

ALASKA GEOLOGY

Newsletter of the
Alaska Geological Society



Shelf-Margin Reservoir Analogs for the Brookian Sequence, Alaska

Jacob A. Covault, Zoltan Sylvester, and Dallas Dunlap

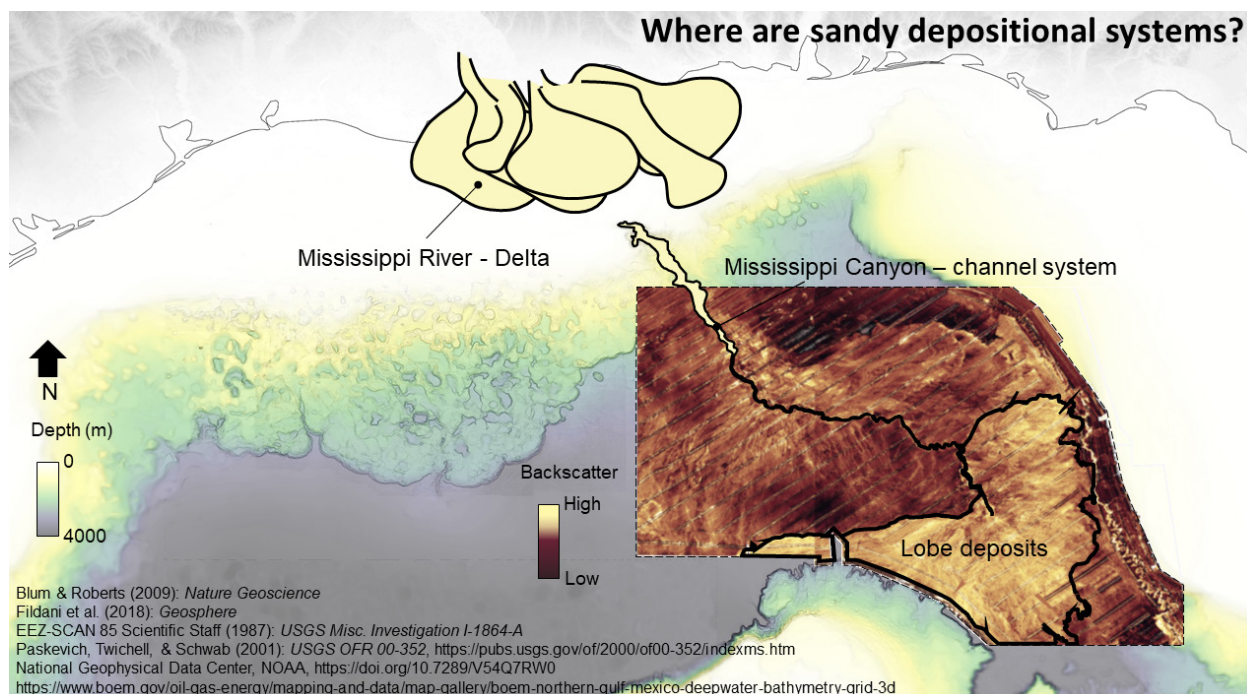
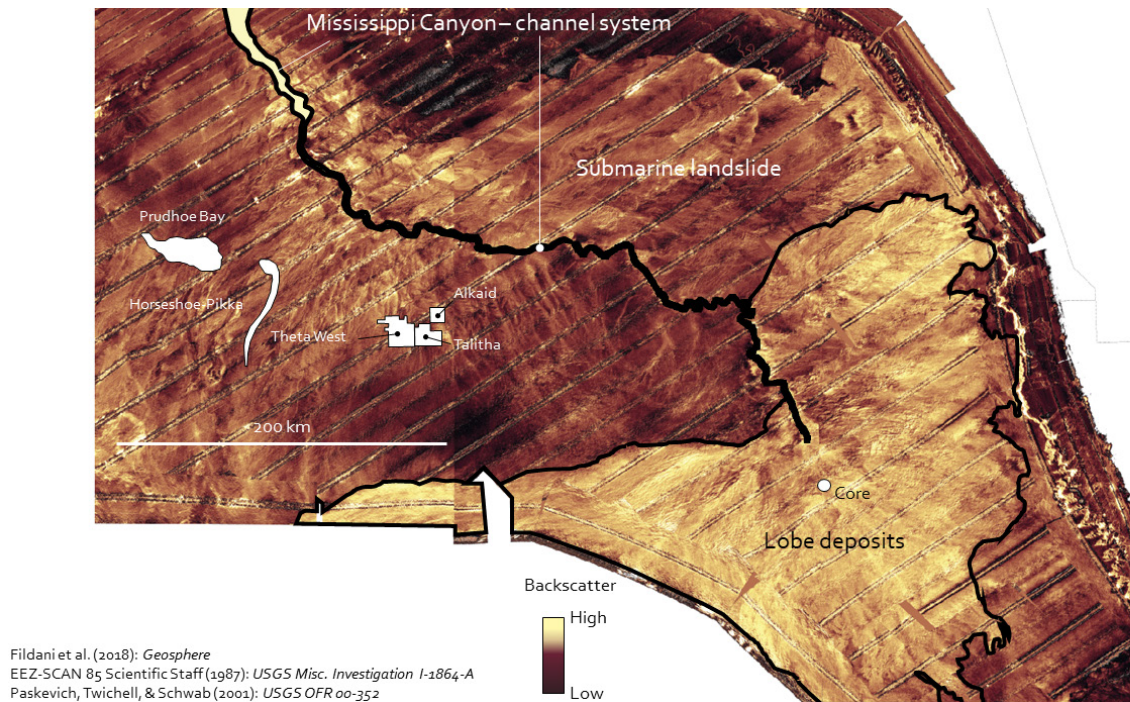
Quantitative Clastics Laboratory, Bureau of Economic Geology, Jackson School of Geosciences,
The University of Texas at Austin, Austin, TX

jake.covault@beg.utexas.edu

Recent hydrocarbon discoveries in stratigraphically trapped, shelf-margin reservoirs of the Albian-Cenomanian Nanushuk Formation, Brookian Sequence, have reinvigorated exploration of the Colville foreland basin, North Slope, Alaska. Since then, Great Bear-Pantheon discovered oil in Campanian deltaic, slope, and basin-floor fan depositional systems (Alkaid, Talitha, and Theta West projects). Our research group, the UT-Austin Quantitative Clastics Laboratory, is collaborating with Great Bear-Pantheon to better understand facies architecture, which controls the spatial variability of reservoir quality, of these reservoirs. We will use >1000 sq mi of proprietary seismic-reflection data and well logs to characterize the Campanian reservoirs. However, initially, we compared the Brookian Sequence to reservoir analogs in the eastern Gulf of Mexico. These reservoir analogs are well understood as a result of a long history of hydrocarbon exploration. We pair characterization of the stratigraphy and lithology of the Gulf with process-based 3D stratigraphic models and evaluate the dynamic connectivity of these reservoir analogs using the MATLAB Reservoir Simulation Toolbox. We highlight preferential locations of sand deposition, including shelf-edge deltas, meandering submarine channels, and basin-floor-fan lobes, which are good analogs for the Campanian of the Colville basin. Sandy axes of delta and basin-floor-fan lobes can connect fluid flow pathways, and muddy drapes serve as baffles and barriers. Similarly, fluid flow can be restricted to the sandy axes of channel elements at the base of deeply incised, meandering slope channel systems.

AGS Meeting

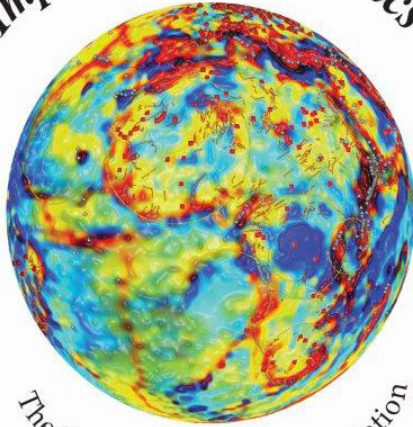
Date & Time: Thursday, September 14; Doors open 11:00 am, announcements 11:15 am, talk 11:30 am–12:30 pm
Program: Shelf-Margin Reservoir Analogs for the Brookian Sequence, Alaska
Speaker: Jake Covault, Quantitative Clastics Laboratory, Bureau of Economic Geology, Austin, TX
Place: Networking at BP Energy Center; Alder/Cottonwood room. Virtual presentation via Google Meet.
Reservations: Reservations are not required
Login: For instructions on how to log in see AGS website: <http://www.alaskageology.org/events.html>
How to Join: Join with Google Meet: meet.google.com/hkb-ugsz-zbg
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About the Speaker:

Dr. Jacob Covault is a Research Scientist and leader of the Quantitative Clastics Laboratory (QCL). His expertise is the sedimentology and stratigraphy of deep-water depositional systems, and source-to-sink sediment dispersal. Jacob aims to address challenges in the exploration and development of natural resources, namely reservoir presence and quality prediction in frontier basins, and reservoir connectivity and heterogeneity. Prior to his present position at the QCL, Jacob was a senior research scientist at Chevron Energy Technology Company, and served the Department of the Interior at the U.S. Geological Survey. He received Ph.D. and B.S. degrees in Geological and Environmental Sciences at Stanford University, where he played football 1999-2003. Jacob has published peer-reviewed research papers and scientific conference abstracts pertaining to petroleum geology, reservoir characterization, sedimentology, stratigraphy, basin analysis, Earth surface processes, and marine geology. Jacob was just announced as the recipient of the 2017 SEPM Wilson Award in recognition of "Excellence in Sedimentary Geology by a Young Scientist."

Impact Crater Tectonics

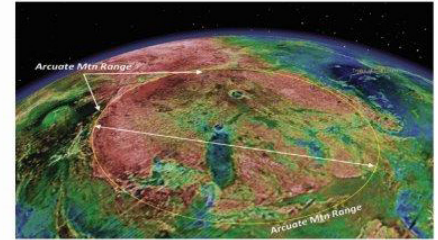


The Future of Resource Exploration

David Buthman

Impact Crater Tectonics provides a universal geologic framework for the prediction of Earth's mineral resources. Based on sound scientific, mathematic, and geologic principles, the demonstrated relationships between impact craters and mineral resources consecrates an imminent paradigm shift for interpreting the tectonic evolution of Earth, particularly for Alaska.

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Pathfinders in Alaska Geology Wall of Fame

The geology of Alaska is exceptionally diverse and complicated. Mapping and understanding Alaska geology are further challenged by remoteness, rugged terrain, severe weather and limited infrastructure. A Pathfinders in Alaska Geology award has been established to recognize outstanding geoscientists that have risen above these difficulties and contributed significantly to synthesizing and understanding the geology, hazards, and resources of the state. These geoscientists will be honored with a photograph and citation on the Alaska Geological Society website and on a dedicated wall in the Geologic Materials Center in Anchorage, Alaska.

- David Brew
- Alfred Brooks
- William Brosgé
- A.F. Buddington
- Stephen Capps
- Robert Coats
- Robert "Buck" Detterman
- Arthur Grantz
- David Hopkins
- Ernest Leffingwell
- Edward Mackevett
- Thomas Marshall
- George Martin
- Walter C. Mendenhall
- John Mertie
- Donald Miller
- Fred Moffit
- Charles "Gil" Mull
- Warren Nokleberg
- William Patton
- Troy Péwé
- Louis Prindle
- Donald Richter
- Frank Schrader
- Philip Smith
- Josiah Spurr
- David Stone
- Irv Tailleir
- Wesley Wallace
- Florence Weber

It is with great honor, pleasure, and humility that the Alaska Geological Society's Pathfinders Committee announces the inaugural class of "Pathfinders in Alaska Geology". This award was established to recognize true trailblazers in the geosciences in Alaska; men and women who made enormous contributions to the general understanding of the geology of the Last Frontier.

The thirty individuals listed at left are inducted as the first Pathfinders class; they will be honored with a permanent display at the Alaska Geologic Materials Center in Anchorage. There also will be an annual dedication ceremony for newly inducted Pathfinders at the Alaska Geological Society's Annual Technical Conference. This year's conference will be held at the University of Alaska-Anchorage on April 22nd, 2023.

The composition of this first class was determined after several months of research and deliberation by a committee of 9 long-time Alaskan geologists. Following the 2023 AGS Technical Conference, the nomination process for future inductees will be posted and open to the public.

Congratulations to the inaugural class – we thank you for your efforts.





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Fossil Type Specimens and Species Named from National Park Service Areas in Alaska

Justin S. Tweet¹, Vincent L. Santucci², and Robert B. Blodgett³

¹National Park Service, 9149 79th Street S., Cottage Grove, MN 55016
justin_tweet@nps.gov

²National Park Service, Geologic Resources Division, 1849 C Street, NW Washington, D.C., 20240
vincent_santucci@nps.gov

³Blodgett & Associates, Consulting Geologists, 2821 Kingfisher Drive, Anchorage, AK 99502
RobertBBlodgett@gmail.com

Eighteen national parks, monuments, and other National Park Service areas and affiliated sites are located within Alaska. These include some of the largest and most geologically diverse parks in the National Park System. Several of these are among the most significant in the NPS for paleontological resources, such as Denali National Park and Preserve (NP&PRES), Lake Clark NP&PRES, Wrangell-St. Elias NP&PRES, and Yukon-Charley Rivers National Preserve (NPRES). Together these NPS units preserve evidence of the complex geologic history of Alaska, assembled from disparate fragments of crust over hundreds of millions of years. The fossils in these rocks help to document this process by illustrating biogeographic connections with other places.

An important part of the study of fossils is describing and naming new species. Every fossil species is based on one or more specimens that are known as “type specimens”, intended to serve as a typical example of that species for comparison with other species. Because detailed locality information was not always published or even possible to determine in the early days of paleontology, the exact number of fossil species that have been named from fossils found in NPS lands is not certain. To date (August 2023), the type specimens for 2,361 fossil species have been confirmed to originate from localities within an NPS unit. Of that total, almost exactly 10% (236) were discovered in and collected from Alaska’s NPS areas. These 236 fossil species, plus two more potentially based on material from what is now Katmai NP&PRES, serve as a microcosm of NPS fossil species and the history of life in general. Of course, not all of these species are necessarily considered valid today, but this represents an impressive number.

Alaska’s NPS fossil type specimens come from nine park units (Table 1). These units are distributed throughout the state, from the Brooks Range to the Alaska Peninsula to the Panhandle. Most of the parks have fewer than two dozen, but Wrangell-St. Elias NP&PRES has 35, and Yukon-Charley Rivers NPRES has 129, which puts it at sixth place in the entire NPS for confirmed type specimens within an individual park.

| Park | Confirmed | Potential |
|--------------------------------|------------|-----------|
| Aniakchak NM & PRES | 2 | 0 |
| Denali NM & PRES | 6 | 0 |
| Gates of the Arctic NM & PRES | 13 | 0 |
| Glacier Bay NM & PRES | 9 | 0 |
| Katmai NM & PRES | 20 | 2 |
| Lake Clark NM & PRES | 21 | 0 |
| Noatak NM & PRES | 1 | 0 |
| Wrangell-Str. Elias NM & PRES | 35 | 0 |
| Yukon-Charley Rivers NM & PRES | 129 | 0 |
| Total | 236 | 2 |

Table 1. Distribution of fossil species named from Alaska’s NPS units.

Taxonomically, this record is dominated by fossil invertebrate taxa, followed distantly by plants, microorganisms, and trace fossils, in that order (Table 2). Notably, to date no fossil vertebrates have been named from body fossils found in Alaska’s NPS units. Within these broad categories numerous groups are represented (Table 3). Trilobites, ammonoids, angiosperms, ostracodes, brachiopods, and bivalves are particularly well-represented.

| Group | Confirmed | Potential |
|---------------|-----------|-----------|
| Invertebrates | 186 | 2 |
| Plants | 38 | 0 |
| Microorganism | 10 | 0 |
| Trace Fossils | 2 | 0 |

Table 2. Broad taxonomic distribution of fossil species named from Alaska’s NPS units.

| Invertebrates | Plants | Microorganism | Trace Fossils |
|-----------------------------|----------------|----------------|---------------|
| 64 trilobites | 34 angiosperms | 9 radiolarians | 2 bird tracks |
| 43 ammonoids (+2 potential) | 2 ferns | 1 foram | |
| 22 ostracodes | 1 conifer | | |
| 19 brachiopods | 1 ginkgo | | |
| 16 bivalves | | | |
| 8 gastropods | | | |
| 4 tentaculitids | | | |
| 3 echinoid ^s | | | |
| 2 belemnites | | | |
| 2 nautiloids | | | |
| 1 coral | | | |
| 1 lobster | | | |
| 1 sponge | | | |

Table 3. Taxonomic diversity of fossil species named from Alaska’s NPS units.

The temporal distribution of the fossil species named from Alaska’s NPS areas is quite extensive, from a questionably Proterozoic occurrence representing one of the more unusual examples (*Brabbinthes churkini* from Yukon-Charley Rivers NPRES; see below) to the Pliocene (Figure 1). Almost every Phanerozoic period or sub-period is represented, most by more than a dozen taxa.

The history of this paleontological work in Alaska extends back more than 150 years (Figure 2). The oldest named fossils identified to date are from Eichwald (1871), with several fossil bivalves named from coastal areas now part of Lake Clark NP&PRES. Following this are several quiet decades, then a brief spurt in the 1920s and 1930s, a lull in the 1940s, then small numbers of taxa each decade except for the 1960s and 1970s. Most of the descriptions from the 1920s through the 1970s come from the work of the U.S. Geological Survey, and are frequently batches of names.

Within the peaks and valleys of the various charts are various works by particular authors. Some of the significant publications include:

- Berdan and Copeland (1973; Devonian ostracodes from Yukon-Charley Rivers NPRES)
- Hollick (1930; Cretaceous plants from Yukon-Charley Rivers NPRES)
- Hollick (1936; Cenozoic plants from several parks)

- Imlay (1960; Cretaceous ammonoids from Wrangell-St. Elias NP&PRES)
- Imlay (1964, Jurassic ammonoids from Lake Clark NP&PRES)
- Knowlton (1904; Oligocene plants from Katmai NP&PRES)
- Kobayashi (1934; Cambrian trilobites and brachiopods from Yukon-Charley Rivers NPRES)
- Palmer (1968; Cambrian trilobites from Yukon-Charley Rivers NPRES)
- Smith (1927; Triassic invertebrates from Wrangell-St. Elias NP&PRES and Yukon-Charley Rivers NPRES)
- Won et al (2002; Silurian radiolarians from Yukon-Charley Rivers NPRES)

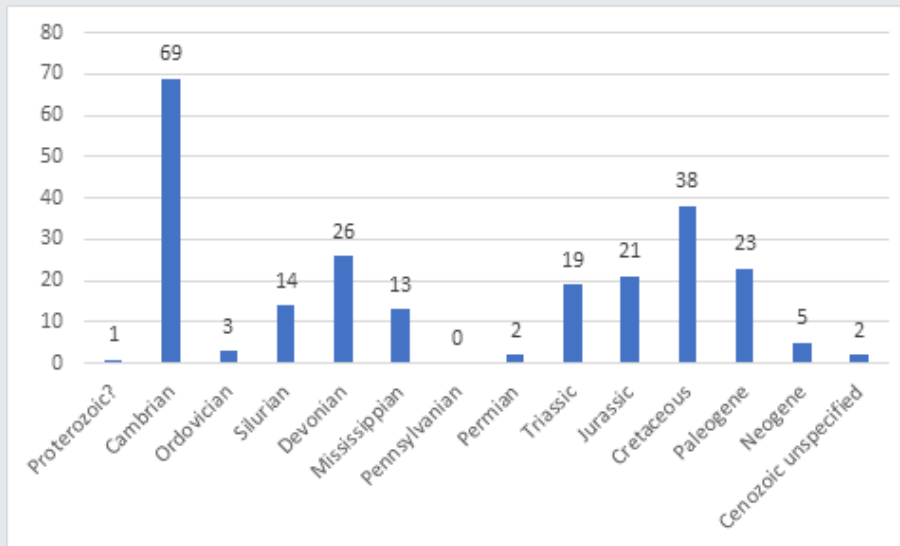


Figure 1. Temporal distribution of fossil species named from Alaska's NPS units (two unconfirmed Jurassic occurrences omitted).

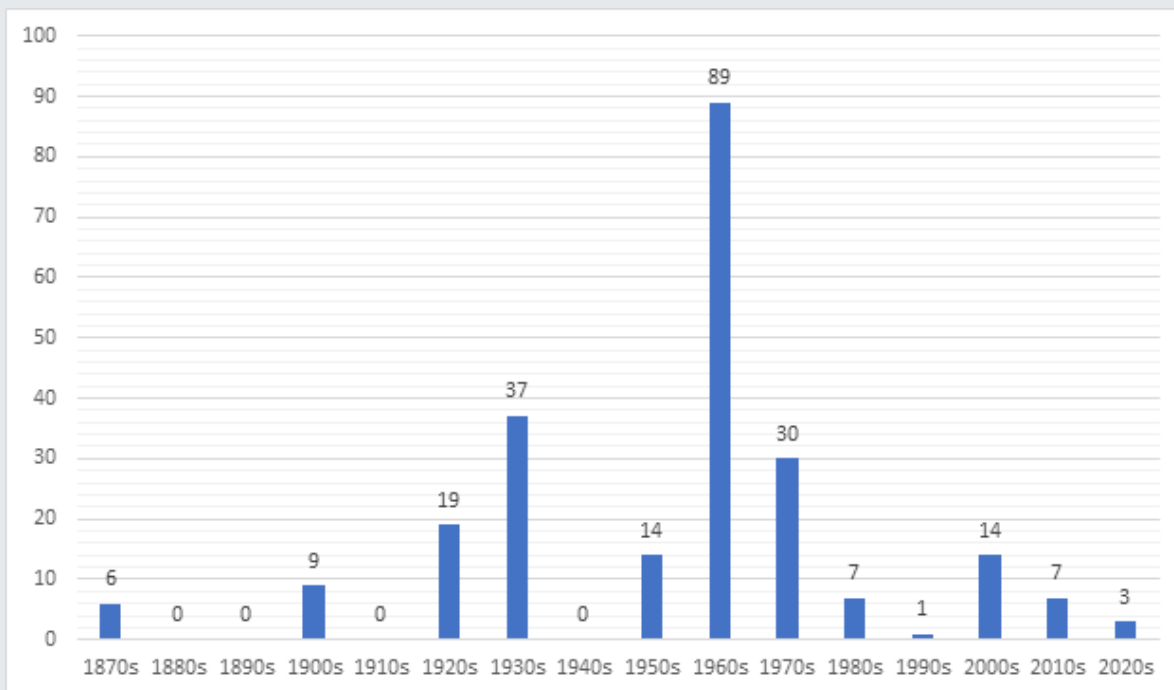


Figure 2. Chronology of fossil species named from Alaska's NPS units (two unconfirmed names from the 1900s omitted).

Each of the 238 taxa represent a piece of the mosaic that is the history of life on Earth. Some of the more unusual species include:

Brabbinthes churkini Allison (1975): This species was first described as a silicified Neoproterozoic flatworm from the “basalt and red beds” unit of the Tindir Group in Yukon-Charley Rivers NPRES (Allison 1975). Its identification and stratigraphic provenance were challenged by Cloud in Cloud et al. (1976), who proposed that the holotype was actually a section of a sponge spicule and found the correlation of the type locality to be questionable. Allison (1988) did not attempt to resurrect a flatworm identification but did not commit to any other identification, either, finding some structural differences from sponge spicules.

Magnoavipes denaliensis Fiorillo et al. (2011): One of many different ichnospecies found in the Upper Cretaceous Cantwell Formation of Denali NP&PRES, *Magnoavipes denaliensis* represents tracks left by a large crane-like bird that reached human heights.

Pycnodesma giganteum (Kirk 1927a): At roughly hand-sized, this is the largest known Silurian bivalve, and is only found in rocks of the Alexander Terrane. The type specimen comes from an islet off Willoughby Island in Glacier Bay NP&PRES. The genus was originally *Pycnodesma* (Kirk 1927a), but that name proved to be in use and *Pycnodesma* was substituted (Kirk 1927b).

Although many fossil species have already been named from the rocks of Alaska’s national parks, we can be sure that many more are yet to be described. In just the past three years three new species of brachiopods were described from the Devonian Shellabarger Limestone of Denali NP&PRES: *Carinagypa robecki* Blodgett et al. (2021) and *Clorinda cappsi* and *Ivdelinia (Ivdelinia) tweeti* Blodgett et al. (2022). Brachiopods have become an especially studied group in the past few decades, and other newly established species include *Myriospirifer breasei* Garcia-Alcalde and Blodgett (2001), also from the Shellabarger Limestone of Denali NP&PRES; *Alaskothyris frosti* Blodgett et al. (2015) from Devonian strata in Noatak NPRES; and *Sapelnikoviella santuccii* Blodgett et al. (2013) from late Silurian strata of the Willoughby Limestone, Glacier Bay NP&PRES. A gallery of some of these species follows the text (Figures 3–9). The complex and varied rocks exposed in the state’s NPS areas should continue to be fertile grounds for new discoveries.

References

- Allison, C. W. 1975. Primitive fossil flatworm from Alaska: new evidence bearing on ancestry of the Metazoa. *Geology* 3(11):649–652.
- Allison, C. W. 1988. Paleontology of late Proterozoic and early Cambrian rocks of east-central Alaska. U.S. Geological Survey, Washington, D.C. Professional Paper 1449.
- Berdan, J. M., and M. J. Copeland. 1973. Ostracodes from Lower Devonian formations in Alaska and Yukon Territory. U.S. Geological Survey, Washington, D.C. Professional Paper 825.
- Blodgett, R. B., V. V. Baranov, and V. L. Santucci. 2015. *Alaskothyris* new genus (Family Stringocephalidae, Subfamily Rensselandiinae) from the Givetian (upper Middle Devonian) of the northwestern Brooks Range, northern Alaska. *New Mexico Museum of Natural History and Science Bulletin* 57:5-8.
- Blodgett, R. B., V. V. Baranov, and V. L. Santucci. 2022. Two new late Emsian (latest Early Devonian) pentameridine brachiopods from the Shellabarger Limestone (new Formation), Shellabarger Pass, Denali National Park and Preserve, south-central Alaska. *New Mexico Museum of Natural History and Science Bulletin* 90:73–83.
- Blodgett, R. B., A. J. Boucot, V. V. Baranov, and D. M. Rohr. 2013. *Sapelnikoviella santuccii*, a new gypidulid brachiopod genus and species from the upper Silurian of Glacier Bay National Park & Preserve, southeast Alaska. *Memoirs of the Association of Australasian Palaeontologists* 44:65–72.
- Blodgett, R. B., V. L. Santucci, V. V. Baranov, and M. S. Hodges. 2021. The gypidulid brachiopod genus *Carinagypa* in late Emsian (latest Early Devonian) strata of the Shellabarger Pass area (Farewell terrane), Denali Park & Preserve, south-central Alaska. *New Mexico Museum of Natural History and Science Bulletin* 82:19–28.
- Cloud, P., J. E. Wright, and L. Glover. 1976. Traces of animal life from 620 million year old rocks in North Carolina. *American Scientist* 64(4):396–406.
- Eichwald, E. v. 1871. Geognostisch-palaeontologische Bemerkungen über die Halbinsel Mangischlak und die Aleutischen Inseln. Buchdruckerei der Kaiserlichen Akademie der Wissenschaften, St. Petersburg, Russia.

- Fiorillo, A. R., S. T. Hasiotis, Y. Kobayashi, B. H. Breithaupt and P. J. McCarthy. 2011. Bird tracks from the Upper Cretaceous Cantwell Formation of Denali National Park, Alaska, USA: a new perspective on ancient north polar vertebrate biodiversity. *Journal of Systematic Paleontology* 9(1):33–49.
- Garcia-Alcalde, J., and R. B. Blodgett. 2001. New Lower Devonian (upper Emsian) *Myriospirifer* (Brachiopoda, Eospiriferinae) species from Alaska and northern Spain and the paleogeographic distribution of the genus *Myriospirifer*. *Journal of the Czech Geological Society* 46(3–4):145–154.
- Hollick, A. 1930. The Upper Cretaceous floras of Alaska. U.S. Geological Survey, Washington, D.C. Professional Paper 159.
- Hollick, A. 1936. The Tertiary floras of Alaska. U.S. Geological Survey, Washington, D.C. Professional Paper 182.
- Imlay, R. W. 1960. Early Cretaceous (Albian) ammonites from the Chitina Valley and Talkeetna Mountains, Alaska. U.S. Geological Survey, Washington, D.C. Professional Paper 354-D.
- Imlay, R. W. 1964. Middle Bajocian ammonites from the Cook Inlet region, Alaska. U.S. Geological Survey, Washington, D.C. Professional Paper 418-B.
- Kirk, E. 1927a. *Pycnodesma*, a new molluscan genus from the Silurian of Alaska. *Proceedings of the United States National Museum* 71, article 20.
- Kirk, E. 1927b. *Pycinodesma*, a new name for *Pycnodesma* Kirk not Schrammen. *Journal of the Washington Academy of Sciences* 17:543.
- Knowlton, F. H. 1904. Fossil plants from Kukak Bay. 1904. Pages 149–162 in B. K. Emerson, C. Palache, W. H. Dall, E. O. Ulrich, and F. H. Knowlton. *Alaska. Volume IV: Geology and paleontology*. Doubleday, Page & Company, New York, New York.
- Kobayashi, T. 1935. The *Briscoia* fauna of the Late Upper Cambrian in Alaska with descriptions of a few Upper Cambrian trilobites from Montana and Nevada. *Japanese Journal of Geology and Geography* 12(3-4):39–57.
- Palmer, A. R. 1968. Cambrian trilobites of east-central Alaska. U.S. Geological Survey, Washington, D.C. Professional Paper 559-B.
- Smith, J. P. 1927. Upper Triassic marine invertebrate faunas of North America. U.S. Geological Survey, Washington, D.C. Professional Paper 141.
- Won, M.-Z., R. B. Blodgett, and V. Nestor. 2002. Llandoveryan (Early Silurian) radiolarians from the Road River Formation of east-central Alaska and the new family Haploptaeniaturidae. *Journal of Paleontology* 76(6):941–964.

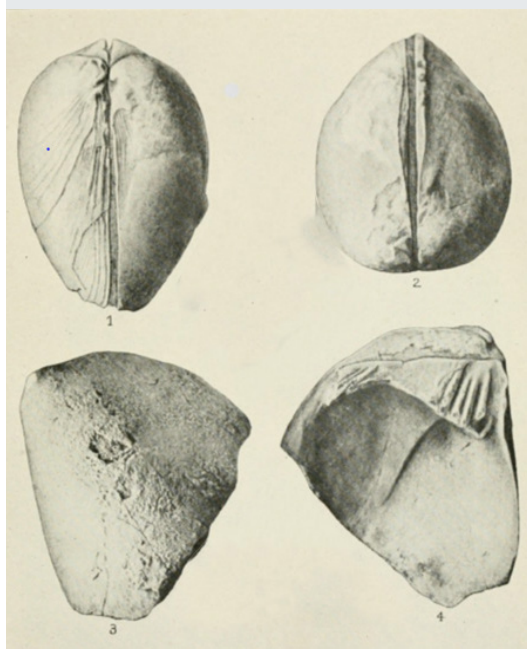


Figure 3. *Pycnodesma giganteum* (Kirk 1927a) from upper Silurian strata of the Willoughby Limestone, Glacier Bay NP&PRES. Articulated specimen, USNM 71275. Reposited at the United States National Museum (USNM), Washington, D.C.

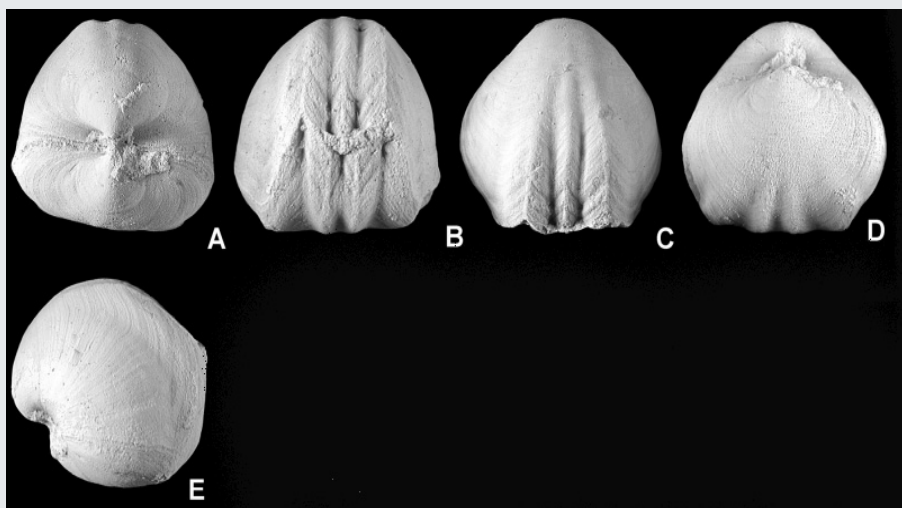


Figure 4. *Sapelnikoviella santuccii* Blodgett et al. (2013) from upper Silurian strata of the Willoughby Limestone, Glacier Bay NP&PRES. Articulated shell, UAMES 23259. Shell measures 9.4 mm in thickness. Reposited at the University of Alaska Museum of Earth Sciences collection (UAMES), Fairbanks, Alaska.

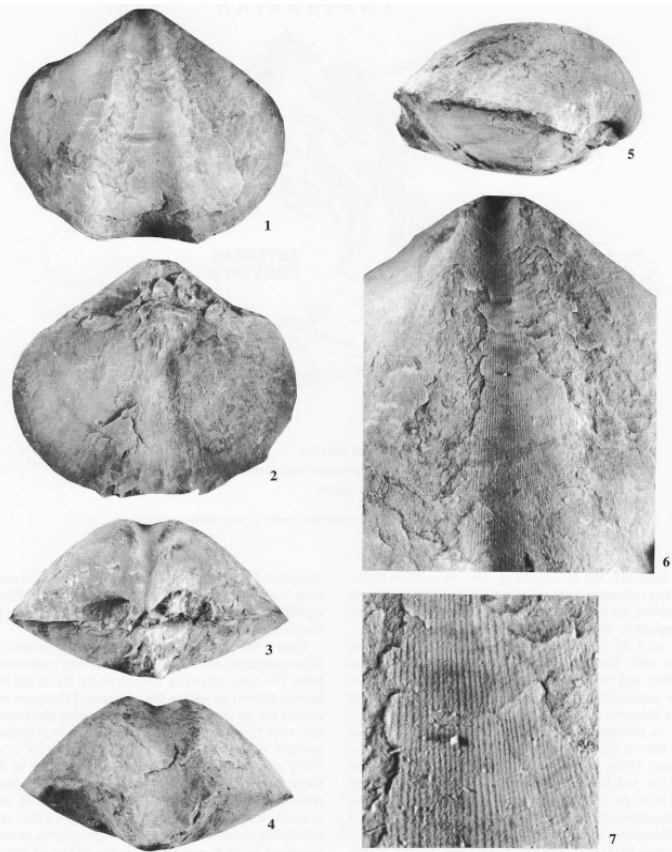


Figure 5. *Myriospirifer breasei* Garcia-Alcalde and Blodgett (2001) from the Devonian Shellabarger Limestone of Denali NP&PRES. Articulated specimen, UAM 2569. Shell measures 50 mm in thickness. Reposited at the University of Alaska Museum of Earth Sciences collection (UAMES), Fairbanks, Alaska.

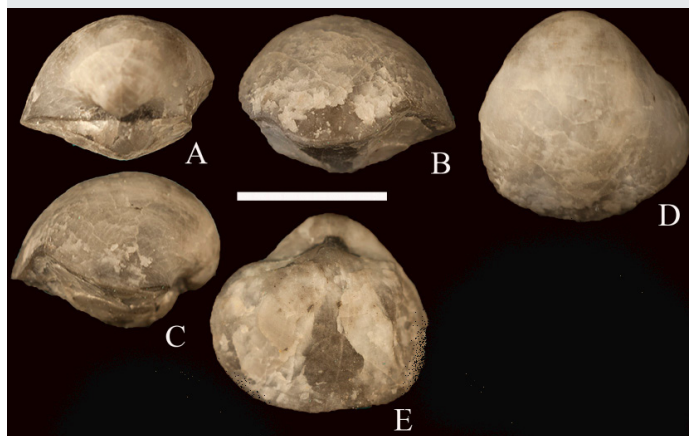


Figure 7. *Clorinda cappsi* Blodgett et al. (2022) from the Devonian Shellabarger Limestone of Denali NP&PRES. Articulated shell, AKGMC-56. Scale bar = 1 cm. Specimen reposit at the Alaska Geological Materials Center (GMC), Anchorage, Alaska.

Figure 9. *Alaskothyris frosti* Blodgett et al. (2015) from the Devonian strata in the Noatak National Preserve. Ventral valve, USNM 604946. Scale bar = 1 cm. Specimen deposited at the United States National Museum (USNM), Washington, D.C.

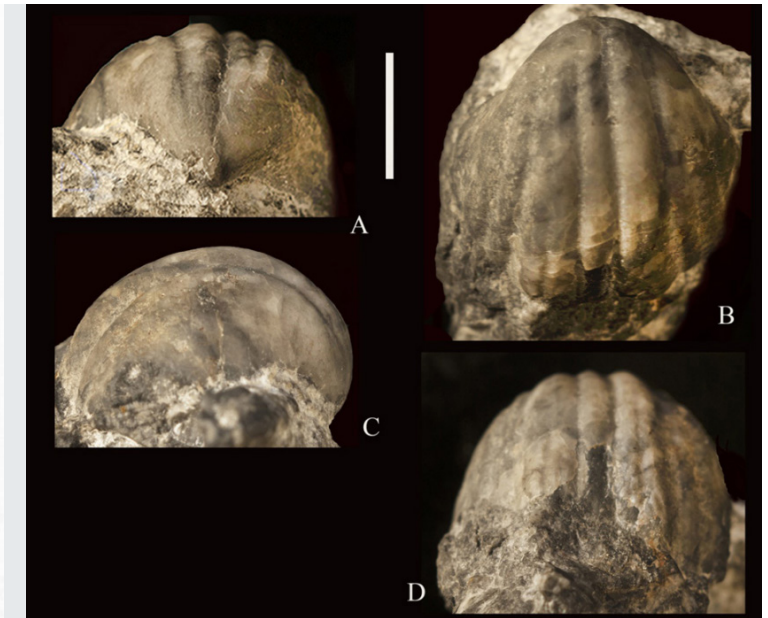


Figure 6. *Ivdelinia (Ivdelinia) tweeti* Blodgett et al. (2022) from the Devonian Shellabarger Limestone of Denali NP&PRES. Ventral valve, AKGMC-54. Scale bar = 1 cm. Specimen reposit at the Alaska Geological Materials Center (GMC), Anchorage, Alaska.

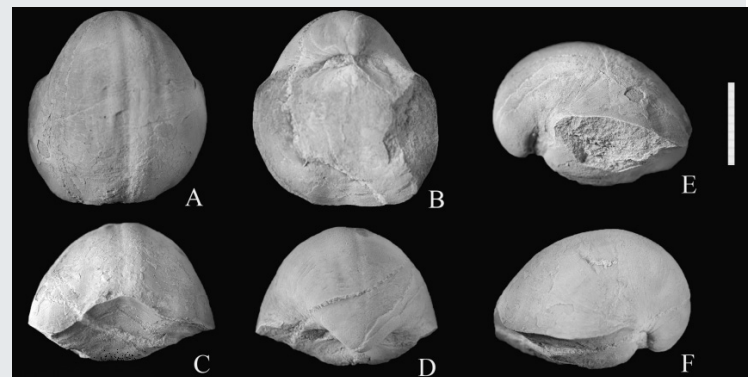
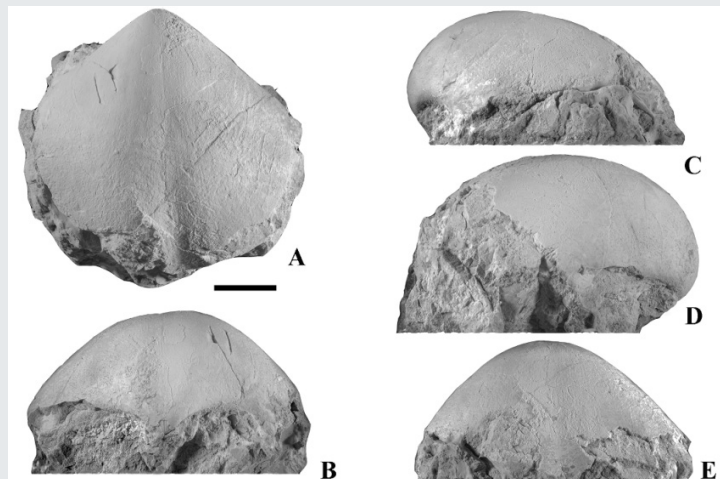


Figure 8. *Carinagypa robecki* Blodgett et al. (2021) from the Devonian Shellabarger Limestone of Denali NP&PRES. Articulated shell, AKGMC=4. Scale bar = 1 cm. Specimen reposit at the Alaska Geological Materials Center (GMC), Anchorage, Alaska.





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Kenneth P. Helmold (Editor)
Alaska Geological Society, Inc.
P. O. Box 101288
Anchorage, AK 99510
e-mail: helmold@alaskan.com
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Contact Jennifer Crews at jennifer.r.crews@conocophillips.com to place ad.

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Alaska Geological Calendar of Events



| Date | Time | Organization | Event | Location |
|----------------|----------|--------------|---|--------------------------------|
| Sept. 14, 2023 | 11:45 am | AGS | Jake Covault, Bureau of Economic Geology. "Shelf-Margin Analogs for Brookian Sequences, AK" | Virtual Google Meet |
| Oct. 30, 2023 | 11:45 pm | AGS | Speaker and title TBA | BP Energy Center & Google Meet |
| Nov. 28, 2023; | 11:45 am | AGS | Speaker and title TBA | BP Energy Center & Google Meet |
| Dec. 14, 2023; | 11:45 am | AGS | Speaker and title TBA | BP Energy Center & Google Meet |
| Jan. 25, 2023; | 11:45 am | AGS | Speaker and title TBA | BP Energy Center & Google Meet |

AMA: Alaska Miners Association; **AGS:** Alaska Geological Society; **GSA:** Geophysical Society of Alaska

AAEP: Alaska Association of Environmental Professionals; **SPE** Society of Petroleum Engineers;

UAA University of Alaska Anchorage.

Membership Note

Membership renewal is November 1; annual dues are:

Full member - \$25

Student member - \$5

Lifetime membership - \$250



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