkins. Ark. Geol. Surv., 1890, vol. iv, p. 56. 1890.
Triassic. Arkansas.
- Potomac marble, Clark. Md. Geol. Surv., vol. ii, p. 171. 1898.
Triassic. Maryland. Included in Red beds, Newark formation. Exact syns. Potomac breccia, and Calico rock.
- Potosi limestone**, Keyes. Mo. Geol. Surv., vol. vi, p. 331. 1894.
Cambrian. Missouri. Included in St. François limestone, Ozark series. Part. syns. Jefferson City limestone and Moreau sandstone.
- Potosi limestone, Winslow. U. S. Geol. Surv., Bull. No. 132, p. 17. 1896.
Missouri.
- Potosi rhyolite series, Cross. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 57. 1899.
Tertiary. Colorado.
- Potsdam sandstone**, Emmons. N. Y. Geol. Surv., 2d Ann. Rept., pp. 214-215. 1838.
Cambrian. New York.
- Potsdam sandstone, Mather. N. Y. Geol. Surv., 5th Ann. Rept., pp. 101-103. 1841.
Cambrian. New York.
- Potsdam, Conrad. Phil. Acad. Nat. Sci., Jour., vol. viii, p. 230. 1842.
Lower Silurian.

Potsdam sandstone, Emmons. Geol. of N. Y., pt. ii, pp. 102-105, 177, 266, 331, 360, 377. 1842.

Paleozoic. New York. Included in New York Transition system, Champlain group.

Potsdam sandstone, Vanuxem. Geol. of N. Y., pt. iii, pp. 28-29. 1842.

Paleozoic. New York. Included in New York system. Includes Potsdam and Keeseville sandstone, No. 1, Pennsylvania Survey.

Potsdam sandstone, Mather. Geol. of N. Y., pt. i, pp. 418-421. 1843.

Paleozoic. New York. Included in Champlain division.

Potsdam sandstone, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 27. 1843.

Paleozoic. New York. Included in New York system. Exact syn. No. 1, Pennsylvania Survey.

Potsdam sandstone, Emmons. Agric. of N. Y., vol. i, pp. 117-118. 1846.

New York. Included in Champlain division of New York system.

Potsdam sandstone, Murray. Can. Geol. Surv., Rept. of Prog., pp. 1847-48. 1849. Ontario.

Potsdam sandstones, Foster and Whitney. Rept. on Geol. of Lake Superior dist., pt. ii, p. 113, Special Sess., Mar. 1851. Ex. Doc. No. 4. 1851.

Lake Superior region.

Potsdam sandstone, Foster and Whitney. Am. Jour. Sci., 2d ser., vol. xvii, p. 29. Abstract. 1854.

Silurian. Michigan.

Potsdam sandstone, Hall. Iowa Geol. Surv., vol. i, pt. i, pp. 47-49. 1858.

Cambrian. Iowa.

Potsdam sandstone, Whitney. Iowa Geol. Surv., vol. i, pt. i, pp. 328-331. 1858.

Cambrian, Iowa.

Potsdam sandstone, Shumard. Am. Jour. Sci., 2d ser., vol. xxxii, p. 216. 1861.

Silurian. Texas.

Potsdam, Hall. Am. Jour. Sci., 2d ser., vol. xxxi, p. 222. 1861.

Vermont.

Potsdam sandstone, Hayden. Am. Jour. Sci., 2d ser., vol. xxxi, p. 233. 1861.

Silurian. South Dakota.

Potsdam sandstone, Marcou. Boston. Soc. Nat. Hist., Proc., vol. viii, 1861-62, pp. 241-242. 1861.

Vermont and Canada. Included in Upper Taconic of Marcou.

Potsdam sandstone, Hitchcock. Geol. of Vt., vol. i, pp. 264-266. 1861.

Paleozoic. Vermont. Included in Potsdam period.

Potsdam sandstone, Whitney. Rept. on Upper Mississippi Lead region, p. 140. 1862.

Cambrian. Wisconsin. Exact syn. Lower sandstone.

Potsdam, Billings. Am. Jour. Sci., 2d ser., vol. xxxii, pp. 100-105. 1862.

Silurian. Vermont.

Potsdam sandstone, Hayden. Am. Jour. Sci., 2d ser., vol. xxxiii, pp. 68-79. 1862.

Silurian. South Dakota.

Potsdam sandstone, Hayden. Am. Phil. Soc., Trans., new ser., vol. xii, pp. 36-38. 1863.

Cambrian. Black Hills. Included in Lower Silurian.

Potsdam, Hall. Regents Univ. of N. Y., 16th Ann. Rept., pp. 210-220. 1863.

Silurian. Lake Superior region, Mississippi Valley. Included in Lower Silurian.

Includes Lower sandstone of Upper Mississippi Valley, Second sandstone, Third Magnesian limestone, Third sandstone, and Fourth Magnesian limestone of Missouri.

Potsdam group, Chapman. Can. Inst., new ser., vol. viii, pp. 186-190. 1863.

Cambrian. Canada. Included in Lower Silurian. Includes Beauharnois and Kaminstiquia formations.

- Potsdam group, Logan. Can. Geol. Surv., Rept., 1843-63, pp. 87-109. 1863.
Cambrian. Canada. Included in Lower Silurian.
- Potsdam sandstone, Winchell. Am. Jour. Sci., 2d ser., vol. xxxvii, pp. 226-232. 1864.
Silurian. Wisconsin.
- Potsdam, Buckley. Prelim. Rept. on Geol. of Texas, pp. 16-22. 1866.
Cambrian. Texas.
- Potsdam sandstone, Cook. Geol. of N. J., pp. 71-89. 1868.
Cambrian. New Jersey.
- Potsdam sandstone, Perry. Am. Jour. Sci., 2d ser., vol. xlvii, p. 344. 1869.
Silurian. Vermont.
- Potsdam group, Safford. Geol. of Tenn., by Safford, pp. 182-226. 1869.
Silurian. Tennessee. Included in Lower Silurian. Includes Ocoee conglomerate and slates, Chilhowee sandstone, and Knox group.
- Potsdam sandstone, White. Iowa Geol. Surv., vol. i, pp. 171-172. 1870.
Cambrian. Iowa. Included in Primordial group of Lower Silurian.
- Potsdam group, Richardson. Can. Geol. Surv., Rept., 1866-69, pp. 120-130. 1871.
Cambrian. Canada. Included in Lower Silurian.
- Potsdam sandstone, Brooks. Am. Jour. Sci., 3d ser., vol. iv, pp. 22-26. 1872.
Cambrian. New York.
- Potsdam sandstone, Irving. Wis. Acad. Sci., Trans., vol. i-ii, 1870-72, pp. 129-137. 1872.
Wisconsin.
- Potsdam sandstone, Eaton. Wis. Acad. Sci., Trans., vol. i-ii, 1870-72, p. 125. 1872.
Wisconsin.
- Potsdam sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., Ann. Rept., 1872, pp. 68-80. 1873.
Silurian. Minnesota.
- Potsdam, Lower, Ford. Am. Jour. Sci., 3d ser., vol. vi, p. 134. 1873.
Cambrian. New York. Exact syn. Olenellus or Georgia slates of Vermont, Olenellus limestones, and Labrador.
- Potsdam sandstone, Eaton. Am. Jour. Sci., 3d ser., vol. v, p. 446. 1873.
Cambrian. Wisconsin.
- Potsdam, Newberry. Ohio Geol. Surv., vol. i, pt. i, pp. 58, 112. 1873.
Silurian. Ohio.
- Potsdam sandstone, Winchell. Rept. of a Recon. of the Black Hills by Capt. Ludlow, pp. 63-64. 1875.
Cambrian. South Dakota.
- Potsdam sandstone, Irving. Am. Jour. Sci., 3d ser., vol. ix, p. 441. 1875.
Cambrian. Wisconsin. Included in Primordial.
- Potsdam sandstone, Fontaine. Am. Jour. Sci., 3d ser., vol. ix, pp. 367-368, 419-421, 424. 1875.
Cambrian. Virginia.
- Potsdam, Prime. 2d Pa. Geol. Surv., Rept. D, pp. 5-7. 1875.
Cambrian. Pennsylvania. Exact syn. No. 1.
- Potsdam, Hotchkiss. A Geogr. and Political Summary of Virginia, p. 22. 1876.
Cambrian and Lower Silurian. Virginia. Exact syns. Primal, Formation No. i, Rogers.
- Potsdam, Smith. Ala. Geol. Surv., Rept., 1875, pp. 13, 132, 173. 1876.
Cambrian. Alabama.
- Potsdam sandstone, Chamberlin. Geol. of Wis., vol. ii, pp. 257-267. 1877.
Lower Silurian. Wisconsin. Includes Madison sandstone and Mendota limestone.
- Potsdam, Prime. Am. Phil. Soc., Proc., vol. xvi, p. 248. 1877.
Pennsylvania. Exact syn. No. 1.

- Potsdam, Emmons. U. S. Geol. Expl. of 40th Parallel, vol. ii, p. 343 et seq. 1877.
Cambrian. Utah.
- Potsdam sandstone, Prime. Am. Jour. Sci., 3d ser., vol. xv, p. 262. 1878.
Cambrian. Pennsylvania.
- Potsdam, Prime. 2d Pa. Geol. Surv., Rept. D², pp. 7-10. 1878.
Cambrian. Pennsylvania. Exact syn. No. 1.
- Potsdam, Endlich. U. S. Geol. and Geog. Surv. of Terr., 11th Ann. Rept., pp. 70,
101, 118. 1879.
Silurian. Wyoming.
- Potsdam sandstone, Wadsworth. Harvard Coll. Mus. Comp. Zool., Bull., vol. vii,
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- Potsdam sandstone, Newton. Geol. of Black Hills, pp. 80-107. 1880.
Cambrian. South Dakota.
- Potsdam sandstone, Strong. Geol. of Wis., vol. iii, pp. 395-397. 1880.
Cambrian. Wisconsin. Includes Madison sandstone and Mendota limestone.
- Potsdam sandstone, Whittlesey. Geol. of Wis., vol. iii, p. 220. 1880.
Cambrian. Wisconsin.
- Potsdam, Hall. 2d Pa. Geol. Surv., Rept. C⁶, pp. 38-46. 1881.
Cambrian. Pennsylvania. Exact syn. Rogers's Primal.
- Potsdam group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, no. iv, p. 267. 1881.
Ordovician.
- Potsdam, Platt. 2d Pa. Geol. Surv., Rept. T, p. 51. 1881.
Cambrian. Pennsylvania.
- Potsdam sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., 10th Ann. Rept.,
pp. 123-136. 1882.
Minnesota.
- Potsdam sandstone, Wooster. Geol. of Wis., vol. iv, pp. 109-123. 1882.
Cambrian. Wisconsin.
- Potsdam sandstone, Strong. Geol. of Wis., vol. iv, pp. 38-64. 1882.
Cambrian. Wisconsin.
- Potsdam, Selwyn. Science, vol. i, p. 11. 1883.
Cambrian. Canada.
- Potsdam, Lesley. 2d Pa. Geol. Surv., Rept. C⁴, pp. 144-160. 1883.
Cambrian. Pennsylvania. Exact syn. Primal slate of Rogers.
- Potsdam, D'Invilliers. 2d Pa. Geol. Surv., Rept. D³, pt. ii, pp. 99-136. 1883.
Cambrian. Pennsylvania. Exact syn. No. 1.
- Potsdam, Prime. 2d Pa. Geol. Surv., Rept. D³, pt. i, pp. 205-214. 1883.
Cambrian. Pennsylvania. Exact syn. No. 1.
- Potsdam, Chamberlin. Geol. of Wis., vol. i, p. 119. 1883.
Cambrian. Wisconsin.
- Potsdam quartzite, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i,
p. 537. 1884.
Minnesota.
- Potsdam quartzite, Upham. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i,
p. 572. 1884.
Minnesota.
- Potsdam group, Campbell. The Virginias, vol. vi, p. 99. 1885.
Cambrian. Virginia.
- Potsdam group, Campbell. Am. Jour. Sci., 3d ser., vol. xxix, pp. 470-474. 1885.
Cambrian. Virginia.
- Potsdam, Dwight. Am. Jour. Sci., 3d ser., vol. xxxi, pp. 125-132. 1886.
Cambrian. New York.

- Potsdam, Dwight. *Am. Assoc. Adv. Sci., Proc.*, vol. xxxiv, p. 204. 1886.
Cambrian. New York.
- Potsdam sandstone, Upham. *Minn. Geol. and Nat. Hist. Surv., Final Rept.*, vol. ii, pp. 117, 157. 1888.
Cambrian. Minnesota.
- Potsdamic, Hitchcock. *Boston Soc. Nat. Hist., Proc.*, vol. xxiv, 1888-90, p. 37. 1888.
- Potsdam group, Miller. *N. A. Geol. and Pal.*, p. 29. 1889.
- Potsdam, Winchell. *Minn. Geol. and Nat. Hist. Surv.*, 17th Ann. Rept., pp. 49-56. 1889.
Minnesota.
- Potsdam sandstone, Hall. *Minn. Acad. Nat. Sci., Bull.*, vol. iii, p. 135. 1889.
Cambrian. Minnesota.
- Potsdam, Walcott. *U. S. Geol. Surv., Bull. No. 87*, pp. 113, 180, 202, 214, 217, 244. 1891.
Cambrian. Lake Superior, Rocky Mts., Texas, Appalachian region. Included in Upper Cambrian.
- Potsdam sandstone, McGee. *U. S. Geol. Surv.*, 11th Ann. Rept., pt. i, p. 333. 1891.
Cambrian. Iowa.
- Potsdam sandstone, Hall and Sardeson. *Geol. Soc. Am., Bull.*, vol. iii, p. 335. 1892.
Cambrian. Minnesota. Included in Upper Cambrian.
- Potsdam, Prosser. *Geol. Soc. Am., Bull.*, vol. iv, pp. 108, 110. 1893.
Cambrian. New York.
- Potsdam sandstone, Darton. *N. Y. State Geol.*, 13th Ann. Rept., pp. 410-417. 1894.
Cambrian. New York.
- Potsdam sandstone, Cushing. *N. Y. State Geol.*, 13th Ann. Rept., pp. 478-479. 1894.
Cambrian. New York.
- Potsdam, Cushing. *Geol. Soc. Am., Bull.*, vol. vi, p. 287. 1895.
Cambrian. New York.
- Potsdam, Udden. *U. S. Geol. Surv.*, 17th Ann. Rept., pt. ii, p. 839. 1896.
Cambrian. Illinois.
- Potsdam sandstone, Cushing. *N. Y. State Geol.*, 15th Ann. Rept., vol. i, p. 510. 1897.
Cambrian. New York.
- Potsdam sandstone, Buckley. *Wis. Geol. and Nat. Hist. Surv., Bull. No. 4, Econ. ser.*, No. ii, pp. 167-248. 1898.
Cambrian. Wisconsin.
- Potsdam sandstone, Wadsworth. *Am. Inst. Mg. Engrs., Trans.*, vol. xxvii, p. 683. 1898.
Cambrian. Lake Superior region.
- Potsdam formation, Walcott. *Geol. Soc. Am., Bull.*, vol. x, p. 225. 1899.
Cambrian. Wisconsin.
- Potsdam sandstone, Salisbury and Atwood. *Wis. Geol. and Nat. Hist. Surv., Bull. No. 5, Ed. ser.*, no. i, pp. 27-31. 1900.
Cambrian. Wisconsin.
- Pottawatomie** formation, Haworth. *Kan. Univ. Geol. Surv.*, vol. iii, pp. 92-93, 94. 1898.
Carboniferous. Kansas. Included in Upper Coal Measures. Includes Garnett limestones, Lane shales, Iowa limestones, Thayer shales, and Erie limestone.
- Potters Clay** formation, Rogers. *N. J. Geol. Surv., Final Rept.*, pp. 179-186. 1840.
Cretaceous. New Jersey.
- Pottery** shale, Wheeler. *Mo. Geol. Surv.*, vol. ix, Sheet Rept., No. 2, p. 65. 1896.
Carboniferous. Missouri. Included in Coal Measures.
- Pottstown** shale, Lyman. *2d Pa. Geol. Surv., Final Rept.*, vol. iii, pt. ii, pp. 2607-2608. 1895.
Juratrias. Pennsylvania. Included in New Red.

Pottsville conglomerate, Ashburner. Am. Phil. Soc., Proc., vol. xvi, pp. 520, 535. 1877.

Carboniferous. Pennsylvania. Included in Piedmont sandstone, Kanawha River coal series. Exact syns. Seral, Millstone grit.

Pottsville conglomerate, Stevenson. 2d Pa. Geol. Surv., Rept. K², pp. 91-95. 1877.

Carboniferous. Pennsylvania. Exact syn. Seral.

Pottsville conglomerate, Platt. 2d Pa. Geol. Surv., Rept. H², pp. xxiv-xxvi. 1877.

Pottsville conglomerate, Stevenson. 2d Pa. Geol. Surv., Rept. K³, pp. 44-46. 1878.

Carboniferous. Pennsylvania. Exact. syn. Seral.

Pottsville conglomerate, Ashburner. 2d Pa. Geol. Surv., Rept. F, pp. 191-194. 1878.

Carboniferous. Pennsylvania. Exact. syn. Seral conglomerate.

Pottsville conglomerate, Chance. 2d Pa. Geol. Surv., Rept. V, pp. 31-34. 1879.

Carboniferous. Pennsylvania. Includes Homewood sandstone, Mercer group, Connoquenessing sandstone. Exact syn. No. 12.

Pottsville, Chance. 2d Pa. Geol. Surv., Rept. V², pp. 59-63, 1880.

Carboniferous. Pennsylvania.

Pottsville, Ashburner. 2d Pa. Geol. Surv., Rept. R, pp. 49-62 1880.

Carboniferous. Pennsylvania. Includes Johnson River sandstone, Kinzua Creek sandstone, and Olean conglomerate. Exact syns. Seral, Millstone grit.

Pottsville, White. 2d Pa. Geol. Surv., Rept. Q⁴, pp. 55-65. 1881.

Carboniferous. Pennsylvania. Includes Homewood sandstone, Mercer group, Connoquenessing group, and Sharon group. Exact syn. No. 12.

Pottsville conglomerate, White. 2d Pa. Geol. Surv., Rept. G⁵, pp. 45-53. 1881.

Carboniferous. Pennsylvania. Exact syn. No. 12.

Pottsville, Platt. 2d Pa. Geol. Surv., Rept. H⁶, pp. xxxiii-xxxiv. 1881.

Carboniferous. Pennsylvania. Exact syn. No. 12.

Pottsville, Stevenson. 2d Pa. Geol. Surv., Rept. T², pp. 65-67. 1882.

Carboniferous. Pennsylvania.

Pottsville, Carll. 2d Pa. Geol. Surv., Rept. I⁴, pp. 185-189. 1883.

Carboniferous. Pennsylvania. Includes Johnsons River rock, Kinzua Creek sandstone, and Olean conglomerate. Exact syn. No 12.

Pottsville, White. 2d Pa. Geol. Surv., Rept. T³, pp. 69-73. 1885.

Carboniferous. Pennsylvania. Includes Homewood (Johnson River) sandstone, Connoquenessing (Kinzua Creek) sandstones, and Sharon conglomerate.

Pottsville conglomerate, Ashburner. 2d Pa. Geol. Surv., Rept. R², p. 399. 1885.

Carboniferous. Pennsylvania. Exact syn. No. 12.

Pottsville conglomerate, Winslow. 2d Pa. Geol. Surv., Ann. Rept., 1886, pt. iv, pp. 1337, 1363. 1887.

Carboniferous. Pennsylvania. Exact syn. No. 12.

Pottsville, Carll. 2d Pa. Geol. Surv., Rept. I³, pp. 111-112, 126-128. 1890.

Carboniferous. Pennsylvania.

Pottsville conglomerate, White. U. S. Geol. Surv., Bull. No. 65, p. 179. 1891.

Carboniferous. Ohio, Pennsylvania, West Virginia. Included in Homewood sandstone, Mercer group, Connoquenessing sandstone, New River Coal group, and Sharon conglomerate.

Pottsville conglomerate, White. Geol. Soc. Am., Bull., vol. iii, p. 190. 1892.

Upper Carboniferous. West Virginia.

Pottsville, Williams and Clark. Maryland. Its Resources, Industries, and Institutions, p. 72. 1893.

Carboniferous. Maryland. Part. syn. No. xii.

Pottsville conglomerate, Smith. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, pp. 1853-1855, 1949-1951 et seq. 1895.

Carboniferous. Pennsylvania. Exact syn. No. xii.

- Pottsville conglomerate, D'Inwilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, pp. 1857-1915. 1895.
Carboniferous. Pennsylvania. Includes Homewood or Johnson River sandstone, Connoquenessing or Kinzua sandstone, and Sharon, Olean, or Garland conglomerate. Exact syn. No. 12, Seral conglomerate of Rogers.
- Pottsville formation, Clark. Md. Geol. Surv., vol. i, pp. 156, 185-186. 1897.
Carboniferous. Maryland. Exact. syn. Blackwater formation.
- Pottsville, Clark. Md. Geol. Surv., vol. ii, p. 208. 1898.
Carboniferous. Maryland. Included in Coal Measures.
- Pottsville conglomerate, White. W. Va. Geol. Surv., vol. i, p. 202. 1899.
Carboniferous. West Virginia.
- Pottsville, Clark. Md. Geol. Surv., vol. iii, p. 100. 1899.
Carboniferous. Maryland. Included in Coal Measures.
- Pottsville formation, White. U. S. Geol. Surv., 20th Ann. Rept., pt. ii, pp. 755-865. 1900.
Carboniferous. Pennsylvania. Includes Clark, Quinnemont, Sewell, and Lookout formations, and Fayette sandstone.
- Pottsville formation, O'Harra. Md. Geol. Surv., Allegany County, p. 113. 1900.
Carboniferous. Maryland.
- Poughquag** limestone and quartzite, Dana. Am. Jour. Sci., 3d ser., vol. iii, pp. 252-253, 255. 1872.
Silurian. New York.
- Powelton** shale, White. 2d Pa. Geol. Surv., Rept. T³, pp. 61-62. 1885.
Carboniferous. Pennsylvania.
- Poxono Island** shale, White. 2d Pa. Geol. Surv., Rept. G⁶, pp. 145-147. 1882.
Silurian. Pennsylvania. Included in Upper Helderburg or No. vi.
- Poxono Island shale and limestone, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 934-935. 1892.
Silurian. Pennsylvania. Included in No. vi.
- Poxono Island shale, Weller. N. J. Geol. Surv., Rept. 1899, pp. 5-6. 1900.
Silurian. New Jersey.
- Prairie Bluff** limestone, Winchell. Am. Assoc. Adv. Sci., Proc., vol. x, p. 90. 1856.
Cretaceous. Alabama. Included in Upper Cretaceous.
- Prairie d'Ane** or White Clay till, Hill. Ark. Geol. Surv., 1888, vol. ii, pp. 32-33. 1888.
Post-Tertiary. Arkansas.
- Pre-Meridian** series, Rogers. Geol. of Pa., vol. i, pp. 107, 136-137, 272 et seq., vol. ii, p. 754. 1858.
Silurian. Pennsylvania. Exact. syn. Lower Helderberg.
- Preston** beds, Hill. Geol. Soc. Am., Bull., vol. v, p. 302. 1894.
Cretaceous. Texas. Included in Washita division. Includes Duck Creek and Kiamitia.
- Price** sandstone, Campbell. Geol. Soc. Am., Bull., vol. v, pp. 171, 177. 1894.
Lower Carboniferous. Virginia. Included in Pocono.
- Price, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 26. 1896.
Carboniferous. Virginia and West Virginia.
- Price sandstone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 44. 1897.
Carboniferous. Virginia and West Virginia. Exact syn. No. x, Montgomery grits.
- Primal** series, Rogers. Am. Jour. Sci., 1st ser., vol. xlvii, p. 155. 1844.
- Primal series, Rogers. Geol. of Pa., vol. i, pp. 104, 122-123, 150-207 et seq., vol. ii, p. 751. 1858.
Cambrian. Pennsylvania. Part. syn. Potsdam.

- Primal, Walcott. U. S. Geol. Surv., Bull. No. 81, pp. 126, 251, 288. 1891.
Cambrian. Appalachian region.
- Primedial** series, Rogers. Am. Jour. Sci., 1st ser., vol. xlvii, p. 155. 1844.
Silurian. Includes Pentamerus and Catskill shaly limestone and Oriskany limestone.
- Princeton** conglomerate, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 26. 1896.
Carboniferous. Virginia and West Virginia.
- Princeton conglomerate, Campbell and Mendenhall. U. S. Geol. Surv., 17th Ann. Rept., pt. ii, p. 489. 1896.
Carboniferous. West Virginia. Included in No. xii of Rogers, Conglomerate series of Fontaine.
- Princeton conglomerate, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 44. 1897.
Carboniferous. Virginia and West Virginia. Part. syns. No. xi, Greenbrier shale Rogers.
- Procamelus** beds, Cope. U. S. Geol. and Geog. Surv. of Terr., vol. v, pp. 51-52. 1879.
Tertiary. Included in Loup Fork.
- Proctor** limestone, Keyes. Mo. Geol. Surv., vol. vi, p. 331. 1894.
Cambrian. Missouri. Included in Gasconade limestone, Ozark series.
- Productal** limestone, Owen. Geol. Recon. State of Indiana, Rept. in 1837, p. 22. 1859.
Indiana. Included in Subcarboniferous limestone.
- Productive** coal measures, Upper and Lower, Rogers. Geol. of Pa., vol. 1, p. 109. 1856.
Carboniferous. Pennsylvania. Included in Seral series.
- Productive measures, Upper, Stevenson. 2d Pa. Geol. Surv., Rept. K, pp. 57-74, 84-88. 1876.
Carboniferous. Pennsylvania. Includes Waynesburg sandstone, Great limestone, Fishpot limestone, and Pittsburg sandstone.
- Productive series, Upper, Stevenson. 2d Pa. Geol. Surv., Rept. K², pp. 30-63. 1877.
Carboniferous. Pennsylvania. Includes Waynesburg sandstone and limestone, Great limestone, Fishpot limestone, and Redstone limestone.
- Productive series, Lower, Stevenson. 2d Pa. Geol. Surv., Rept. K², pp. 73-90. 1877.
Carboniferous. Pennsylvania and West Virginia. Includes Mahoning sandstone, Freeport limestone, and Piedmont sandstone (= Tionesta).
- Productive series, Lower, White. 2d Pa. Geol. Surv., Rept. Q², pp. 27-51. 1877.
Carboniferous. Pennsylvania. Includes Freeport or Butler sandstone and limestone, Kittanning sandstone, and Ferriferous limestone.
- Productive measures, Lower, Ashburner. 2d Pa. Geol. Surv., Rept. F, pp. 184-191. 1878.
Carboniferous. Pennsylvania. Exact syn. Allegheny River series.
- Productive series, Upper, White. 2d Pa. Geol. Surv., Rept. Q, pp. 21-22. 1878.
Carboniferous. Pennsylvania.
- Productive series, Lower, White. 2d Pa. Geol. Surv., Rept. Q, pp. 39-64. 1878.
Carboniferous. Pennsylvania. Includes Freeport limestone, Butler sandstone and limestone, Kittanning sandstone, and Ferriferous limestone.
- Productive series, Upper, Stevenson. 2d Pa. Geol. Surv., Rept. K³, pp. 14-17. 1878.
Carboniferous. Pennsylvania.

- Productive series, Lower, Stevenson. 2d Pa. Geol. Surv., Rept. K³, pp. 27-43. 1878.
 Carboniferous. Pennsylvania. Includes Mahoning sandstone, Freeport limestone and sandstone, Kittanning limestone, Bolivar sandstone, and Clarion sandstone.
- Productive measures, Upper, Platt. 2d Pa. Geol. Surv., Rept. H⁴, pp. 155-165. 1878.
 Carboniferous. Pennsylvania.
- Productive measures, Lower, Platt. 2d Pa. Geol. Surv., Rept. H⁴, pp. 175-231. 1878.
 Carboniferous. Pennsylvania.
- Productive measures, Lower, Chance. 2d Pa. Geol. Surv., Rept. V, pp. 15-29. 1879.
 Carboniferous. Pennsylvania. Includes Freeport group, Mahoning sandstone, Kittanning group, and Ferriferous limestone.
- Productive measures, Lower, White. 2d Pa. Geol. Surv., Rept. Q³, pp. 22-32. 1880.
 Carboniferous. Pennsylvania. Includes Ferriferous limestone.
- Productive measures, Lower, Ashburner. 2d Pa. Geol. Surv., Rept. R, pp. 45-48. 1880.
 Carboniferous. Pennsylvania.
- Productive measures, Lower, Chance. 2d Pa. Geol. Surv., Rept. V², pp. 31-56. 1880.
 Carboniferous. Pennsylvania. Includes Freeport group, Kittanning group, Johnstown cement limestone, Clarion group, and Ferriferous limestone.
- Productive measures, Upper, Platt. 2d Pa. Geol. Surv., Rept. H⁵, pp. 43-291. 1880.
 Carboniferous. Pennsylvania.
- Productive measures, Lower, Platt. 2d Pa. Geol. Surv., Rept. H⁵, p. 313. 1880.
 Carboniferous. Pennsylvania.
- Productive measures, Lower, Chance. 2d Pa. Geol. Surv., Rept. H¹, pp. 25-80. 1884.
 Carboniferous. Pennsylvania.
- Productive measures, Lower, Ashburner. 2d Pa. Geol. Surv., Rept. R², p. 393. 1885.
 Carboniferous. Pennsylvania.
- Productive measures, Upper, D'Inwilliers. 2d Pa. Geol. Surv., Ann. Rept., 1885, pp. 171-177. 1886.
 Carboniferous. Pennsylvania.
- Productive measures, Lower, Platt. 2d Pa. Geol. Surv., Rept. H⁶, pp. xxix-xxxii. 1887.
 Carboniferous. Pennsylvania. Included in Freeport group, Kittanning group, and Clarion group.
- Productive measures, Upper, D'Inwilliers. 2d Pa. Geol. Surv., Ann. Rept., 1886, pp. 63-74, 206-208, 264-265, 291-295, 336-341. 1887.
 Carboniferous. Pennsylvania. Exact syn. Monongahela River series.
- Productive measures, Lower, D'Inwilliers. 2d Pa. Geol. Surv., Ann. Rept., 1886, pp. 79-81. 1887.
 Carboniferous. Pennsylvania. Exact syn. Allegheny River series.
- Productive measures, Upper, Carll. 2d Pa. Geol. Surv., Rept. I⁵, pp. 122-123. 1890.
 Carboniferous. Pennsylvania. Exact syn. Monongahela series.
- Productive measures, Lower, Carll. 2d Pa. Geol. Surv., Rept. I⁵, pp. 125-126. 1890.
 Carboniferous. Pennsylvania. Exact syn. Allegheny series.
- Productive group, Squire. Ala. Geol. Surv., Rept. on Cahaba coal field, p. 14 et seq. 1890.
 Carboniferous. Alabama. Included in Coal Measures.
- Productive series, Upper, D'Inwilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2448-2564. 1895.
 Carboniferous. Pennsylvania. Exact syns. No. xv, Monongahela River series.
- Productive measures, Lower, D'Inwilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2155-2405. 1895.
 Carboniferous. Pennsylvania. Exact syns. No. xiii, Allegheny River series.

- Prospect Mountain limestone and quartzite, Hague.** U. S. Geol. Surv., 3d Ann. Rept., pp. 253, 254. 1883.
Cambrian. Nevada.
- Prospect, Walcott.** U. S. Geol. Surv., Bull. No. 81, pp. 252, 313. 1891.
Cambrian. Nevada.
- Prospect Mountain limestone, Hague.** U. S. Geol. Surv., Mon., vol. xx, p. 36. 1892.
Cambrian. Nevada.
- Prospect Mountain quartzite, Hague.** U. S. Geol. Surv., Mon., vol. xx, p. 35. 1892.
Cambrian. Nevada.
- Proteau group, Vanuxem.** N. Y. Geol. Surv., 4th Ann. Rept., pp. 374-375. 1840.
Silurian. New York.
- Proteau group, Hall.** Am. Jour. Sci., 1st ser., vol. xlii, p. 60. 1842.
New York and Ohio.
- Protoceras beds, Wortman.** Am. Mus. Nat. Hist., Bull., vol. v, 1893, pp. 101-102. 1893.
Lower Miocene. South Dakota. Included in White River sediments. Includes Uppermost strata of Oreodon beds.
- Protoceras, Wortman.** Am. Mus. Nat. Hist., Bull., vol. v, pp. 96, 101. 1893.
Tertiary. Included in White River or Lower Miocene.
- Pteranodon beds, Marsh.** U. S. Geol. Surv., Mon., vol. xxvii, p. 476. 1896.
Cretaceous. Colorado.
- Pteranodon beds, Logan.** Jour. of Geol., vol. vii, pp. 90-91. 1899.
Cretaceous. Kansas and Nebraska. Included in Niobrara. Exact syns. Apishapa and Upper Timber beds.
- Puckwunge conglomerate, Winchell.** Am. Geol., vol. xx, pp. 50-51. 1897.
Algonkian. Minnesota.
- Puckwunge conglomerate, Winchell.** Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. iv, pp. 13, 517. 1899.
Cambrian. Minnesota. Included in Keweenawan.
- Puckwunge conglomerate, Winchell.** Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. v, p. 54. 1900.
Cambrian. Minnesota.
- Puerco marl, Cope.** Rept. of Secy. of War to 44th Cong., vol. ii, pt. ii, p. 1012. 1875.
Tertiary. New Mexico. Included in Eocene.
- Puerco marl, Holmes.** U. S. Geol. and Geog. Surv. of Terr., 9th Ann. Rept., p. 248. 1877.
Cretaceous. Colorado. Exact syn. Bad Land group.
- Puerco marl, Endlich.** U. S. Geol. and Geog. Surv. of Terr., 10th Ann. Rept., p. 123. 1878.
Tertiary. Colorado. Included in Wahsatch group.
- Puerco, Cope.** U. S. Geol. and Geog. Surv. of Terr., Mon., vol. iii, pp. 3-6. 1881.
Tertiary.
- Puerco, Clark.** U. S. Geol. Surv., Bull. No. 83, p. 137. 1891.
Tertiary. Colorado and New Mexico.
- Puerco beds, Osborn and Earle.** Am. Mus. Nat. Hist., Bull., vol. vii, 1895, pp. 1-3. 1895.
New Mexico. Included in Basal Eocene.
- Puerco beds, Marcou.** Am. Geol., vol. xix, pp. 120-121. 1897.
Tertiary.
- Puerco, Matthew.** Am. Mus. Nat. Hist., Bull., vol. ix, 1897, pp. 259-323. 1897.
Eocene. New Mexico. Included in Basal Eocene.
- Puerco beds, Dall.** U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 347. 1898.
Tertiary. New Mexico and Colorado. Included in Eocene. Part. syn. Torregon formation.

- Puerco formation, Smith. *Jour. of Geol.*, vol. viii, pp. 448-449. 1900.
Tertiary. Western North America. Included in Eocene.
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Cretaceous. Washington. Exact syn. Laramie.
- Puget** group, White. *U. S. Geol. Surv., Bull.* No. 51, pp. 49-63. 1889.
Cretaceous. Washington.
- Puget**, White. *U. S. Geol. Surv., Bull.* 51, p. 49, 1889. *U. S. Geol. Surv., Bull.* No. 82, p. 196. 1891.
Cretaceous. Pacific coast. Included in Upper Cretaceous.
- Puget**, Clark. *U. S. Geol. Surv., Bull.* No. 83, p. 107. 1891.
Tertiary. Washington. Included in Eocene. Exact syn. Tejon (?).
- Puget** group, Dall and Harris. *U. S. Geol. Surv., Bull.* No. 84, p. 229. 1892.
Tertiary. Washington.
- Puget** group, Kimball. *Am. Geol.*, vol. xix, pp. 305-306. 1897.
Cretaceous or Eocene. Washington.
- Puget** group (epoch), Willis. *Geol. Soc. Am., Bull.*, vol. ix, p. 2. 1897.
Tertiary. Washington. Part. syn. Tejon.
- Puget** group, Dall. *U. S. Geol. Surv., 18th Ann. Rept.*, pt. ii, p. 347. 1898.
Tertiary. Washington. Included in Eocene.
- Puget** formation, Willis. *U. S. Geol. Surv., 18th Ann. Rept.*, pt. iii, pp. 400-412. 1898.
Tertiary. Washington.
- Puget** formation, Willis and Smith. *U. S. Geol. Surv., Geol. Atlas of U. S., Folio* No. 54. 1899.
Tertiary. Washington. Included in Eocene.
- Puget** formation, Smith. *Jour. of Geol.*, vol. viii, pp. 457-459. 1900.
Tertiary. Washington. Included in Eocene.
- Pugh**, Taff and Brooks. *U. S. Geol. Surv., Geol. Atlas of U. S., Folio* No. 34. 1896.
Carboniferous. West Virginia.
- Pulaski** shales, Vanuxem. *N. Y. Geol. Surv., 4th Ann. Rept.*, pp. 373-374. 1840.
New York.
- Pulaski** shale, Vanuxem. *Geol. of N. Y.*, pt. iii, p. 64. 1842.
Paleozoic. New York. Included in Hudson River group.
- Pulaski** shale, Campbell. *Geol. Soc. Am., Bull.*, vol. v, pp. 171, 178. 1894.
Lower Carboniferous. Virginia. Part. syn. Umbral.
- Pulaski** shale, Campbell. *U. S. Geol. Surv., Geol. Atlas of U. S., Folio* No. 26. 1896.
Carboniferous. Virginia and West Virginia.
- Pulaski** formation, Diller. *U. S. Geol. Surv., 19th Ann. Rept.*, pt. iii, pp. 319-320. 1899.
Tertiary. Oregon. Included in Arago, Eocene.
- Pulliam** formation, Vaughan. *U. S. Geol. Surv., Geol. Atlas of U. S., Folio* No. 64. 1900.
Cretaceous. Texas. Included in Gulf series.
- Purgatory** conglomerate, Shaler, Woodworth and Foerste. *U. S. Geol. Surv., Mon.*, vol. xxxiii, pp. 363-374. 1899.
Carboniferous. Rhode Island.
- Putnam Hill** limestone, Andrews. *Ohio Geol. Surv., Rept. Prog.*, 1869, p. 84. 1870.
Ohio.
- Putnam Hill** limestone, Andrews. *Ohio Geol. Surv., Rept.*, 1869, p. 88. 1871.
Ohio.
- Putnam Hill** limestone, Andrews. *Ohio Geol. Surv.*, vol. i, pt. i, p. 315. 1873.
Carboniferous. Ohio. Included in Coal Measures.
- Putnam Hill** limestone, Orton. *Ohio Geol. Surv.*, vol. v, p. 20. 1884.
Carboniferous. Ohio.
- Putnam Hill** limestone, White. *The Virginias*, vol. vi, p. 15. 1885.
Carboniferous. West Virginia. Included in Coal Measures.

- Putnam Hill limestone, clay and shales, Orton. Ohio Geol. Surv., vol. vii, p. 63. 1893.
Carboniferous. Ohio.
- Putnamville** stone, Collett. Indiana Dept. Statistics and Geology, 2d Ann. Rept., 1880, p. 409. 1880.
Indiana.
- Puyallup** epoch (sands), Willis. Geol. Soc. Am. Bull., vol. ix, pp. 145, 146. 1898.
Pleistocene. Washington.
- Quadrant**, Peale. U. S. Geol. Surv., Bull. No. 110, p. 39. 1893.
Carboniferous. Montana.
- Quadrant quartzite, Iddings and Weed. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 1. 1894.
Carboniferous. Montana.
- Quadrant, Peale. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 24. 1896.
Carboniferous. Montana.
- Quadrant quartzite, Weed. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 30. 1896.
Carboniferous. Wyoming.
- Quadrant, Weed and Pirsson. U. S. Geol. Surv., Bull. No. 139, p. 41. 1896.
Carboniferous. Montana.
- Quadrant formation, Weed. U. S. Geol. Surv., Geol. Atlas of U. S., Folios No. 55, 56. 1899.
Carboniferous. Montana.
- Quadrant formation, Iddings and Weed. U. S. Geol. Surv., Mon., vol. xxxii, pt. ii, pp. 1-59, 149-164. 1899.
Carboniferous. Yellowstone Park.
- Quadrant group, Weed. U. S. Geol. Surv., 20th Ann. Rept., pt. iii, pp. 294-298. 1900.
Carboniferous. Montana. Includes Kibbey sandstone and Otter shale.
- Quakertown** shale, White. 2d Pa. Geol. Surv., Rept. Q², p. 66. 1877.
Carboniferous. Pennsylvania. Included in No. 12, or Pottsville.
- Quakertown coal group, Platt. 2d Pa. Geol. Surv., Rept. H⁵, p. 326. 1880.
Carboniferous. Pennsylvania.
- Quakertown coal and sandstone, Orton. Ohio Geol. Surv., vol. vii, pp. 59, 60. 1893.
Carboniferous. Ohio.
- Quarry Creek** limestone, Worthen. Ill. Geol. Surv., vol. vi, pp. 10-11, 12-17. 1875.
Carboniferous. Illinois. Included in Coal Measures.
- Quarry Creek and Martinsville limestone, Worthen. Econ. Geol. of Ill., vol. iii, p. 339. 1882.
Carboniferous. Illinois. Included in Coal Measures.
- Quartz** rock, Hitchcock. Geol. of Vt., vol. i, pp. 342-357. 1861.
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- Quartz slate member, Van Hise. U. S. Geol. Surv., 10th Ann. Rept., p. 370. 1890.
Algonkian. Wisconsin and Minnesota. Included in Penokee.
- Quartz slate member, Irving and Van Hise. U. S. Geol. Surv., Mon., vol. xix, p. 143. 1892.
Algonkian. Lake Superior region. Included in Penokee series.
- Quebec** group, Logan. Can. Inst., new ser., vol. vi, pp. 40-46. 1861.
Cambro-Silurian. Canada.
- Quebec group, Logan. Am. Jour. Sci., 2d ser., vol. xxxi, pp. 216-220. 1861.
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- Quebec group, Hall. Boston Soc. Nat. Hist., Proc., vol. viii, 1861-62, p. 185. 1861.
Paleozoic.
- Quebec group, Hall. Am. Jour. Sci., 2d ser., vol. xxxi, pp. 220-226. 1861.
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- Quebec group, Logan. *Am. Jour. Sci.*, 2d ser., vol. xxxvi, p. 368. 1863.
- Silurian. Canada.
- Quebec group, Chapman. *Can. Inst.*, new ser., vol. viii, pp. 186, 191-195. 1863.
- Silurian. Canada. Included in Lower Silurian. Includes Chazy or Sillery, and Calciferous or Lévis.
- Quebec group, Hind. *Geol. of New Brunswick*, p. 143. 1865.
- Silurian. New Brunswick. Included in Lower Silurian.
- Quebec group, Richardson. *Can. Geol. Surv., Rept.*, 1863-1866, pp. 29-48. 1866.
- Lower Silurian. Canada (Eastern). Includes Lévis, Lauzon, and Sillery divisions.
- Quebec group, Logan. *Can. Geol. Surv., Rept.*, 1863-1866, pp. 4-5. 1866.
- Lower Silurian. Canada. Includes Lévis, Lauzon, and Sillery divisions.
- Quebec group, Richardson. *Can. Geol. Surv., Rept.*, 1866-1869, pp. 145-155. 1871.
- Lower Silurian. Canada. Includes Lévis, Lauzon, and Sillery formations.
- Quebec group, Hunt. *Boston Soc. Nat. Hist., Proc.*, vol. xix, 1876-1878, pp. 2-4. 1876.
- Quebec, Hunt. 2d Pa. *Geol. Surv., Rept. E*, pp. 101-108. 1878.
- Cambrian. Canada.
- Quebec, St. John. *U. S. Geol. and Geog. Surv. of Terr.*, 11th Ann. Rept., p. 481. 1879.
- Silurian. Idaho. Included in Canadian. Includes Upper and Lower Quebec.
- Quebec group, Selwyn. *Can. Geol. Surv., Rept.*, 1877-78, p. 1A. 1879.
- Cambro-Silurian. Canada. Includes 3 groups of strata, Lower Silurian group, Volcanic group, Crystalline Schist group [Huronian (?)].
- Quebec group, Macfarlane. *Can. Nat.*, 2d ser., vol. ix, pp. 91-102. 1880.
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- Quebec group, Selwyn. *Can. Nat.*, 2d ser., vol. ix, pp. 17-31. 1880.
- Cambro-Silurian. Canada. Included in Lower Silurian. Includes Lower Silurian group, Lévis formation, Volcanic group, and Crystalline Schist group.
- Quebec group, Miller. *Cin. Soc. Nat. Hist., Jour.*, vol. iv, no. iv, pp. 270, 277. 1881.
- Quebec group, Ells. *Can. Geol. Surv., Rept.*, 1880-81-82, pp. 16DD-31DD. 1883.
- Cambro-Silurian. New Brunswick. Includes Lévis, Lauzon, and Sillery formations.
- Quebec group, Selwyn. *Can. Roy. Soc., Proc. and Trans.*, 1882-83, vol. i, sec. iv, pp. 1-13. 1883.
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- Silurian. Canada.
- Quebec group, Miller. *N. A. Geol. and Pal.*, p. 34. 1889.
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- Silurian. Arkansas. Included in Silurian group. Part. syn. Knox group.
- Quebec group, Matthew. *Can. Rec. Sci.*, vol. iv, pp. 339-343. 1891.
- Cambro-Silurian. New Brunswick.
- Quebec terrane, Ami. *Geol. Soc. Am., Bull.*, vol. ii, pp. 491, 495. 1891.
- Cambrian (?). Quebec. Included in Quebec.
- Quebec group, Ami. *Ottawa Field Nat. Club., Trans.*, 1892-93, vol. viii, pp. 41-43. 1892.
- Cambro-Silurian. Canada. Included in Lower Ordovician.

- Quebec Group, Low. Can. Geol. Surv., new ser., vol. v, pt. i, pp. 26L-33L. 1893.
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Cambro-Silurian. Canada.
- Quebec group, Ellis. Can. Geol. Surv., new ser., vol. vii, pp. 15J-64J. 1896.
Cambro-Silurian. Province of Quebec, Canada. Includes Sillery, Lévis and Lower Phillipsburg, Upper Phillipsburg, Bedford and Mystic slates, and Farnham slates and limestones.
- Quebec group, Dawson. Can. Roy. Soc., Trans., new ser., vol. ii, sec. iv, pp. 91-129. 1896.
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- Quebec group, Marcou. Am. Geol., vol. xix, pp. 111-113. 1897.
Cambro-Silurian.
- Queen Charlottes Island** formation. Dawson. Am. Jour. Sci., 3d ser., vol. xxxviii, pp. 120-127. 1889.
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- Queen Charlotte, Stanton. Geol. Soc. Am., Bull., vol. iv, p. 245. 1893.
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- Queen Charlotte Islands, group, Diller and Stanton. Geol. Soc. Am., Bull., vol. v, p. 461. 1894.
Cretaceous. British Columbia. Part. syn. Shasta-Chico.
- Queen Charlotte Island formation, Dawson. Can. Geol. Surv., new ser., vol. vii, p. 26B, 64B-65B. 1896.
Cretaceous. British Columbia. Included in Lower Cretaceous. Part. syns. Jackass Mountain group and Shasta group of California.
- Queen City** beds, Kennedy. Phil. Acad. Nat. Sci., Proc., p. 135. 1895.
Lower Eocene. Texas. Included in Lignitic.
- Queens River** moraine, Woodworth and Marbut. Jour. of Geol., vol. iv, pp. 691-703. 1896.
Pleistocene. Rhode Island.
- Quesnel Lake** crystalline series, Bowman. Can. Geol. Surv., new ser., vol. iii, pt. i, p. 25C. 1889.
Archean. British Columbia.
- Quesnel River beds, Bowman. Can. Geol. Surv., new ser., vol. iii, pt. i, pp. 17C-19C. 1889.
Cretaceous. British Columbia. Part. syn. Shasta group of California, upper part.
- Quinnemont**, Stevenson. Am. Phil. Soc., Proc., vol. xix, pp. 229, 498. 1881.
Carboniferous. Virginia. Exact syns. Seral, Pottsville.
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- Quinnemont-Fire Creek horizon, White. Geol. Soc. Am., Bull., vol. vi, p. 310. 1895.
Upper Carboniferous. West Virginia. Included in Pottsville formation.
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Carboniferous. Virginia, West Virginia. Included in Coal-bearing strata, Pottsville series.

- Quinnemont formation, White. U. S. Geol. Surv., 20th Ann. Rept., pt. ii, p. 815. 1900.
- Carboniferous. Virginia and West Virginia.
- Quinnesec** schists, Van Hise and Bayley. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 62. 1900.
- Archean. Michigan.
- Quitman** bed, Taff. Texas Geol. Surv., 2d Ann. Rept., pp. 728-730. 1891.
- Cretaceous. Texas. Included in Washita division.
- Quitman limestone, Gallaher. Mo. Geol. Surv., Bien. Rept., p. 54. 1898.
- Upper Carboniferous. Missouri. Included in Upper Coal Measures.
- Quitman-Muerto** series, Hill. Geol. Soc. Am., Bull., vol. iii, p. 97. 1892.
- Tertiary. Texas, New Mexico.
- Raccoon** shales, Hicks. Am. Jour. Sci., 3d ser., vol. xvi, pp. 216-219. 1878.
- Carboniferous. Ohio. Included in Waverly group.
- Racine** limestone, Hall. Regents Univ. of N. Y., 20th Ann. Rept., pp. 305-308. 1867.
- Silurian. Wisconsin. Included in Niagara. Exact syns. Guelph, Leclaire (Ia.) limestone.
- Racine beds. Geol. of Wis., vol. ii, pp. 360-377. 1877.
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- Rockwood formation, Hayes. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 35. 1896.
- Silurian. Alabama. Exact syns. Clinton or Red Mountain group, Dyestone group, and White Oak Mountain sandstone.
- Rockwood formation, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 44. 1897.
- Silurian. Virginia, West Virginia.
- Rockwood formation, Clark. Md. Geol. Surv., vol. i, pp. 181-182. 1897.
- Silurian. Maryland. Exact syn. Clinton shales.
- Rockwood formation, Darton. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 61. 1899.
- Silurian. Virginia and West Virginia.
- Rockwood formation, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 59. 1899.
- Silurian. Virginia, Tennessee.
- Rocky Comfort** chalk, Hill. Ark. Geol. Surv., 1888, vol. ii, pp. 89-95. 1888.
- Cretaceous. Arkansas. Included in Chalky marl beds.
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- Cambrian. Kentucky, Virginia, and Tennessee.
- Rogersville shale, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 16, 25, 27. 1895, 1896.
- Cambrian. Tennessee and North Carolina.
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- Rome sandstone, Walcott. U. S. Geol. Surv., Bull. No. 81, p. 247. 1891.
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- Rome sandstone, Hayes. Ala. Geol. Surv., Bull. No. 4, pp. 34, 37. 1892.
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- Rome formation, Hayes. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 2, 4, 6, 20. 1894-5.
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- Rome, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 16, 25, 27. 1895, 1896.
- Cambrian. Tennessee, North Carolina.
- Rome formation, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 33. 1896.
- Cambrian. Tennessee. Exact syn. Knox sandstone.
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- Devonian. Virginia. Part. syn. Hamilton.
- Romney shale, Darton. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 14, 32. 1894, 1896.
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- Devonian. West Virginia and Maryland.
- Romney shale, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 44. 1897.
- Devonian. Virginia and West Virginia.

- Romney formation, Clark. Md. Geol. Surv., vol. 1, p. 183. 1897.
Devonian. Maryland. Exact syn. Hamilton shales.
- Romney shale, Darton. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 61. 1899.
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- Romney formation, O'Harra. Md. Geol. Surv., Allegany Co., p. 103. 1900.
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- Rondout** waterlime, Clarke and Schuchert. Science, new ser., vol. x, pp. 876-877. 1899.
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- Rondout waterlime formation, Weller. N. J. Geol. Surv., Rept., 1899, p. 20. 1900.
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- Roslyn** sandstone, Russell. U. S. Geol. Surv., 20th Ann. Rept., p. ii, pp. 123-127. 1900.
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- Rossville** shales and sandstone, Beede. Kan. Acad. Sci., Trans., vol. xv, p. 31. 1898.
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- Rotten** limestone, Winchell. Am. Assoc. Adv. Sci., Proc., vol. x, p. 91. 1856.
Cretaceous. Alabama. Included in Upper Cretaceous.
- Rotten limestone group, Hilgard. Rept. on Geol. and Agric. of Miss., pp. 62, 76-83. 1860.
Cretaceous. Mississippi.
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- Rotten limestone, Killebrew and Safford. Res. of Tenn., p. 43. 1874.
Cretaceous. Tennessee.
- Rotten limestone, Smith and Johnson. U. S. Geol. Surv., Bull. No. 43, p. 83. 1887.
Cretaceous. Alabama.
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- Rotten limestone, White. U. S. Geol. Surv., Bull. No. 82, p. 106. 1891.
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- Roubidoux, Nason. Am. Geol., vol. xi, p. 94. 1893.
Missouri.
- Roubidoux sandstone, Keyes. Mo. Geol. Surv., vol. iv, p. 30. 1894.
Lower Silurian. Missouri. Included in Calciferous stage.
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Cambrian. Missouri.

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Silurian. Massachusetts. Included in Lower Silurian.
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Silurian. Massachusetts.
- Roxbury conglomerate**, Crosby. Rept. on Geol. Map of Mass., p. 41. 1876.
Paleozoic. Massachusetts. Included in Carboniferous(?).
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Carboniferous. Massachusetts.
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Carboniferous. West Virginia. Included in No. xii of Rogers, Conglomerate series of Fontaine.
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Cretaceous. Colorado.
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Cretaceous. Colorado.
- Rushville group**, Andrews. Am. Jour. Sci., 3d ser., vol. xviii, p. 137. 1879.
Carboniferous. Ohio.
- Russell**, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 12, 26. 1894; 1896.
Cambrian. Kentucky, Virginia, Tennessee.
- Russell formation, Cragin. Colo. Coll. Stud., vol. vi, p. 49. 1896.
Cretaceous. Kansas. Included in Benton. Includes Downs limestone or Fence-post limestone and Lincoln marble.
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- Russell serpentines, Emerson. U. S. Geol. Surv., Mon., vol. xxix, p. 90. 1898.
Silurian. Massachusetts. Included in Chester amphibolites.
- Russell group, Adams. Kan. Univ. Geol. Surv., vol. iv, pp. 25-26. 1898.
Upper Cretaceous. Kansas. Included in Benton.
- Russell formation, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 59. 1899.
Cambrian. Virginia and Tennessee.
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Carboniferous. Arkansas. Included in Appleton shale.
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- Rutledge limestone, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 16, 25, 27. 1895, 1896.
Cambrian. Tennessee and North Carolina.
- Rutledge limestone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 59. 1899.
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Tertiary. Texas. Exact syn. Timber belt beds.
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Tertiary. Texas. Included in Eocene. Exact syn. Timber belt beds.
- Sac** limestone, Shepard. Mo. Geol. Surv., vol. xii, pp. 49, 74-77. 1898.
Devonian. Missouri. Included in Hamilton stage.
- Saccharoidal** sandstone, Shumard. Mo. Geol. Surv., 1st and 2d Ann. Repts, pt. ii, p. 160. 1855.
Silurian. Missouri. Included in Lower Silurian.
- Saccharoidal** sandstone, Swallow. Mo. Geol. Surv., 1st and 2d Ann. Repts., pp. 117, 197. 1855.
Silurian. Missouri. Included in Lower Silurian.
- Saccharoidal** sandstone, Meek. Mo. Geol. Surv., 1st and 2d Ann. Repts., pt. ii, p. 105. 1855.
Silurian. Missouri. Included in Lower Silurian.
- Saccharoid** sandstone, Shumard. Mo. Geol. Surv., Rept., 1855-1871, pp. 191, 207, 215, 234, 245, 268, 284, 298, 308. 1873.
Silurian. Missouri. Included in Lower Silurian and Calciferous sand rock.
- Saccharoidal** sandstone, Broadhead. Mo. Geol. Surv., Rept., 1855-1871, pp. 10, 26, 54. 1873.
Silurian. Missouri. Included in Lower Silurian and Calciferous sand rock.
- Saccharoidal** sandstone, Meek. Mo. Geol. Surv., Rept., 1855-1871, pp. 118, 142. 1873.
Silurian. Missouri. Included in Lower Silurian.
- Saccharoidal** sandstone, Broadhead. Mo. Geol. Surv., Rept., 1873-74, pp. 29. 1874.
Lower Silurian. Missouri. Included in Magnesian limestone series.
- Saccharoidal** sandstone, Ladd. Mo. Geol. Surv., Bull. No. 3, pp. 14, 15. 1890.
Lower Silurian. Missouri.
- Saccharoidal** sandstone, Simonds and Hopkins. Ark. Geol. Surv., 1891, vol. ii, pp. 30-33. 1891.
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- Sachuest** arkose, Shaler, Woodworth and Foerste. U. S. Geol. Surv., Mon., vol. xxxiii, p. 379. 1899.
Carboniferous. Rhode Island.
- Sacramento** formation, Smith. Jour. of Geol., vol. ii, pp. 591-593. 1894.
Devonian. California. Includes Kennett limestones and shales.
- Saddle Creek** bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 416. 1893.
Carboniferous. Texas. Included in Cisco division.
- Sailor Canyon**, Turner. Am. Geol., vol. xiii, p. 232. 1894.
Juratrias. California.
- Sailor Canyon** formation, Lindgren. U. S. Geol., Surv., Geol. Atlas of U. S., Folio No. 39. 1897.
Juratrias. California. Included in Bed Rock series.
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Juratrias. California. Included in Bed Rock series.
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Vermont and Canada. Included in Upper Taconic of Marcou.
- St. Anthony** sandstone, Hopkins. Indiana Dept. Geol. and Nat. Res., 20th Ann. Rept., 1895, p. 312. 1896.
Indiana.
- St. Clair** marble (limestone), Hopkins. Ark. Geol. Surv., 1890, vol. iv, pp. 50, 212-252. 1890.
Silurian. Arkansas.

- St. Clair limestone, Penrose. Ark. Geol. Surv., 1890, vol. i, pp. 124-128, 166-184. 1890.
 Silurian. Arkansas.
- St. Clair shales, Lane. Mich. Geol. Surv., Rept. State Board, 1891, 1892, p. 66. 1893.
 Devonian. Michigan.
- St. Clair limestone, Williams. Am. Jour. Sci., 3d ser., vol. xlvii, pp. 326-329. 1894.
 Silurian. Arkansas. Included in Ordovician.
- St. Clair shales, Lane. Mich. Geol. Surv., vol. v, pt. ii, p. 21. 1895.
 Michigan.
- St. Clair shales, Lane. U. S. Geol. Surv., Water-Supply Papers, No. 30, pl. vi. 1899.
 Carboniferous. Michigan. Part. syns. Ohio and Black shale.
- St. Clair shales, Sherzer. Mich. Geol. Surv., vol. vii, pt. i, pp. 25-30. 1900.
 Devonian. Michigan. Exact syn. Genesee.
- St. Clair limestone, Williams. Ark. Geol. Surv., 1892, vol. v, pp. 281-301. 1900.
 Silurian. Arkansas. Included in Niagara.
- St. Croix sandstone, Winchell.** Minn. Geol. and Nat. Hist. Surv., 1st Ann. Rept., 1872, pp. 68-80. 1873.
 Lower Silurian. Minnesota.
- St. Croix sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., 4th Ann. Rept., p. 31. 1876.
 Lower Silurian. Minnesota.
- St. Croix sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., 5th Ann. Rept., pp. 29-34. 1877.
 Lower Silurian. Minnesota.
- St. Croix sandstone, Upham. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, p. 424. 1884.
 Minnesota.
- St. Croix sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, pp. 223, 257, 281. 1884.
 Minnesota.
- St. Croix formation, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. ii, pp. xxi, 13, 31. 1888.
 Minnesota. Includes Jordan sandstone, St. Lawrence limestone + certain sands and sandy shales.
- St. Croix sandstone, Upham. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. ii, p. 407. 1888.
- St. Croix sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., 17th Ann. Rept., pp. 56-64. 1889.
 Minnesota.
- St. Croix shales, Hall. Minn. Acad. Nat. Sci., Bull., vol. iii, No. 1, p. 134. 1889.
 Cambrian. Minnesota. Included in St. Croix formation as middle member.
 Part. syn. 4th Magnesian limestone of Missouri.
- St. Croix sandstones, Hall. Minn. Acad. Nat. Sci., Bull., vol. iii, No. 1, p. 134. 1889.
 Cambrian. Minnesota. Included in St. Croix formation as lowest of three members.
- St. Croix, Walcott. U. S. Geol. Surv., Bull. No. 81, pp. 245, 330. 1891.
 Cambrian. Mississippi Valley.
- St. Croix sandstone, Keyes. Iowa Geol. Surv., 1st Ann. Rept., vol. i, pp. 20-21. 1893.
 Cambrian. Iowa. Included in Upper Cambrian. Exact syn. Potsdam.
- St. Croix sandstone, Calvin. Iowa Geol. Surv., vol. iv, pp. 54-61. 1895.
 Cambrian. Iowa. Included in Potsdam series.
- St. Croix sandstone, Norton. Iowa Geol. Surv., vol. iii, pp. 184-186. 1895.
 Cambrian. Iowa.

- St. Elias schist**, Russell. Nat. Geog. Mag., vol. iii, pp. 167, 173-174. 1891.
Alaska.
- St. Elias schist**, Upham. Geol. Soc. Am., Bull., vol. iv, p. 190. 1893.
Pleistocene (?). Alaska.
- St. Francois limestone**, Keyes. Mo. Geol. Surv., vol. vi, pp. 331, 349, 352. 1894.
Cambrian. Missouri. Included in Ozark series. Includes Potosi limestone and
St. Joseph limestone.
- St. Francois**, Keyes. Mo. Geol. Surv., vol. vii, pt. ii, p. 649. 1894.
Lower Silurian. Missouri.
- St. Genevieve limestone**, Shumard. St. Louis Acad. Sci., Trans., vol. i, p. 406.
1857.
Lower Carboniferous. Missouri. Included in Mountain limestone.
- St. Genevieve limestone**, Shumard. Mo. Geol. Surv., Rept., 1855-1871, p. 293. 1873.
Carboniferous. Missouri. Included in Lower Carboniferous.
- St. Genevieve**, Keyes. Geol. Soc. Am., Bull., vol. iii, pp. 284, 287. 1892.
Lower Carboniferous. Missouri.
- St. Genevieve limestone**, Keyes. Mo. Geol. Surv., vol. iv, pp. 30, 76. 1894.
Lower Carboniferous. Missouri. Included in St. Louis stage.
- St. Genevieve limestone**, Keyes. Mo. Geol. Surv., vol. vii, pt. ii, p. 390. 1894.
Lower Carboniferous. Missouri. Included in St. Louis stage.
- St. Joe marble**, Hopkins. Ark. Geol. Surv., 1890, vol. iv, pp. 252-350. 1890.
Carboniferous. Arkansas. Included in Lower Carboniferous.
- St. Joe limestone**, Gallagher. Mo. Geol. Surv., Bien. Rept., p. 52. 1898.
Upper Carboniferous. Missouri. Included in Upper Coal Measures.
- St. Johns slate**, Jukes. General Rept. on Geol. of Newfoundland, p. 51 et seq.
1843.
Cambrian (?). Newfoundland.
- St. John shales**, Dawson. Am. Jour. Sci., 2d ser., vol. xxxv, pp. 314-319. 1863.
Devonian. Canada. Included in St. John group or series.
- St. John group**, Dawson. Am. Jour. Sci., 2d ser., vol. xxxv, pp. 314-319. 1863.
Devonian. Canada. Includes St. John shales.
- St. John group**, Matthew. Can. Nat., vol. viii, pp. 244, 247-251. 1863.
Cambrian. New Brunswick.
- St. John series**, Dawson. Regents Univ. of N. Y., 16th Ann. Rept., pp. 97-109;
Quart. Jour. Geol. Soc., vol. xviii, p. 296. 1863.
Devonian or Upper Silurian. New Brunswick. Included in Middle and Lower
Devonian, Upper Silurian. Includes Catskill, Chemung, Portage, Genesee,
Hamilton, Corniferous, Oriskany and Schoharie.
- St. Jean (John) group**, Bailey and Matthew. Can. Geol. Surv., Rept. 1870-71, pp. 138-
148. 1873.
Lower Silurian. New Brunswick. Exact syn. Acadian group.
- St. John group**, Matthew. Can. Geol. Surv., Rept. 1876-77, p. 342. 1878.
New Brunswick.
- St. John group**, Bailey. Can. Geol. Surv., Rept. 1877-78, p. 28D². 1879.
Cambrian. New Brunswick. Included in Primordial Silurian. Exact syn.
Acadian group.
- St. John group**, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, No. 4, p. 271. 1881.
- St. John group**, Matthew. Can. Roy. Soc., Proc. and Trans., vol. i, sec. iv, pp. 87-108,
271-279; vol. ii, sec. iv, pp. 99-124; vol. iii, sec. iv, pp. 29-84; vol. v, sec. iv,
pp. 115-166; vol. viii, sec. iv, pp. 123-166; vol. ix, sec. iv, pp. 95-110; vol. xi, sec.
iv, pp. 85-130. 1883-1893.
Cambrian. New Brunswick.
- St. John group**, Matthew. N. B. Nat. Hist. Soc. Bull., vol. i, 1882-86, pp. 97-102.
1885.
Cambrian. New Brunswick.

- St. John group, Matthew. Can. Rec. Sci., vol. ii, pp. 357-363. 1887.
Cambrian. New Brunswick.
- St. John group, Matthew. Can. Roy. Soc., Proc. and Trans., vol. vii, sec. iv, pp. 123-129. 1890.
Cambrian. New Brunswick.
- St. John, Walcott. U. S. Geol. Surv., Bull. No. 81, pp. 248, 264. 1891.
Cambrian. Newfoundland.
- St. John group, Matthew. Can. Roy. Soc., Trans., new ser., vol. iii, sec. iv, pp. 165-211. 1897.
Cambrian. New Brunswick.
- St. John group, Matthew. Can. Roy. Soc., Trans., new ser., vol. iv, sec. iv, p. 123. 1898.
Cambrian. New Brunswick.
- St. John group, Walcott. Wash. Acad. Sci., Proc., vol. i, p. 324. 1900.
Cambrian. Newfoundland.
- St. Joseph** limestone, Keyes. Mo. Geol. Surv., vol. vi, p. 331. 1894.
Cambrian. Missouri. Included in St. Francois limestone, Ozark series. Part. syn. Osage limestone, Cole Camp limestone.
- St. Joseph limestone, Winslow. U. S. Geol. Surv., Bull. No. 132, p. 14. 1896.
Missouri.
- St. Lawrence** limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., 2d Ann. Rept., pp. 152-155. 1874.
Lower Silurian. Minnesota.
- St. Lawrence limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., 4th Ann. Rept., pp. 32-34. 1876.
Lower Silurian. Minnesota. Included in Lower Magnesian as lowest portion.
- St. Lawrence limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., 5th Ann. Rept., p. 29. 1877.
Lower Silurian. Minnesota.
- St. Lawrence, Upham. Minn. Geol. and Nat. Hist. Surv., 8th Ann. Rept., p. 103. 1880.
Lower Silurian. Minnesota.
- St. Lawrence limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, pp. 222, 253, 282. 1884.
Minnesota.
- St. Lawrence limestone, Harrington. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, p. 334. 1884.
Cambrian. Minnesota.
- St. Lawrence limestone, Upham. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, p. 424. 1884.
Minnesota.
- St. Lawrence, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. ii, pp. 70, 381. 1888.
Cambrian. Minnesota.
- St. Lawrence limestone, Upham. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. ii, pp. 119, 160. 1888.
Cambrian. Minnesota.
- St. Lawrence limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. ii, p. xxii. 1888.
Minnesota. Included in St. Croix. Exact syn. Mendota limestone of Wisconsin Survey.
- St. Lawrence formation, Hall. Minn. Acad. Nat. Sci., Bull., vol. iii, No. 1, p. 134. 1889.
Cambrian. Minnesota. Exact syn. Mendota limestone of Irving.

- St. Lawrence formation, Hopkins. Ark. Geol. Surv., 1890, vol. iv., p. 50. 1890.
Cambrian. Arkansas.
- St. Lawrence limestone, Hall and Sardeson. Geol. Soc. Am., Bull., vol. iii, p. 341. 1892.
Ordovician. Minnesota. Included in Magnesian series.
- St. Lawrence limestone, Keyes. Iowa Geol. Surv., vol. i, p. 23. 1893.
Cambrian. Iowa. Included in St. Croix sandstone. Exact syn. Mendota limestone.
- St. Lawrence stage, Upham. Am. Geol., vol. xvi, p. 106. 1895.
Pleistocene. Included in Champlain epoch.
- St. Lawrence, Hall and Sardeson. Geol. Soc. Am., Bull., vol. vi, pp. 167, 172. 1895.
Cambrian(?). Minnesota. Included in Magnesian series.
- St. Louis** limestone, Englemann. Am. Jour. Sci., 2d ser., vol. iii, pp. 119-120. 1847.
Lower Carboniferous. Illinois. Included in Mountain limestone.
- St. Louis limestone, Swallow. Mo. Geol. Surv., 1st and 2d Ann. Repts., pp. 93, 174. 1855.
Carboniferous. Missouri. Included in Mountain or Lower Carboniferous limestone.
- St. Louis limestone, Shumard. Mo. Geol. Surv., 1st and 2d Ann. Repts., pt. ii, pp. 139, 170, 181. 1855.
Carboniferous. Missouri.
- St. Louis, Hall. Am. Assoc. Adv. Sci., Proc., vol. x, p. 56. 1856.
Carboniferous. Mississippi Valley. Exact syn. Concretionary limestone.
- St. Louis limestone, Shumard. St. Louis Acad. Sci., Trans., vol. i, p. 407. 1857.
Lower Carboniferous. Missouri. Included in Mountain limestone.
- St. Louis limestone, Hall. Iowa Geol. Surv., vol. i, pt. i, pp. 98-100. 1858.
Carboniferous. Iowa. Exact. syn. Concretionary limestone.
- St. Louis limestone, Hall. Albany Inst., Trans., vol. iv, pp. 2-3. 1864.
Carboniferous. Mississippi Valley. Exact syn. Concretionary limestone.
- St. Louis group, Worthen. Ill. Geol. Surv., vol. i, pp. 41-43, 83-89. 1866.
Carboniferous. Illinois. Includes Warsaw limestone.
- St. Louis limestone, Worthen. Ill. Geol. Surv., vol. i, pp. 292, 321, 333-334, 352, 353-354. 1866.
Carboniferous. Illinois.
- St. Louis group, Engelm. Ill. Geol. Surv., vol. i, pp. 378-381, 413-414, 435-438, 459. 1866.
Carboniferous. Illinois.
- St. Louis, limestone, Engelmann. St. Louis Acad. Sci., Trans., vol. ii, p. 189. 1868.
Lower Carboniferous. Illinois.
- St. Louis limestone, White. Am. Jour. Sci., 2d ser., vol. xlv, p. 333. 1868.
Carboniferous. Iowa.
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- Siliceous group, Upper, Smith. Ala. Geol. Surv., Rept., 1877, 1878, pp. 14, 21. 1879.
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Trias. Included in Red beds.
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1895.
Cambrian. Tennessee. Included in Chilhowee series.
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Ontario.
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Carboniferous. Canada. Included in Middle Carboniferous.
- Stockbridge** limestone, Emmons. Agric. of N. Y., vol. i, pp. 78-83. 1846.
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1872.
Silurian. New York.
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Silurian. Massachusetts.
- Stockbridge limestone, Marcou. Am. Geol., vol. xix, pp. 113-116. 1897.
Cambrian. New England.
- Stockbridge limestone, Emerson. U. S. Geol. Surv., Bull. No. 159, pp. 84-85. 1899.
Silurian. Massachusetts.
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Juratrias. New Jersey. Included in Newark system.
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Juratrias. New York, New Jersey. Included in Newark.
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Carboniferous. Texas. Included in Cisco division.
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Silurian. Tennessee. Included in Stones River group.
- Stones River group, Safford. Am. Jour. Sci., 2d ser., vol. xii, pp. 354-356. 1851.
Silurian. Tennessee. Includes Stones River beds, Lower Lebanon limestone, and Upper Lebanon limestone.
- Stones River group, Safford. Am. Assoc. Adv. Sci., Proc., vol. vii, p. 153. 1853.
Silurian. Tennessee. Exact syns. Lower Trenton and Black River group.
- Stones River, Safford. Geol. Reconm. of the State of Tenn., 1st Rept., p. 155. 1856.
Silurian. Tennessee. Included in Central limestone and shale group. Part. syns. Black River and Lower Trenton of New York.
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Devonian. Pennsylvania. Included in Chemung.
- Stony Brook beds, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1564-1566. 1892.
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- Stonybrook quartzite, Hobbs. Am. Geol., vol. xxiii, p. 110. 1899.
Cambrian. Massachusetts.
- Stormville**, White. 2d Pa. Geol. Surv., Rept. G⁶, pp. 131-137. 1882.
Silurian. Pennsylvania. Included in Lower Helderberg or No. vi.
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Silurian. Pennsylvania. Included in Lower Helderberg or No. vi.
- Stormville shale, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 924-925, 944, 948, 959, 1048, 1065, 1074. 1892.
Silurian. Pennsylvania. Included in No. vi; includes Bastard limestone. Exact syn. Oriskany shale.
- Stormville sandstone, Weller. N. J. Geol. Surv., Rept. 1899, p. 39. 1900.
Devonian. New Jersey.
- Strawn division**, Cummins. Texas Geol. Surv., 2d Ann. Rept., p. 374. 1891.
Carboniferous. Texas. Included in Coal Measures.

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Carboniferous. Texas. Includes Ricker, Antelope Creek, Indian Creek, Comanche Creek, Wilbarger Creek, Buffalo Creek, Rough Creek, Hanna Valley, Cottonwood Creek, Spring Creek, Brown Creek, Big Valley, Bull Creek, Horse Creek, Fox Creek, Bed No. VIII, Shadrick Mill, Elliott Creek, Burnt Branch, and Lynch Creek beds.

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Silurian. Pennsylvania.
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Silurian. Canada. Includes Ottawa beds. Exact syn. Utica shale.
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Silurian. Pennsylvania.
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Ordovician.
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Silurian. Pennsylvania.
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Silurian. New York. Exact syns. Mohawk slate, Black slate and shale, Frankfort slate, Lorraine shales. Part. syns. Eaton's Transition argillite, Wacke slate, Glazed slate, and Matinal black slate of Pennsylvania Survey.
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- Warrensburg sandstone, Marbut. Mo. Geol. Surv., vol. xii, pt. ii, pp. 123, 210, 275. 1898.
Upper Carboniferous. Missouri. Included in Missourian series.
- Warsaw**, Hall. Am. Assoc. Adv. Sci., Proc., vol. x, p. 56. 1856.
Carboniferous. Mississippi Valley. Exact syn. Second Archimides.
- Warsaw limestone, Shumard. St. Louis Acad. Sci., Trans., vol. i, p. 407. 1857.
Lower Carboniferous. Missouri. Included in Mountain limestone. Exact syn. Second Archimides limestone.
- Warsaw limestone, Hall. Iowa Geol. Surv., vol. i, p. 97. 1858.
Carboniferous. Iowa. Exact syn. Second Archimides limestone.
- Warsaw limestone, Worthen. Iowa Geol. Surv., vol. i, p. 192. 1858.
Carboniferous. Iowa.
- Warsaw limestone, Hall. Albany Inst., Trans., vol. iv, pp. 2-3. 1864.
Carboniferous. Mississippi Valley. Exact syns. Second Archimides limestone, Magnesian limestone.
- Warsaw limestone, Engelmann. St. Louis Acad. Sci., Trans., vol. ii, p. 189. 1868.
Lower Carboniferous. Illinois.
- Warsaw beds, Worthen. Ill. Geol. Surv., vol. v, p. 276. 1873.
Carboniferous. Illinois. Included in St. Louis limestone.
- Warsaw limestone, Broadhead. Mo. Geol. Surv., Rept., 1873-74, p. 184. 1874.
Carboniferous. Missouri. Included in St. Louis group.
- Warsaw group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, No. 4, p. 275. 1881.
Carboniferous.
- Warsaw limestone, Hopkins. Ark. Geol. Surv., 1890, vol. iv, p. 55. 1890.
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- Warsaw, Keyes. Geol. Soc. Am., Bull., vol. iii, pp. 286, 293, 298. 1892.
Lower Carboniferous. Missouri. Included in St. Louis and Osage groups.
- Warsaw, Keyes. Mo. Geol. Surv., vol. iv, pp. 30, 76. 1894.
Lower Carboniferous. Missouri. Included in Augusta stage (part).
- Warsaw, Keyes. Mo. Geol. Surv., vol. vii, pt. ii, p. 390. 1894.
Lower Carboniferous. Missouri. Included partly in St. Louis stage, partly in Augusta stage.
- Warsaw formation, Gordon. Jour. of Geol., vol. iii, pp. 289-311. 1895.
Carboniferous. Iowa.
- Warsaw shale and limestone, Gordon. Iowa Geol. Surv., vol. iv, pp. 213-214. 1895.
Carboniferous. Iowa.
- Washakie**, Peale. U. S. Geol. and Geog. Surv. of Terr., 8th Ann. Rept., p. 146. 1876.
Tertiary. Rocky Mountains.
- Washakie beds, Dall and Harris. U. S. Geol. Surv., Bull. No. 84, p. 337. 1892.
Tertiary. Wyoming.

- Washburn** sandstone, Stevenson. N. Y. Geol. Acad. Sci., Trans., vol. xv, p. 51. 1896.
Carboniferous. Arkansas. Included in Appleton stage.
- Wartburg** sandstone, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 33. 1896.
Carboniferous. Tennessee. Part. syn. Walden sandstone.
- Wartburg** sandstone, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 40. 1897.
Carboniferous. Tennessee. Part. syn. Walden sandstone.
- Washington** County group, Stevenson. 2d Pa. Geol. Surv., Rept. K, pp. 44-56. 1876.
Carboniferous. Pennsylvania. Included in Upper Barren Measures.
- Washington** County group, Lesley. 2d Pa. Geol. Surv., Rept., H³, p. xxiii, 1877.
- Washington** County group, D'Inwilliers. 2d Pa. Geol. Surv., Ann. Rept., 1886, pp. 59-60. 1887.
Carboniferous. Pennsylvania. Included in Upper Barren Measures.
- Washington** shale and sandstone, Simonds. Ark. Geol. Surv., 1888, vol. iv, pp. 75-82, 151. 1888.
Carboniferous. Arkansas. Included in Lower Carboniferous.
- Washington** or High Bluff greensand, Hill. Ark. Geol. Surv., 1888, vol. ii, pp. 72-75. 1888.
Cretaceous. Arkansas. Included in Upper Arenaceous beds.
- Washington** sandstone, White. U. S. Geol. Surv., Bull. No. 65, p. 38. 1891.
Carboniferous. Pennsylvania, West Virginia. Included in Permo-Carboniferous, Dunkard Creek.
- Washington** limestone, White. U. S. Geol. Surv., Bull. No. 65, pp. 35-36. 1891.
Carboniferous. Pennsylvania and West Virginia. Included in Permo-Carboniferous, Dunkard Creek. Includes Upper, Middle, and Lower Washington limestones.
- Washington** gneiss, Emerson. U. S. Geol. Surv., Geol. Atlas of U. S., Hawley sheet. 1892.
Algonkian. Massachusetts. Part. syn. Stamford gneiss.
- Washington**, Hill. Geol. Soc. Am., Bull., vol. v, p. 302. 1894.
Cretaceous. Texas. Included in Glauconitic division.
- Washington** shale, Drake. Am. Phil. Soc., Proc., vol. xxxvi, p. 354. 1897.
Carboniferous. Indian Territory. Included in Boston group of Lower Cretaceous.
- Washington** gneiss, Emerson. U. S. Geol. Surv., Mon., vol. xxix, pl. xxxiv, p. 20. 1898.
Pre-Cambrian. Massachusetts.
- Washington** gneiss, Emerson. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 50. 1898.
Algonkian. Massachusetts.
- Washington** limestone, Richardson. Am. Assoc. Adv. Sci., Proc., vol. xlvii, pp. 295-296. 1898.
Silurian. Vermont. Included in Trenton.
- Washington** gneiss, Emerson. U. S. Geol. Surv., Bull. No. 159, p. 34. 1899.
Pre-Cambrian. Massachusetts.
- Washita** limestone, Shumard. St. Louis Acad. Sci., Trans., vol. i, pp. 583, 586. 1857.
Cretaceous. Texas.
- Washita** limestone, Marcou. Boston Soc. Nat. Hist., Proc., vol. viii, 1861-62, p. 89. 1861.
Cretaceous. Texas. Included in Upper Cretaceous (Lower Cretaceous, according to Marcou).

- Washita division, White. Phil. Acad. Nat. Sci., Proc., 1887, p. 40. 1887.
Cretaceous. Texas. Included in Comanche series.
- Washita division, Hill. Ark. Geol. Surv., 1888, vol. ii, pp. 111-113, 179-180. 1888.
Cretaceous. Arkansas. Included in Lower Cretaceous or Comanche series.
- Washita division, Dumble. Texas Geol. Surv., 1st Ann. Rept., pl. iii, pp. i-li. 1890.
Cretaceous. Texas. Included in Comanche series.
- Washita division, Hill. Texas Geol. Surv., 1st Ann. Rept., pp. 126-130. 1890.
Cretaceous. Texas. Included in Comanche series. Includes Shoal Creek limestone, Exogyra Arietna clay, Washita or Fort Worth limestone, Caprotina beds.
- Washita division, Taff. Texas Geol. Surv., 2d Ann. Rept., pp. 719-732. 1891.
Cretaceous. Texas. Included in Lower Cretaceous. Includes Caprotina, Arietna, Malone, Etholen, Yucca Bluff, Quitman, and Mountain beds.
- Washita division, Hill. Geol. Soc. Am., Bull., vol. ii, pp. 503, 515-518. 1891.
Cretaceous. Texas. Includes Denison beds, Fort Worth limestone, Duck Creek limestone, and Kiamitia clays.
- Washita division, Hill. Artesian Invest., Final Rept., pt. iii, p. 88, 52d Cong., 1st sess., Ex. Doc. 41, pt. iii. 1892.
Cretaceous. Southwest. Includes Denison beds. Exact syn. Indian Territory division.
- Washita division, Taff. Texas Geol. Surv., 3d Ann. Rept., pp. 276-277. 1892.
Cretaceous. Texas. Includes Vola limestone, Arietna clay, Denison, and Fort Worth.
- Washita, Dumble and Cummins. Am. Geol., vol. xii, p. 310. 1893.
Cretaceous. Texas.
- Washita division, Taff. Texas Geol. Surv., 4th Ann. Rept., pp. 262-283. 1893.
Cretaceous. Texas. Included in Lower Cretaceous. Includes Vola limestone, Exogyra Arietina clay, Fort Worth limestone, and Denison marl.
- Washita stage, Dumble. Geol. Soc. Am., Bull., vol. vi, p. 377. 1895.
Cretaceous. Texas. Included in Lower Cretaceous.
- Wassonville limestone**, Bain. Am. Geol., vol. xv, p. 322. 1895.
Carboniferous. Iowa. Included in Mississippian series, Kinderhook.
- Wassonville limestone, Bain. Iowa Geol. Surv., vol. v, p. 134. 1896.
Carboniferous. Iowa. Included in Kinderhook.
- Water lime**, Gebhard. Am. Jour. Sci., 1st ser., pp. 172-177. 1835.
New York.
- Water lime, Vanuxem. N. Y. Geol. Surv., 3d Ann. Rept., pp. 272-274. 1839.
Silurian. New York.
- Water-lime series, Hall. N. Y. Geol. Surv., 3d Ann. Rept., pp. 292, 306. 1839.
Silurian. New York.
- Water-lime group, Vanuxem. Geol. of N. Y., pt. iii, pp. 110-116. 1842.
Paleozoic. New York. Included in New York system. Includes Water-lime group, Hydraulic limerock. Part. syn. No. vi, Pennsylvania Survey.
- Water-lime group, Mather. Geol. of N. Y., pt. i, pp. 349-352. 1843.
Paleozoic. New York. Included in Helderberg division. Includes Hydraulic limestone, No. vi, Rogers.
- Water-lime group, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 141-143. 1843.
Paleozoic. New York. Includes Water-lime group, Water-lime rock (?). Tentaculite limestone.
- Water-lime group or (Manlius Water lime), Owen. Am. Jour. Sci., 2d ser., vol. i, p. 47. 1846.
Silurian. New York. Included in Helderberg series of the New York system. Part. syn. part of No. vi, Pennsylvania Survey.
- Water lime, Cook. Geol. of N. J., pp. 155-157. 1868.
Silurian. New Jersey.

- Water lime, Winchell. Ohio Geol. Surv., vol. i, pt. i, pp. 599, 617, 632, 642. 1873.
Silurian. Ohio.
- Water lime, Gilbert. Ohio Geol. Surv., vol. i, pt. i, p. 575. 1873.
Silurian. Ohio.
- Water lime, Newberry. Ohio Geol. Surv., vol. i, pt. i, p. 135. 1873.
Silurian. Ohio.
- Water lime, Newberry. Ohio Geol. Surv., vol. ii, p. 193. 1874.
Silurian. Ohio.
- Water lime, Winchell. Ohio Geol. Surv., vol. ii, pp. 230, 301, 317, 329, 374, 388, 399.
1874.
Silurian. Ohio.
- Water lime, Ashburnet. Am. Phil. Soc. Proc., vol. xvi, pp. 530, 555. 1877.
Silurian. Appalachian region. Exact syn. Scalent.
- Water lime group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, No. 4, p. 274. 1881.
- Water lime group, Tiffany. Sci., vol. ii, p. 323. 1883.
Silurian. Iowa.
- Water lime, Tiffany. Am. Assoc. Adv. Sci., Proc., vol. xxxii, p. 246. 1884.
Silurian. Iowa.
- Water lime group, Hopkins. Ark. Geol. Surv., 1890, vol. iv, p. 52. 1890.
Silurian. Arkansas. Included in Silurian group. Part syn. Lower Helderberg.
- Water lime formation, Luther. N. Y. State Geol., 16th Ann. Rept., p. 211. 1899.
Silurian. New York.
- Waterloo** quartzite, Chamberlin. Geol. of Wis., vol. ii, pp. 252-256. 1877.
Archean. Wisconsin.
- Waterville** slates, Hitchcock. Rept. on Geol. of Maine, 1861, p. 232. 1861.
Lower Silurian.
- Watts Creek** bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 419. 1893.
Carboniferous. Texas. Included in Cisco division.
- Waukesha** beds, Chamberlin. Geol. of Wis., vol. ii, pp. 357-360. 1877.
Upper Silurian. Wisconsin. Included in Niagara.
- Waukesha beds, Chamberlin. Geol. of Wis., vol. i, p. 187. 1883.
Silurian. Wisconsin. Included in Niagara.
- Waverly** sandstone series, Mather. Am. Jour. Sci., 1st ser., vol. xxxiv, p. 356.
1838.
Ohio.
- Waverly sandstone series, Briggs. Ohio Geol. Surv., 1st Ann. Rept., by W. W.
Mather, p. 79. 1838.
Carboniferous. Ohio.
- Waverly sandstone, Owen. Geol. Recon. Indiana, 2d Rept., 1838, pp. 37, 44. 1839.
- Waverly rock, Owen. Geol. Recon. Indiana, Rept., 1838, pt. ii, p. 59. 1859.
Carboniferous. Ohio. Exact syn. Soft freestone of the knobs (Knob-stone group)
of Indiana.
- Waverly group, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, p. 28. 1870.
Carboniferous. Ohio. Includes Cuyahoga shale, Berea grit, Bedford shale, and
Cleveland shale.
- Waverly sandstone, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, p. 21. 1870.
Carboniferous. Ohio.
- Waverly black slate, Andrews. Ohio Geol. Surv., Rept. Prog., 1869, p. 66. 1870.
Ohio.
- Waverly sandstones, Andrews. Ohio Geol. Surv., Rept. Prog., 1869, pp. 61, 65.
1870.
Ohio.
- Waverly Sandstone group, Andrews. Ohio Geol. Surv., Rept. Prog., 1870, p. 59.
1871.
Ohio.

- Waverly sandstone, Andrews. Ohio Geol. Surv., Rept., 1869, p. 67. 1871.
Ohio.
- Waverly group, Read. Ohio Geol. Surv., Rept. Prog., 1870, p. 474. 1871.
Ohio.
- Waverly group, Newberry. Ohio Geol. Surv., Rept., 1869, p. 21. 1871.
Carboniferous. Ohio. Includes Cuyahoga shale, Berea grit, Bedford shale, and
Cleveland shale.
- Waverly, Andrews. Ohio Geol. Surv., vol. i, pt. i, p. 345. 1873.
Carboniferous. Ohio.
- Waverly, Newberry. Ohio Geol. Surv., vol. i, pt. i, pp. 185, 208. 1873.
Carboniferous. Ohio. Includes Cuyahoga shale, Berea grit, and Bedford and
Cleveland shales.
- Waverly, Newberry. Ohio Geol. Surv., vol. ii, pp. 84-99. 1874.
Carboniferous. Ohio. Included in Lower Carboniferous. Includes Cuyahoga
shale, Berea grit, Bedford shale and Cleveland shale.
- Waverly, Andrews. Ohio Geol. Surv., vol. ii, pp. 589, 593. 1874.
Carboniferous. Ohio.
- Waverly, Orton. Ohio Geol. Surv., vol. ii, pp. 618, 648. 1874.
Carboniferous. Ohio. Included in Subcarboniferous.
- Waverly group, Rominger. Mich. Geol. Surv., vol. iii, pt. i, p. 69. 1876.
Carboniferous. Michigan. Includes Winchells, Marshall group, and part of his
Huron group. Exact syn. Waverly group of Ohio.
- Waverly, Shaler. Ky. Geol. Surv., new ser., vol. iii, pp. 175-178. 1877.
Carboniferous. Kentucky. Exact syn. Siliceous group.
- Waverly group, Hicks. Am. Jour. Sci., 3d ser., vol. xvi, pp. 216-224. 1878.
Carboniferous. Ohio. Includes Licking shales, Black Hand conglomerate, Gran-
ville beds, Raccoon shales, Sunbury slate, etc.
- Waverly conglomerate, Read. Ohio Geol. Surv., vol. iii, pp. 317, 337, 523, 545, 816.
1878.
Carboniferous. Ohio.
- Waverly, Hodge. Ohio Geol. Surv., vol. iii, p. 564. 1878.
Carboniferous. Ohio.
- Waverly, Orton. Ohio Geol. Surv., vol. iii, p. 58. 1878.
Carboniferous. Ohio.
- Waverly, Newberry. Ohio Geol. Surv., vol. iii, pp. 19, 763. 1878.
Carboniferous. Ohio.
- Waverly, Orton. Am. Jour. Sci., 3d ser., vol. xviii, pp. 138-139. 1879.
Carboniferous. Ohio.
- Waverly, Orton. Am. Assoc. Adv. Sci., Proc., vol. xxx, pp. 167-174. 1882.
Carboniferous. Ohio. Included in Subcarboniferous. Includes Bedford shale,
Berea grit, Berea shale=Waverly black shale, Cuyahoga shale, Logan group,
and Maxville limestone.
- Waverly, Hall. Am. Assoc. Adv. Sci., Proc., vol. xxxiii, pt. ii, p. 419. 1885.
Carboniferous. New York and Pennsylvania.
- Waverly series, Orton. Ohio Geol. Surv., Prelim. Rept. Petroleum and Inflammable
Gas, p. 24. 1886.
Ohio. Includes Logan series, Cuyahoga shale, Berea shale, Berea grit, and Bedford
shale.
- Waverly group, Herrick. Denison Univ. Sci. Lab., Bull., vol. ii, p. 7. 1887.
Ohio.
- Waverly group, Orton. Ohio Geol. Surv., Rept., vol. vi, pp. 3, 33. 1888.
Carboniferous. Ohio. Includes Logan group, Cuyahoga shale, Berea shale; Berea
grit, and Bedford shale.
- Waverly group, Herrick. Denison Univ. Sci. Lab., Bull., vol. iii, pp. 13, 23, 101. 1888.
Ohio.

- Waverly group, Herrick. Denison Univ. Sci. Lab., Bull., vol. iv, p. 97. 1888.
Ohio. Includes Cuyahoga or Waverly series, and Berea or Transition series.
- Waverly shale, Herrick. Denison Univ. Sci. Lab., Bull., vol. iv, p. 106. 1888.
Ohio. Included in Berea or Transition series.
- Waverly group, Miller. N. A. Geol. and Pal., p. 68. 1889.
- Waverly, Herrick. Am. Geol., vol. iii, pp. 94-99. 1889.
Carboniferous. Ohio. Includes Subcarboniferous limestone (Burlington and Keokuk), Kinderhook, and Chemung in part.
- Waverly, Vogdes. N. Y. Acad. Sci., Annals, vol. iv, p. 71. 1889.
Carboniferous. Mississippi Valley. Includes Chouteau limestones and Vernicular sandstone. Exact syn. Kinderhook group.
- Waverly group, Cooper. Denison Univ. Sci. Lab., Bull., vol. v, p. 24. 1890.
Ohio. Includes Bedford shale, Berea grit, Lower Berea shale, Cuyahoga shale, etc.
- Waverly group, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept., pp. 33-42. 1890.
Carboniferous. Ohio. Includes Bedford shale, Berea grit and shale, Cuyahoga shale, and Logan group.
- Waverly, Williams. U. S. Geol. Surv., Bull. No. 80, p. 173. 1891.
Carboniferous.
- Waverly shale and sandstone, Sullivan. Ky. Geol. Surv. (Proctor), Geol. of Jackson and Rockcastle Cos., 1891.
Carboniferous. Kentucky.
- Waverly group, Orton. Ohio. Geol. Surv., vol. vii, pp. 4, 26. 1893. Includes Logan group, Cuyahoga shale, Berea shale, Berea grit, and Bedford shale.
Carboniferous. Ohio.
- Waverly, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, pp. 1779-1789. 1895.
Carboniferous. Pennsylvania. Included in No. x, Pocono.
- Waverly shale, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 46, 47. 1898.
Carboniferous. Kentucky. Included in Mississippian series.
- Waverly formation, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 53. 1899.
Carboniferous. Tennessee. Included in Mississippian series. Part. syn. Fort Payne chert.
- Waverly group, Weller. St. Louis Acad. Sci., Trans., vol. ix, p. 49. 1899.
Carboniferous. Ohio.
- Waynesburg** limestone, D'Inwilliers. 2d Pa. Geol. Surv., Ann. Rept., 1886, pp. 71-73. 1887.
Carboniferous. Pennsylvania. Included in Upper Productive Measures.
- Waynesburg sandstone, Lovejoy. Ohio Geol. Surv., vol. vi, pp. 627, 635. 1888.
Carboniferous. Ohio.
- Waynesburg sandstone, White. U. S. Geol. Surv., Bull. No. 65, p. 40. 1891.
Carboniferous. Pennsylvania, West Virginia. Included in Permo-Carboniferous, Dunkard Creek series.
- Waynesburg limestone, White. U. S. Geol. Surv., Bull. No. 65, p. 58. 1891.
Carboniferous. Pennsylvania, West Virginia. Included in Upper Coal Measures, Monongahela River series.
- Waynesburg sandstone, White. Geol. Soc. Am., Bull., vol. iii, p. 189. 1892.
Upper Carboniferous. West Virginia. Included in Upper Coal Measures.
- Wealden**, Uhler. Johns Hopkins Univ. Circs., No. 21, p. 53. 1883.
Jurassic. Maryland.
- Webb Bluff**, Dumble. Geol. Soc. Am., Bull., vol. iii, p. 230. 1892.
Tertiary. Texas. Included in Eocene.

- Webberville** formation, Hill and Vaughan. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 241. 1898.
Cretaceous. Texas. Included in Montana division of Gulf series.
- Weber** quartzite, King. Am. Jour. Sci., 3d ser., vol. xi, p. 480. 1876.
Carboniferous. Nevada.
- Weber** quartzite, Emmons. U. S. Geol. Expl. of 40th Parallel, vol. ii, p. 343 et seq. 1877.
Carboniferous. Utah. Included in Upper Carboniferous.
- Weber** quartzite, King. U. S. Expl. of 40th Parallel, vol. i, pp. 127-248. 1878.
Carboniferous. Utah, Nevada.
- Weber** quartzite, White. U. S. Geol. and Geog. Surv. of Terr., 10th Ann. Rept., p. 23. 1878.
Carboniferous. Utah.
- Weber** grit, Emmons. U. S. Geol. Surv., 2d Ann. Rept., p. 219. 1882.
Carboniferous. Colorado.
- Weber** conglomerate, Hague. U. S. Geol. Surv., 3d Ann. Rept., pp. 253, 270. 1883.
Carboniferous. Nevada.
- Weber**, Emmons. U. S. Geol. Surv., Mon., vol. xii, p. 67. 1886.
Carboniferous. Colorado.
- Weber** conglomerate, Hague. U. S. Geol. Surv., Mon., vol. xx, p. 91. 1892.
Carboniferous. Nevada.
- Weber**, Eldridge. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 9. 1894.
Carboniferous. Colorado.
- Weber** formation, Emmons. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 48. 1898.
Carboniferous. Colorado.
- Weber** formation, Spurr. U. S. Geol. Surv., Mon., vol. xxxi, pp. 30-33. 1898.
Carboniferous. Colorado.
- Weisner** quartzite, Hayes. Geol. Soc. Am., Bull., vol. ii, p. 143. 1890.
Cambrian (?). Tennessee. Part. syn. Chilhowee (?).
- Weisner** quartzite, Smith. Ala. Geol. Surv., Rept. on Cahaba coal field, p. 149. 1890.
Cambrian. Alabama.
- Weisner**, Walcott. U. S. Geol. Surv., Bull. No. 81, p. 251. 1891.
Cambrian. Appalachian region.
- Weisner** formation, Hayes. Geol. Soc. Am., Bull., vol. v, p. 468. 1894.
Cambrian. Georgia.
- Weisner** sandstone, McCalley. Ala. Geol. Surv., Rept. on Valley regions, pt. ii, pp. 38-39, 484, 509-512, 542-575, 674-692, 754-765, 815-817. 1897.
Cambrian. Alabama. Exact syn. Chilhowee sandstone.
- Welch** formation, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 44. 1897.
Carboniferous. Virginia, West Virginia. Part. syns. No. xii, Great Conglomerate of Rogers.
- Well** rock series, Swallow. Kan. Geol. Surv., Prelim. Rept., pp. 21-22, 47. 1866.
Carboniferous. Kansas.
- Wellesley** formation, Brooks. U. S. Geol. Surv., 20th Ann. Rept., pt. vii, pp. 470-472, 479. 1900.
Devonian or Carboniferous. Alaska.
- Wellington** shale, Cragin. Washburn Coll. Lab. Nat. Hist., Bull., vol. i, No. 3, pp. 85-86. 1885.
Pleistocene. Kansas. Exact syn. Champlain.
- Wellington** shale, Cragin. Kansas City Rev., vol. viii, pp. 678-682. 1885.
Pleistocene. Kansas. Exact syn. Champlain.

- Wellington shales, Cragin. Colo. Colleg. Stud., vol. vi. pp. 3, 16. 1896.
 Permian. Kansas. Included in Big Blue series. Exact syns. Gray beds or Gray shales.
- Wellington formation, Prosser. Kan. Univ. Geol. Surv., vol. ii, pp. 67-68. 1897.
 Carboniferous. Kansas. Included in Permian. Includes Wellington shales.
- West Elk** breccia, Cross. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 9. 1894.
 Tertiary. Colorado.
- West Fork** series, Schrader. U. S. Geol. Surv., 21st Ann. Rept., pt. ii, p. 475. 1900.
 Devonian (?). Alaska.
- West Franklin** limestone, Collett. Indiana Dept. Geol. and Nat. Hist., 13th Ann. Rept., for 1883, p. 61. 1884.
 Carboniferous. Indiana. Exact syn. Carthage limestone (?).
- West Jefferson** sandstone, Orton. Ohio Geol. Surv., vol. vi, pp. 4, 20. 1888.
 Devonian. Ohio.
- West Jefferson sandstone, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept., p. 25. 1890.
 Devonian. Ohio. Included in Upper Helderberg.
- West Jefferson sandstone, Orton. Ohio Geol. Surv., vol. vii, pp. 4, 18. 1893.
 Devonian. Ohio.
- West Union** limestone, Orton. Ohio Geol. Surv., Rept., 1870, pp. 271, 301. 1871.
 Silurian. Ohio. Included in Niagara series.
- West Union, Orton. Ohio Geol. Surv., vol. ii, p. 670. 1874.
 Silurian. Ohio. Included in Niagara.
- West Union beds, Foerste. Denison Univ. Sci. Lab., Bull., vol. iii, p. 8. 1888.
 Ohio.
- Western** sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept. vol. iv. p. 15. 1899.
 Cambrian. Minnesota.
- Western Valley** gravel, Safford. Am. Jour. Sci., 2d ser., vol. xxxvii, p. 360. 1864.
 Recent. Tennessee.
- Westerville** limestone, Bain. Am. Jour. Sci., 4th ser., vol. v, pp. 437, 439. 1898.
 Carboniferous. Missouri. Included in Carboniferous (Missourian series), Bethany limestone.
- Westfield** serpentine, Emerson. U. S. Geol. Surv., Mon., vol. xxix, p. 92. 1898.
 Silurian. Massachusetts. Included in Chester amphibolites.
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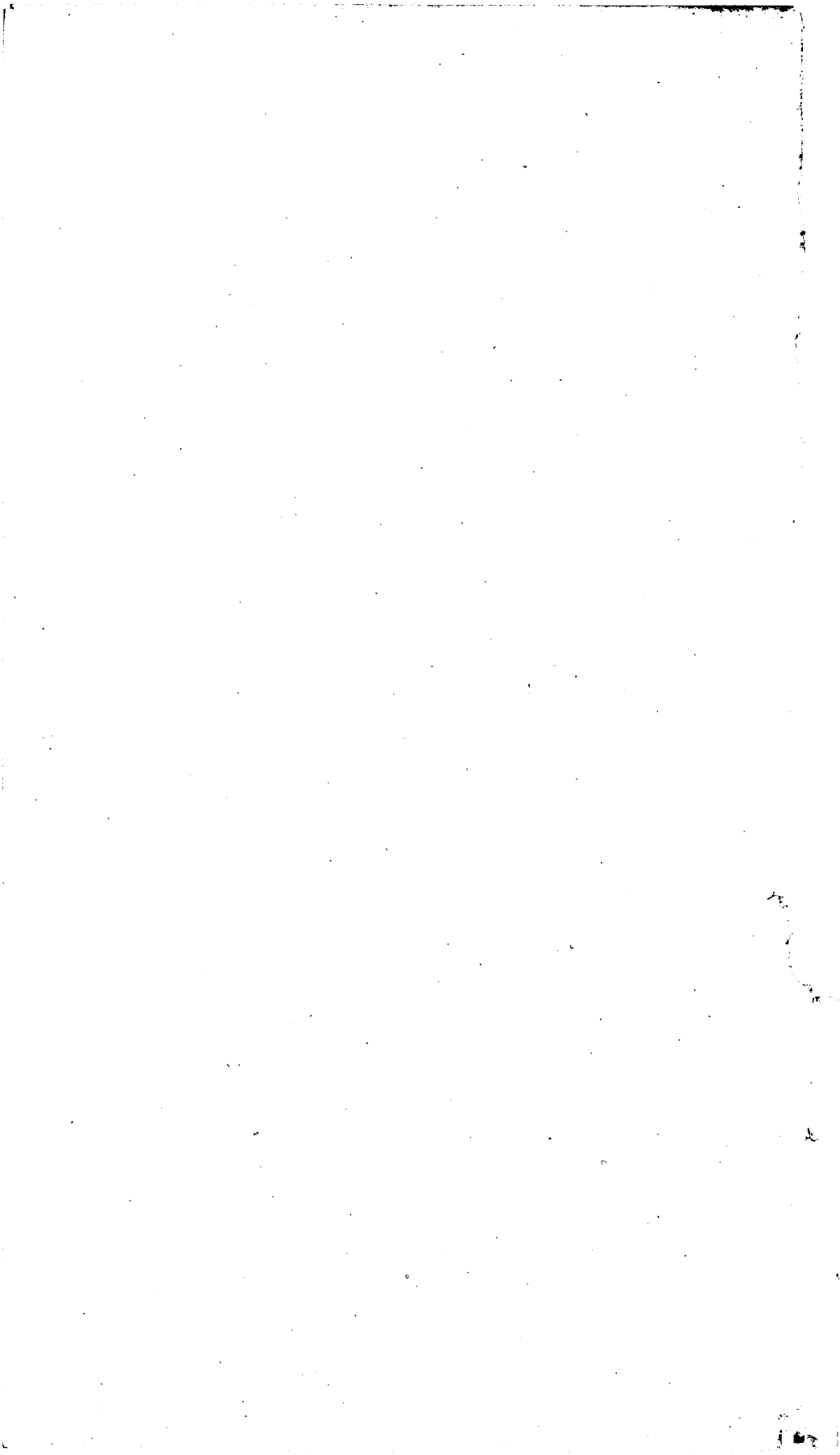
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Maryland.



INDEX LIST OF FORMATION NAMES.

Abilene.	Antiguan.	Atlantocaurus.
Acadian.	Antoine.	Atoka.
Adams Branch.	Anvil Rock.	Attleboro.
Adams Lake.	Apishapa.	Aturia.
Admiralty.	Apison.	Aubrey.
Aftonian.	Appanoose.	Auburn.
Ajibik.	Appleton.	Augusta.
Alachua.	Appomattox.	Auriferous.
Albany.	Aquia Creek.	Auriferous slate.
Albert.	Aquidneck.	Auroral.
Albertan.	Arago.	Austin.
Albirupean.	Arapahoe.	Autocene.
Aldrich.	Arcadia.	Aux Vases.
Algoma.	Archer.	Avalon.
Alleghany River.	Archimedes.	Avondale.
Allegrippus.	Ardmore.	Bad Land.
Allouez.	Arenaceous group.	Baden.
Alma.	Arickaree.	Badito.
Alnwick.	Arietna.	Baird.
Altamaha.	Arisaig.	Bakerstown.
Altamont.	Arizonian.	Ballard.
Alton.	Arkadelphia.	Baltimorean.
Altoona.	Arkansas.	Banff.
Amboy.	Arkona.	Bangor.
Americus.	Arlington.	Baptanodon.
Ames.	Aroostook.	Bar Harbor.
Amherst.	Artemisia.	Baraboo.
Amphitheatre.	Arundel.	Barachois.
Amyzon.	Arvonian.	Barbican.
Anacacho.	Ashland.	Barker.
Anamosa.	Ashley.	Barnegate.
Anderson.	Ashley Hill.	Barnstable.
Anderson River.	Ashton.	Barranca.
Animas River.	Aspalaga.	Barree.
Animikie.	Asphalto.	Barren.
Anoma.	Aspidella.	Barrett.
Anorthosite.	Astoria.	Barrington.
Antelope.	Atane.	Bartletts Island.
Antelope Creek.	Atchison.	Barton.
Anthracite.	Athabasca.	Basal.
Anticosti.	Athens.	Bashi.
Antietam.	Atic Oban.	Bastard.
	Atlantic.	Bates Hole.

Batesville.	Birdseye.	Bowling Green.
Baucari.	Birmingham.	Bozeman.
Bay shot.	Bishop Mountain.	Bradford.
Bayard.	Bitter Creek.	Branditown.
Bayou Chicot.	Bituminous.	Brawdon.
Bays.	Black Bluff.	Braxton.
Beacon Hill.	Black Butte.	Breathitt.
Bead Mountain.	Black Hand.	Bretonian.
Bear River.	Black Hill.	Briceville.
Bearwallow.	Black Prairie.	Bridgeport.
Beaver.	Black River.	Bridger.
Beaver River.	Black River Falls.	Bridgeton.
Beavertown.	Black shale, slate.	Brimfield.
Becket.	Blackstone.	Bristol Bay.
Becraft.	Blackwater.	Brito.
Bed Rock.	Blacksville.	Broad Branch.
Bedford.	Blanco.	Broad Top.
Bee Spring.	Blanco Canyon.	Brontotherium.
Beekmantown.	Blanford.	Brown.
Belfast.	Bloomfield.	Brown Creek.
Belle Isle.	Bloomsburg.	Browns Park.
Bellowspipe.	Bloomsbury.	Brownstown.
Bells Landing.	Blossburg.	Brownsville.
Bellton.	Blue.	Browntown.
Bellvale.	Blue Canyon.	Brownwood.
Belly River.	Blue Creek.	Brunswick.
Beloit.	Blue Cut.	Brush Creek.
Belt.	Blue Hills.	Bryant.
Belva.	Blue Mountain.	Bryn Mawr.
Belvidere.	Blue shell.	Buchanan.
Bend.	Bluefield.	Buda.
Benezette.	Bluegate.	Buff.
Benton.	Bluestone.	Buff Bay.
Berea.	Bluff.	Buffalo.
Berkshire.	Bodeville.	Buffalo Creek.
Bernardston.	Boggy.	Buhr.
Bertie.	Bogue Island.	Buhrstone.
Bertram.	Bohemia.	Bull Creek.
Bethany Falls.	Bolivar.	Bull Mountain.
Bettles.	Bolton.	Buncombe.
Beulah.	Bonair.	Bunker Hill.
Bevier.	Bonaventure.	Burlingame.
Bicknell.	Bone Lake.	Burlington.
Big Basin.	Boone.	Burnetan.
Big Blue.	Booneville.	Burnet.
Big Clifty.	Boscabel.	Burnet Branch.
Big Decipher.	Bosque.	Butler.
Big Injun.	Bossardville.	Byron beds.
Big Valley.	Boston Bar.	Cacapon.
Bijiki.	Boston group.	Cache Creek.
Biloxi.	Bottom prairie.	Cache Lake.
Bingen.	Boulder.	Cache Valley.
Birch Creek.	Bow River.	Cadent.
Bird Mountain.	Bowdan.	Cades.

- Cairo.
 Calaveras.
 Calcareous.
 Calciferous.
 Calderwood Neck.
 Calhoun.
 Callaway.
 Caloosahatchie.
 Calumet Beach.
 Cambridge.
 Camden.
 Camp Colorado.
 Camp Creek.
 Campbell Creek.
 Campophyllum.
 Canaan.
 Canadian.
 Canal.
 Cananiol.
 Cannelton.
 Cantera.
 Cantwell.
 Canyon.
 Canyon City.
 Cap-au-Grés.
 Cape Beaufort.
 Cape Cod.
 Cape Fairweather.
 Cape Girardeau.
 Cape Horn.
 Cape John.
 Cape May.
 Capitol.
 Caprina.
 Caprotina.
 Cardiola.
 Cariboo.
 Carlile.
 Carlinville.
 Carlyle.
 Carmanah Point.
 Carmelo.
 Carolinian.
 Caroni.
 Carribean.
 Carrizo Creek.
 Carrollton.
 Carters Creek.
 Cascade.
 Cascale.
 Caseyville.
 Cashaqua.
 Cason.
 Cassville.
- Castle.
 Castle Mountain.
 Cat Head.
 Catadupa.
 Catoctin.
 Catskill.
 Cauda-Galli.
 Cave.
 Cave Creek.
 Cave Rock.
 Cave Spring.
 Cayuga.
 Cedar.
 Cedar Hills.
 Cedar Valley.
 Cedarton.
 Cedarville.
 Central.
 Ceratops.
 Cerro Gordo.
 Chaelites.
 Chalky.
 Chamberlin.
 Champion.
 Champlain.
 Chanute.
 Chapelton.
 Chapman.
 Charette.
 Chariton.
 Charleston.
 Chase.
 Chatauquan.
 Chattahoochee.
 Chattanooga.
 Chazy.
 Chehalis.
 Chemung.
 Cherokee.
 Cherry.
 Cherry Creek.
 Cherry Ridge.
 Cherryvale.
 Chesapeake.
 Cheshire.
 Chester Valley.
 Chester.
 Chesterfield.
 Chestnut Hill.
 Cheyenne.
 Chickamauga.
 Chickasaw.
 Chico.
 Chicopee.
- Chico-Tejon.
 Chiffin.
 Chikis.
 Chilhowee.
 Chipola.
 Chippewa.
 Chiques.
 Chitistone.
 Chloritic.
 Choctaw.
 Chouteau.
 Chuar.
 Churchill.
 Cimarron.
 Cincinnati.
 Cisco.
 Citadel.
 Citico.
 Claiborne.
 Clapsydrops.
 Clarion.
 Clark.
 Clark County.
 Clarkes Mill.
 Clarksburg.
 Clay.
 Clayton.
 Clear Creek.
 Clear Fork.
 Clearwater.
 Cleveland.
 Cleveland County.
 Click.
 Cliff.
 Clinch.
 Clinch Mountain.
 Clingman.
 Clinton.
 Clipper Gap.
 Clover Canyon.
 Coal Bluff.
 Coal measures.
 Coaledo.
 Coast.
 Coastal.
 Coasters Harbor Island.
 Coatzacoalcas.
 Cobequid.
 Cobscook.
 Cobre.
 Cochran.
 Cochulta.
 Cockeysville.
 Cocksfield Ferry.

Codorus.
 Coeymans.
 Coffee sand.
 Coggan.
 Coldbrook.
 Coldwater.
 Cole Camp.
 Coleman.
 Coles Brook.
 College Hill.
 Collinsville.
 Colorado.
 Columbia.
 Columbus.
 Colvins Run.
 Comanche.
 Comanche Peak.
 Comet Creek.
 Como.
 Conanicut.
 Conasauga.
 Conception.
 Concretionary.
 Conemaugh.
 Conglomerate.
 Connecticut River.
 Connellsville.
 Connoquenessing.
 Conshohocken.
 Contra Costa.
 Conway.
 Cooks Inlet.
 Cooks Mountain.
 Cooper.
 Cooper River.
 Coos.
 Coosa.
 Copper River.
 Copper-bearing.
 Coquina.
 Coral.
 Coralline.
 Corbin.
 Cornfield Harbor.
 Corniferous.
 Corral.
 Corry.
 Cortlandt.
 Coryphoden.
 Cottonwood.
 Cottonwood Creek.
 Cottonwood Falls.
 Courtland.
 Couthiching.

Cove.
 Coxville.
 Crab Orchard.
 Cranberry Island.
 Cranston.
 Crawford.
 Cretaceous No. 1, 2, 3.
 Crinoidal.
 Cripple Creek.
 Croatan.
 Cross Plains.
 Crosswicks.
 Crystal.
 Crystal City.
 Cuboides.
 Cuchara.
 Cumberland.
 Cupriferous.
 Curlew.
 Curzon.
 Cussewago.
 Cuyahoga.
 Cypress.
 Dakota.
 Dallas.
 Dalton.
 Damourite.
 Danville.
 Davenport.
 Day Creek.
 Dayton.
 De Soto.
 Decker Ferry.
 Deep Creek.
 Deep River.
 Deer Creek.
 Dekalb.
 Del Rio.
 Delaware.
 Delhi.
 Dellville.
 Delphi.
 Delta.
 Delthyris.
 Denison.
 Denver.
 Dexter.
 Diablo-Davis.
 Diamond Peak.
 Dinosaur.
 Dismal.
 Dockum.
 Dog Creek.
 Dolores.

Dore.
 Dorset.
 Dotson.
 Double Mountain.
 Douglas.
 Douty.
 Dover.
 Downs.
 Dresbach.
 Dry Bone.
 Dry Creek.
 Duck Creek.
 Dun.
 Dundee.
 Dunkard Creek.
 Dunlap.
 Dunvegan.
 Duplin.
 Dyestone.
 Eagle.
 Eagle Ford.
 Eagle Pass.
 Earlham.
 Earlton.
 East Lee.
 Eastern.
 Eaton.
 Eau Claire.
 Ephora.
 Edison.
 Edmonton.
 Edwards.
 Egremont.
 Einstine.
 Elevator.
 Elevator B.
 Elgin.
 Elk.
 Elk Creek.
 Elk Falls.
 Elk Lick.
 Elk Mountain.
 Elk River.
 Elkgarden.
 Ellensburg.
 Ellicottsville.
 Elliott Creek.
 Ellis.
 Elm Creek.
 Elmont.
 Empire.
 Emporia.
 Encrinal.
 Encrinital.

English River.
 Eolian.
 Equing.
 Equus.
 Erian.
 Erie.
 Eryops.
 Escondido.
 Esmerelda.
 Esopus.
 Estuary.
 Etcheminian.
 Etholen.
 Eureka.
 Eutaw.
 Everett.
 Exogyra arietina.
 Exogyra costata.
 Exogyra ponderosa.
 Fairfax.
 Fairmount.
 Falls Creek.
 Falls River.
 Falmouth.
 Farnham.
 Fayette.
 Fayetteville.
 Federal Creek.
 Felch Mountain.
 Fence-post.
 Fernandan.
 Ferriferous.
 Ferruginous.
 Fish Creek.
 Fish House.
 Fishpot.
 Flag.
 Flagstone.
 Flaming Gorge.
 Flanagan.
 Flat Rock.
 Flathead.
 Flatwoods.
 Fleming.
 Flint.
 Flint Hill.
 Flint Ridge.
 Florence.
 Floridian.
 Florissant.
 Flower-pot.
 Floyd.
 Folley.
 Fond du Lac.

Foraminiferal.
 Forbes.
 Foreman.
 Forest.
 Forest City.
 Fort Benton.
 Fort Bridger.
 Fort Dodge.
 Fort Ellis.
 Fort Hays.
 Fort Knox.
 Fort Payne.
 Fort Pierre.
 Fort Riley.
 Fort St. John.
 Fort Scott.
 Fort Selden.
 Fort Union.
 Fort Worth.
 Fortymile.
 Fossiliferous.
 Fountain.
 Fourth Moraine.
 Fox Ford.
 Fox Hills.
 Fragmental.
 Franciscan.
 Franconia.
 Frankenfield.
 Frankford.
 Frankfort.
 Franklin.
 Fredericksburg.
 Fredericktown.
 Freeport.
 Fremont.
 Frickham.
 Frio.
 Frog Mountain.
 Frostburg.
 Fullington.
 Fusulina.
 Gale.
 Galena.
 Galisteo.
 Gallatin.
 Gallitzen.
 Galt.
 Gardeau.
 Garland.
 Garnett.
 Garrard.
 Gary.
 Gasconade

Gaspé.
 Genesee.
 Geneva.
 Genevieve.
 Gentile Valley.
 Geode.
 George River.
 Georgetown.
 Georgia.
 Geronimo.
 Geuda.
 Giles.
 Gillespie.
 Gilmore.
 Girard.
 Girardeau.
 Glacian.
 Glade.
 Gladeville.
 Glass Mountain.
 Glassboro.
 Glauconitic.
 Glen Rose.
 Glencoe.
 Glens Falls.
 Godiva.
 Golconda.
 Golden Gate.
 Golden Wall.
 Goniatite.
 Goodland.
 Goodnight.
 Goodrich.
 Goose Pond.
 Goshen.
 Gower.
 Grainger.
 Granby.
 Grand Canyon.
 Grand Gulf.
 Grand Portage.
 Grand Prairie.
 Grand Rapids.
 Grand River.
 Grand Tower.
 Grandad.
 Graneros.
 Granular.
 Granville.
 Grape Creek.
 Grassmere.
 Grassy Creek.
 Gravel.
 Gray.

Gray Cliff.
 Graydon.
 Graydon Springs.
 Grayson.
 Graysonton.
 Great Bend.
 Great Carolina.
 Great Conglomerate.
 Great Falls.
 Green County.
 Green Mountain.
 Green Pond.
 Green River.
 Greenbrier.
 Greenhorn.
 Greenleaf.
 Greensand.
 Greensburg.
 Greenstone.
 Greenwich.
 Greenwood.
 Griggs Landing.
 Grenville.
 Greylock.
 Greyson.
 Griswold Gap.
 Gritstone.
 Grizzly.
 Ground Ice.
 Groveland.
 Guallava.
 Guelph.
 Guertie.
 Gulf.
 Gunnison.
 Gwynedd.
 Gypsum.
 Gyroseras.
 Hackberry.
 Halymenites.
 Halysites.
 Hamburg.
 Hamburg Mountain.
 Hamilton.
 Hampshire.
 Hampton.
 Hanbury.
 Hancock.
 Hanging Rock.
 Hanna Valley.
 Hannibal.
 Hardgrave.
 Harding.
 Hardistonville.

Hardwick.
 Harlan.
 Harpers.
 Harpers Ferry.
 Harpeth.
 Harris City.
 Harrodsburg.
 Hartford.
 Hartselle.
 Hartshorn.
 Hartwell.
 Hastings.
 Hatchetigbee.
 Hawley.
 Hawpatch.
 Hawthorne.
 Hay Creek.
 Hayes River.
 Hazel.
 Hazlet.
 Helderberg.
 Helderbergian.
 Helena.
 Hellem.
 Hemlock.
 Henrietta.
 Henrys Fork.
 Hermansville.
 Hermosa.
 Hesse.
 Hickman.
 Hickory.
 High Park.
 High Rock.
 Highbridge.
 Highland.
 Hillsboro.
 Hinchmann.
 Hinckley.
 Hindostan.
 Hinsdale.
 Hinton.
 Hog Creek.
 Hogback.
 Holikunk.
 Holland.
 Holocene.
 Holyoke.
 Home Creek.
 Homewood.
 Honaker.
 Honesdale.
 Hoosac.
 Hoover.

Hop Brook.
 Hopewell.
 Hordes Creek.
 Horse Creek.
 Horsepen.
 Horsetown.
 Hosmer.
 Hosselkus.
 Hot Spring.
 Howard.
 Hudson.
 Hudson River.
 Hueco.
 Huerfano.
 Humboldt.
 Humbug.
 Hunker.
 Huntingdon.
 Huron.
 Huronian.
 Hydraulic.
 Idaho.
 Illinoisian.
 Independence.
 Indian Creek.
 Indian River.
 Inoceramus.
 Intermediate.
 Inwood.
 Iola.
 Ione.
 Iowa.
 Iowan.
 Iron Mountain.
 Irondale.
 Iroquois.
 Irvine.
 Island.
 Isle Lamotte.
 Ishpeming.
 Itasca.
 Ithaca.
 Izard.
 Jackass Mountain.
 Jackson.
 Jacksonboro.
 Jacksonian.
 Jacksonville.
 Jagger Bend.
 James River.
 Jamesburg.
 Jefferson.
 Jenkins.
 Jennings.

- Jerusalem.
 Joachim.
 Johannian.
 John Day.
 Johnson.
 Johnson River.
 Johnstown.
 Joliet.
 Jollytown.
 Jonesboro.
 Jordan.
 Judith River.
 Juniata.
 Kaminstiquia.
 Kanawha.
 Kanawha Falls.
 Kanektok.
 Kansan.
 Kansas City.
 Kaskaskia.
 Katemcy.
 Kearsarge.
 Keewatin.
 Kenai.
 Kendall Green.
 Kennett.
 Kentucky.
 Kenwood.
 Keokuk.
 Keosauqua.
 Kessler.
 Kettleman.
 Keweenawan.
 Keweenian.
 Kiamitia.
 Kibbey.
 Kiger.
 Kimberling.
 Kinderhook.
 King.
 Kingfisher.
 Kings Mill.
 Kings Mountain.
 Kingsdown.
 Kingston.
 Kingstown.
 Kinzua.
 Kiowa.
 Kirkby.
 Kitchi.
 Kittanning.
 Kittitas.
 Klondike.
 Klutena.
 Knob.
 Knobstone.
 Knox.
 Knoxville.
 Koipato.
 Kolmakof.
 Kome.
 Komooks.
 Kona.
 Kootanie.
 Kotlo.
 Kowak.
 Kuskokwim.
 La Biche.
 La Grange.
 La Motte.
 La Plata.
 Labette.
 Labrador.
 Labradorian.
 Lackawaxen.
 Lady Washington.
 Lafayette.
 Lagarto.
 Lagonda.
 Lake.
 Lake Bonneville.
 Lake Huron.
 Lake Superior.
 Lake Winnipiseogie.
 Lambton.
 Lamont.
 Lancaster.
 Lane.
 Lanphier.
 Lansdale.
 L'Anse.
 Lapara.
 Laramie.
 Lauderdale.
 Laurel.
 Lauzon.
 Lawrence.
 Lawrence-Crawford.
 Lawrencian.
 Laurentian.
 Le Claire.
 Le Compton.
 Le Grand.
 Le Roy.
 Le Seur.
 Leadville.
 Lebanon.
 Leboeuf.
 Leda.
 Lee.
 Lehigh.
 Leitchfield.
 Lenoir.
 Leon.
 Leona.
 Levant.
 Levis.
 Lewistown.
 Lexington.
 Leyden.
 Licking.
 Lignite.
 Lignitic.
 Lime Creek.
 Limon.
 Lincoln.
 Lingula.
 Linnville.
 Lisbon.
 Lista Blanca.
 Lithographic.
 Little Compton.
 Little Genesee.
 Little Grizzly Creek.
 Little River.
 Little Traverse Bay.
 Livingston.
 Llano.
 Llano Estacado.
 Lockatong.
 Lodore.
 Loess.
 Logan.
 Logie Green.
 Lohn.
 London.
 Lone Mountain.
 Long Grove.
 Long Meadow.
 Long Mountain.
 Longwood.
 Lookout.
 Loon River.
 Lorraine.
 Losee Pond.
 Lost Creek.
 Lost River.
 Louisian.
 Louisiana.
 Louisville.
 Louisville-Delphi.
 Loup Fork.

Loup River.	Mariposa.	Merom.
Lower Cross Timbers.	Marks Mills.	Merrimack.
Lower Green.	Marksburg.	Mertgomist.
Lowville.	Marl.	Mesa.
Ludlowville.	Marl Brook Columbus.	Mesa Verde.
Lufkin.	Marlborough.	Mesabi.
Lynch Creek.	Marmaton.	Mesnard.
Lyman.	Maroon.	Michigamme.
McAlester.	Marquette.	Michigan salt.
McCarthy Creek.	Marquette-Menominee.	Middleboro.
McCloud.	Marquettian.	Middle Conglomerate.
McCoytown.	Marseilles.	Middle Park.
McCum.	Marsh.	Middleton.
McElmo.	Marsh Creek.	Midland.
McKean.	Marshall.	Midway.
Mackinac.	Marshalltown.	Midwayan.
Macluria.	Marsouin.	Miffintown.
Macon City.	Martinez.	Milburn.
McPherson.	Martinsburg.	Milburn-Strawn.
Madison.	Maruga.	Miliolite.
Madisonville.	Marvin Creek.	Mill Creek.
Magnesian.	Marylandinian.	Miller.
Magothy.	Maryville.	Millers River.
Mahoning.	Mascarene.	Millsap.
Main street.	Mason.	Millstone.
Malade Valley.	Massanutten.	Milton.
Malone.	Massillon.	Minbo.
Mammoth.	Masuk.	Mineral King.
Manasquan.	Matanuska.	Minne-Lusa.
Manatee.	Matanzas.	Minnesota River Valley.
Manayunk.	Matawan.	Mionippus.
Manchiouell.	Matinal.	Mispec.
Mancos.	Matthews Landing.	Mission Creek.
Manhattan.	Mauch Chunk.	Mississippian.
Manitoban.	Maxville.	Missouri.
Manitonnuck.	May Pen.	Missourian.
Manitou.	Mayville.	Mitchell.
Manlius.	Meade.	Moberly.
Mansfield.	Meadeville.	Mobile.
Manti.	Meagher.	Moccasin.
Manzanilla.	Medicine.	Moduria.
Maple Hill.	Medicine Lodge.	Mohawk.
Mapleton.	Medina.	Mohawkian.
Maquethian.	Meekoceras.	Mohegan.
Maquoketa.	Megalonyx.	Mojair.
Marais des Cygnes.	Mendon.	Mojave.
Marble.	Mendota.	Momable.
Marble Canyon.	Menevian.	Mona.
Marble Hill.	Meniscus.	Monarch.
Marcellus.	Menominee.	Monclova.
Mareniscan.	Mentor.	Moneague.
Marietta.	Merced.	Monmouth.
Marine.	Mercer.	Monongahela River.
Marion.	Meridian.	Monroe.

Monroe-Harrison.
 Monson.
 Mont Alto.
 Montalban.
 Montana.
 Monte de Oro.
 Monteballo.
 Montego.
 Monterey.
 Montevallo.
 Montgomery.
 Montpelier.
 Montrose.
 Monument Creek.
 Moodys Branch.
 Moose Hide.
 Moose Island.
 Moose River.
 Moreau.
 Morgantown.
 Mormon.
 Morrison.
 Moruga.
 Moscow.
 Mott Haven.
 Mottled.
 Mound Valley.
 Mount Holly.
 Mount Mesnard.
 Mount Morris.
 Mount Pleasant.
 Mount Sand.
 Mount Selman.
 Mount Toby.
 Mount Vernon.
 Mount Washington.
 Mountain.
 Murray.
 Mussel-bearing.
 Myrick.
 Myrtle.
 Mytilus.
 Naheola.
 Naknek.
 Nampa.
 Nanafalia.
 Nanaimo.
 Naparima.
 Naples.
 Napoleon.
 Nariva.
 Nashaquitsa.
 Nashville.
 Nasina.

Natick.
 Navarro.
 Navasota.
 Navesink.
 Nebo.
 Nebraska.
 Necedah.
 Nechacco.
 Neeleytown.
 Negaunee.
 Nehant.
 Neihart.
 Neocomian.
 Neodesha.
 Neosho.
 Nerinaea.
 Neudeckian.
 Nevada.
 New Albany.
 New Glasgow.
 New Milford.
 New Providence.
 New Red.
 New Richmond.
 New River.
 New Scotland.
 New Ulm.
 New York.
 Newark.
 Newland.
 Newman.
 Newport.
 Newport Neck.
 Newtonville.
 Niagara.
 Niagaran.
 Nichols.
 Nicola.
 Nicollet.
 Nilkoko.
 Nineveh.
 Niobrara.
 Nipigon.
 Nisconleth.
 Nishuabotany.
 Nodaway.
 Nolichucky.
 Noix.
 Norian.
 Normandy.
 Norristown.
 North Denison.
 North Park.
 North Valley Hill.

North Vernon.
 Norton.
 Novaculite.
 Nulato.
 Nummulite.
 Nunda.
 Nushagak.
 Nussbaum.
 Nutzotin.
 Oak Creek.
 Oak Grove.
 Oakland.
 Oakville.
 Ocala.
 Oceanic.
 Ocheesee.
 Ocoee.
 Ocoya Creek.
 Odanah.
 Ogden.
 Ogishke.
 Ohio.
 Ohio Creek.
 Oil Creek Lake.
 Oil Lake.
 Oklune.
 Olean.
 Olentangy.
 Old Red.
 Olive.
 Oneida.
 Oneonta.
 Onondaga.
 Ontaric.
 Ontarian.
 Ontario.
 Oostanala.
 Ophian.
 Orange Martin.
 Orange sand.
 Orangeburg.
 Orangeville.
 Orbitoides.
 Orbitoitic.
 Orbitolite.
 Orca.
 Orchard.
 Oread.
 Oreodon.
 Oriskany.
 Orthaulax.
 Orting.
 Osage.
 Osage City.

Osborne.	Pella.	Plymouth.
Osceola.	Pelodian.	Pocahontas.
Osgood.	Pemigewasset.	Pochuck.
Ostrea sellaeformis.	Pendleton.	Pocono.
Oswegatchie.	Pennian.	Pogonip.
Oswegan.	Pennington.	Point aux Gres.
Oswego.	Pennsylvania.	Point of Rocks.
Ottawa.	Penokee.	Point Pleasant.
Otis.	Penokee-Gogebic.	Pointe Levis.
Otter.	Pensauken.	Poison Canyon.
Otter Creek.	Pentacrimus.	Pokegama.
Otterdale.	Pentamerua.	Polk Bayou.
Ouray.	Pentremital.	Polk County.
Oxmoor.	Peorian.	Pomeroy.
Ozark.	Pepino.	Ponderosa.
Ozarkian.	Pequawket.	Pondville.
Packer.	Perkasie.	Ponent.
Packsaddle.	Perry.	Pope Hollow.
Paine.	Peru.	Porcupine.
Paint Rock.	Pescadero.	Porphyrian.
Palisades.	Pewabic.	Port Hudson.
Palmer.	Phelps.	Portage.
Palo Duro.	Philadelphia.	Porters Creek.
Paluxy.	Phillipsburg.	Portland.
Pamunkey.	Phipsburg.	Porus.
Panama.	Pickens.	Postmedial.
Panola.	Pictou.	Postmeridian.
Panther Creek.	Pictured Cliff.	Poteau.
Para.	Piedmont.	Potomac.
Parian.	Pierce.	Potosi.
Park.	Pierre.	Potsdam.
Parks Mountain.	Pigeon.	Pottawatomie.
Parma.	Pilgrim.	Potters.
Parting.	Pilot Knob.	Pottery.
Parkville.	Pine Creek.	Pottstown.
Pascagoula.	Pine Mountain.	Pottsville.
Paskapoo.	Pink Cliff.	Poughquag.
Paso Robles.	Pinnacle.	Powelton.
Patapsco.	Pinon.	Poxono Island.
Patoot.	Pinon Mesa.	Prairie Bluff.
Patuxent.	Pinto.	Prairie d'Ane.
Paupack.	Pipestone.	Premedial.
Paw Paw.	Piscataway.	Pre-Meridian.
Pawhuski.	Pithole.	Preston.
Pawnee.	Pitt.	Price.
Pawtucket.	Pittsburg.	Primal.
Payette.	Plant.	Princeton.
Peace Creek.	Plateau.	Procamelus.
Peach Bottom.	Platte.	Proctor.
Pearl River.	Plattsburgh.	Productal.
Pearlette.	Plattsmouth.	Productive.
Pedee.	Pleasanton.	Prospect Mountain.
Pelham.	Pleurocoelus.	Protean.
Pelican.	Pliohippus.	Protoceras.

- Pteranodon.
 Puckwunge
 Puerco.
 Puget.
 Pulaski.
 Pulliam.
 Purgaton.
 Putnam Hill.
 Putnamville.
 Puyallup.
 Quadrant.
 Quakertown.
 Quarry Creek.
 Quartz rock.
 Quartz slate.
 Quebec.
 Queen Charlotte.
 Queen City.
 Queens River.
 Quesnel Lake.
 Quesnel River.
 Quinnemont.
 Quinnesec.
 Quitman.
 Quitman-Muerto.
 Raccoon.
 Racine.
 Radiolarian.
 Rainy Mountain.
 Raleigh.
 Rampart.
 Rancocas.
 Random.
 Randville.
 Rapids.
 Rappahannock.
 Raritan.
 Reading.
 Receptaculites.
 Red.
 Red Bluff.
 Red Creek.
 Red Mountain.
 Red River.
 Red sand rock.
 Red Wall.
 Redbank.
 Redrock.
 Redstone.
 Reeder.
 Relief.
 Rensselaer.
 Republic.
 Requienia.
 Reynosa.
 Rhomboidal.
 Riceville.
 Richland.
 Richmond.
 Richmond-Gordon.
 Richmondville.
 Ricker.
 Rico.
 Ridley.
 Riga.
 Riley.
 Ripley.
 Riversdale.
 Riverside.
 Robinett.
 Robinson.
 Rochdale.
 Roche Percee.
 Rochelle.
 Rock Creek.
 Rock Falls.
 Rockcastle.
 Rockford.
 Rockingham.
 Rockmart.
 Rockville.
 Rockwood.
 Rocky Comfort.
 Rogersville.
 Rome.
 Romney.
 Rondout.
 Rose Island.
 Roslyn.
 Rossville.
 Rotten.
 Roubidoux.
 Rough Creek.
 Rowe.
 Roxbury.
 Royal.
 Ruby.
 Rushville.
 Russell.
 Russellville.
 Rutledge.
 Sabine River.
 Sac.
 Saccharoidal.
 Sachuest.
 Sacramento.
 Saddle Creek.
 Sailor Canyon.
 St. Albans.
 St. Anthony.
 St. Clair.
 St. Croix.
 St. Elias.
 St. Francois.
 St. Genevieve.
 St. Jean.
 St. Joe.
 St. John.
 St. Joseph.
 St. Lawrence.
 St. Louis.
 St. Marys.
 St. Stephens.
 St. Peters.
 St. Thomas.
 Salamanca.
 Salem.
 Salida.
 Saliferous.
 Salina.
 Salmon River.
 Salt Creek.
 Salt Fork.
 Salt Lake.
 Salt Plain.
 Salt Wells.
 Saltsburg.
 San Diego.
 San Francisco.
 San Miguel.
 San Pablo.
 San Pedro.
 San Saba.
 Sangamon.
 Sand Hill.
 Sand Mountain.
 Sandpond.
 Sandstone.
 Sandsuck.
 Sandusky.
 Sankaty.
 Santa Anna.
 Santa Clara.
 Santa Cruz.
 Santa Fe.
 Santee.
 Saskatchewan.
 Sassafras River.
 Saugeen.
 Sault St. Mary.
 Savage.
 Savanna.

Savoy.	Shunganunga.	Stellarton.
Sawatch.	Shushitna.	Stockbridge.
Saxicava.	Shuswap.	Stockton.
Scalent.	Siamo.	Stockwether.
Schoharie.	Siderian.	Stokes.
Schooner Head.	Signal Hill.	Stones River.
Schreyfogels.	Silicious.	Stony Brook.
Scioto.	Sillery.	Stormville.
Scott.	Silver Lake.	Strawn.
Scotts Creek.	Silveria.	Strong.
Scutella.	Simelkameen.	Stuntz.
Sea Urchin.	Simmons Bluff.	Sturgeon.
Sebastian.	Sioux.	Styliolina.
Secret Canyon.	Skaneatles.	Subconglomerate.
Sedalia.	Skunnemunk.	Sucarnochee.
Selinsgrove.	Skwentna.	Sugarloaf.
Selkirk.	Smalls Brook.	Suisure.
Sellersburg.	Smelt Brook.	Sukonk.
Seneca.	Smith River.	Sulphur.
Senecan.	Smithfield.	Summit.
Sequoyah.	Smoky Hill.	Summer.
Seral.	Smoky River.	Sunbury.
Sespe.	Sneedville.	Sundance.
Setters.	Snyder Creek.	Sunrise.
Severn.	Sockanosset.	Superjacent.
Severy.	Soldier Creek.	Surgent.
Sevier.	Sooke.	Suttons Island.
Sewanee.	Sopchophy.	Swallow.
Sewell.	South Carrolton.	Swanton.
Sewickley.	South Mountain.	Swauk.
Seymour.	South Valley Hill.	Swearinger.
Shadrick Mill.	Spadra.	Sweetland.
Shakopee.	Sparry.	Sweetwater.
Shark River.	Sparta.	Swift Water.
Sharon.	Speck Mountain.	Sylamon.
Sharpsville.	Sphinx.	Sylamore.
Shasta.	Spirifera pennata.	Sylvania.
Shasta-Chico.	Spokane.	Syntrialasina.
Shawangunk.	Spring Creek.	Syrtensian.
Shawnee.	Spring River.	Tachatna.
Shelby.	Spring Rock.	Taconic.
Shelbyville.	Springfield.	Tacoynite.
Shell Bluff.	Springvale.	Tahkandit.
Shenandoah.	Squanjum.	Talcoid.
Shenango.	Stafford.	Talcose.
Sherburne.	Stamford.	Talladega.
Sheridan.	Stanford.	Tallahatta.
Shiloh.	Stanton.	Taloga.
Shimer.	Star Peak.	Talpa.
Shinarump.	Starr.	Tamana.
Shinersville.	Starucca.	Tampa.
Shirley.	State Quarry.	Tanana.
Shoal Creek.	Steep Rock.	Tar.
Shoo Fly.	Steilacoom.	Tar Spring.

Tassagara.
 Taunton.
 Taylor.
 Taylors Ridge.
 Taylorsville.
 Teay.
 Tecumseh.
 Tehachipa.
 Tehuelche.
 Tejon.
 Tellico.
 Tellowa.
 Temple Butte.
 Tenmile River.
 Tentaculite.
 Terra Cotta.
 Terrace.
 Terranovan.
 Teton.
 Texan.
 Texana.
 Texanan.
 Texian.
 Thayer.
 Thebes.
 Thessalon.
 Third Moraine.
 Thomas Hill.
 Thompson.
 Three Forks.
 Thunder Bay.
 Thunderhead.
 Thurman.
 Ticholeptus.
 Timber Belt.
 Timber Creek.
 Timpas.
 Tintic.
 Tionesta.
 Tisbury.
 Titanotherium.
 Tiverton.
 Todos Santos.
 Togiak.
 Tok.
 Tolenas.
 Tolleston.
 Tombigbee.
 Tomlinson.
 Tonto.
 Topeka.
 Torbay.
 Tordrillo.
 Toronto.

Torregan.
 Towanda.
 Tower.
 Trail.
 Tranquille.
 Trap Tuff.
 Trappean.
 Traverse.
 Travis Peak.
 Trego.
 Trenton.
 Trincheras.
 Trinidad.
 Trinity.
 Trough Creek.
 Truckee.
 Truro.
 Tuckahoe.
 Tucumcari.
 Tule.
 Tully.
 Tuna.
 Tunnel Point.
 Tu-nunk.
 Tuscahoma.
 Tuscaloosa.
 Tuscan.
 Tuscarora.
 Tuscumbia.
 Twelvemile.
 Tymochtee.
 Tyonek.
 Tyre.
 Tyringham.
 Uinta.
 Ulsterian.
 Umbral.
 Umpqua.
 Unga.
 Unicoi.
 Union.
 Uniontown.
 Unionville.
 Unkar.
 Unkpaps.
 Upshur.
 Upson.
 Ute.
 Utica.
 Uvalde.
 Val Verde.
 Valdes.
 Valera Bend.
 Valley.

Valley Spring.
 Valparaiso.
 Van Wert.
 Vancouver.
 Vanport.
 Vashon.
 Venango.
 Ventura.
 Verdi.
 Vergent.
 Vermilion.
 Vermont.
 Vernicular.
 Vespertine.
 Vicarya.
 Vicksburg.
 Vicksburgian.
 Victoria.
 Vilas.
 Vinal Haven.
 Vincentown.
 Vineyard.
 Vinita.
 Virginian.
 Vishnu.
 Vola.
 Volcan.
 Vulcan.
 Wabauensee.
 Waccamaw.
 Wahsatch.
 Wakarusa.
 Walden.
 Waldo.
 Waldrip.
 Waldron.
 Walker Block.
 Wallala.
 Wallkill.
 Walnut.
 Wamsutta.
 Wapiti.
 Wappinger Valley.
 Wapsipinicon.
 Warren.
 Warrensburg.
 Warsaw.
 Wartburg.
 Washakie.
 Washburn.
 Washington.
 Washington County.
 Washita.
 Wassonville.

Waswangoning.
 Waterline.
 Waterloo.
 Waterville.
 Watts Creek.
 Waukesha.
 Waverly.
 Waynesburg.
 Webb Bluff.
 Webberville.
 Weber.
 Weisner.
 Welch.
 Well Rock.
 Wellesley.
 Wellington.
 West Elk.
 West Fork.
 West Franklin.
 West Jefferson.
 West Union.
 Western.
 Western Valley.
 Westerville.
 Westfield.
 Weston.
 Weverton.
 Wewe.
 Weyquosque.
 Whateley.
 White.
 White Bluff.
 White Mountain.

White Oak Mountain.
 White Pine.
 White Prairie d'Ane.
 White River.
 Whitmores Ferry.
 Whitsett.
 Wichita.
 Wilbarger Creek.
 Wilbur.
 Wildcat.
 Wildcat Mountain.
 Wilhite.
 Willard.
 Williamsport.
 Willow Creek.
 Willow River.
 Wills Point.
 Wilmington.
 Wiltons Run.
 Winchester.
 Wind River.
 Windsor.
 Windy Gap.
 Winfield.
 Wingate.
 Winnipeg.
 Winnepigosan.
 Winnepesaukee.
 Winooski.
 Winterset.
 Winthrop.
 Wisconsin.
 Wise.

Wolf Creek.
 Wood River.
 Woodbridge.
 Woodbury.
 Woodhurst.
 Woods Bluff.
 Woodstock.
 Woodville.
 Worcester.
 Wreford.
 Wyckoff.
 Wykoff.
 Wymann.
 Wyo.
 Wyoming.
 Wyoming Valley.
 Yakutat.
 Yallahs.
 Yarmouth.
 Yegua.
 Yellow.
 Yellowstone.
 Yentna.
 Yogo.
 Yonkers.
 York.
 Yucca.
 Yukon.
 Yule.
 Zapata.
 Zeuglodon.
 Zoar.
 Zuni.