ALASKA GEOLOGY
Newsletter of the
Alaska Geological Society

Dinosaurs, Sharks, Mammoths & More: Ray Troll's Prehistoric Alaska

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Artist Ray Troll has spent over half of his 61 years on the planet in the geologically rich state of Alaska. When Ray moved to Ketchikan in 1983 he brought with him a life-long love of all things prehistoric. Over the decades he has carved out a unique artistic career becoming well known for his quirky, off beat fish-centric humor. Over the course of his career he began to establish working relationships with numerous marine biologists and ichthyologists and eventually found himself returning to his first love in life, paleontology, when he met Dr. Kirk Johnson who was then employed at the Denver Museum of Nature and Science.

Together they published a book and a large fossil map with Fulcrum Press called "Cruisin' the Fossil Freeway" in 2007. That book led to a major traveling exhibit sponsored by the Burke Museum of Natural History that visited many museums across the United States. In 2010 Ray and Kirk were jointly awarded a Guggenheim Fellowship to underwrite the extensive travel for their second book with Fulcrum entitled "Cruisin' the Eternal Coastline: the Best of the Fossil West from Baja to Barrow". Their next book is due out in the fall of 2016.

From 2009 to 2013 the pair traveled up and down the west coast spending copious amounts of time in museum collections, out in the field hunting fossils and on the road gathering stories, doing research, making art and filling notebooks and sketchbooks with drawings and reams of data. California, Oregon, Washington, British Columbia, the Yukon and Alaska were all explored on numerous trips over the course of four years. In 2012 Kirk Johnson moved to Washington DC to become the Sant Director of the National Museum of Natural History.

Troll will show highlights from their various West Coast fossil forays but will concentrate on showing new work on fossil Alaskan flora and fauna, from boating expeditions in the Alexander Archipelago finding giant ichthyosaurs and fossilized palm fronds to chasing down polar dinosaurs on the north slope of Alaska.

AGS Luncheon

(joint meeting with Geological Society of America's Cordilleran Section Meeting)

Date & Time:	**Tuesday, May 12th, 12:00 am – 1:00 pm**
Program:	**Dinosaurs, Sharks, Mammoths & More: Ray Troll's Prehistoric Alaska**
Speaker:	**Ray Troll, Ketchikan, AK**
Place:	**ConocoPhillips Integrated Science Building, University of Alaska Anchorage Campus**
Reservations:	**Make your reservation before noon Friday, May 8th, 2015**
Cost:	**Lunch with reservation: $25**

For more information call (907) 854-2363 or visit the AGS website: www.alaskageology.org

From the President's Desk:

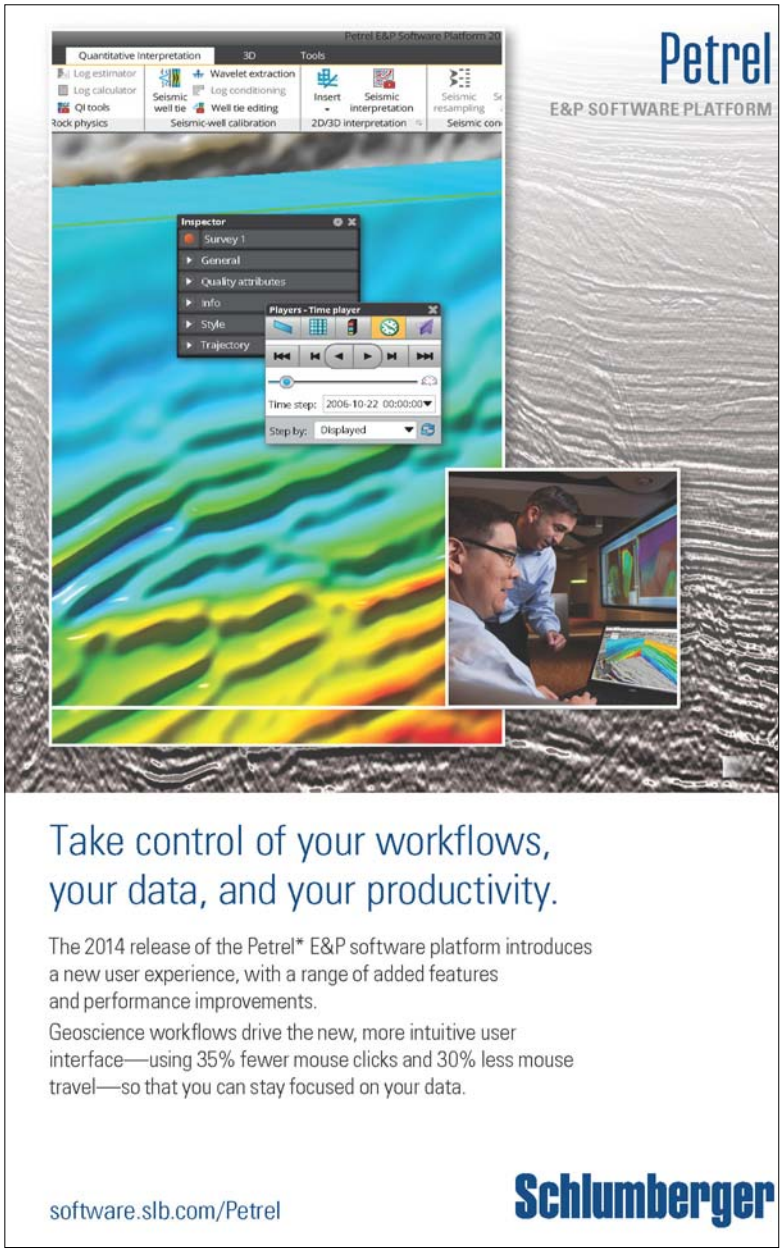
Did you know that the Alaska State fossil is the Woolly Mammoth *Mammuthus primigenius*? Well Alaska is a big state and we deserve a really big fossil. As it happens three other states have also selected mammoths and mastodons as their state fossils making them almost as popular as dinosaurs. Not a fossil mammoth molar, a sliver of a fossil ivory or even a tusk mind you, but the whole animal. Vermont even has a Beluga whale as their state fossil; perhaps nobody told the good folks in Vermont that they are still alive and well in the Turnagain Arm. Texas has a sauropod dinosaur as their state fossil; no surprise there!

So maybe size is everything in state fossils. When the state governors meet every year do they all tease poor Ohio who has selected a lowly trilobite? I think that they whole point of state fossils is that the average school kid should have a fair chance of seeing said fossil on a nature trip, even if collecting said fossil is no longer encouraged (or even legal). So maybe the brachiopods and solitary corals demand our respect as well as the trophy fossils.

Why all this rambling talk of fossils? Our May luncheon talk will be given by renowned Alaskan artist Ray Troll whose quirky art can be found in all the best galleries in the state and graces the new AGS tee shirts (a steal at $25). Ray has been fascinated by paleontology for many years and has collaborated with Kirk Johnson of the Denver Museum to illustrate several popular books and maps on the subject. It should be a great talk and a fitting end to the 2014/2015 session.

Finally, I would like to thank the board members and officers who are stepping down this year. Many thanks to Eric Cannon, Jim Brown, Tom Morahan and Richard Lease for their service over the years to the society.

~ Keith



CHANGE TO AGS NEWSLETTER PUBLICATION FORMAT

In May, 2015 the Alaska Geological Society will cease to print and mail out the monthly newsletter and all future newsletters will go out as electronic (pdf) files attached to e-mails. The AGS Board of Director's decision to distribute newsletters in solely an electronic format was reached because the preparation and mail-out of printed newsletters is one of the largest costs borne by the Society and is not offset by revenues from dues, thus eroding the reserve scholarship funds. At present our membership roster lists 263 past and present members, most receiving printed newsletters, with 97 active members (dues paid through November 2015).

To continue to receive the AGS newsletters after May 2015, you will need: 1) to be an active member (annual dues paid up); and 2) to provide the Society with a functional e-mail address. Membership renewals or submissions of updated e-mail addresses can be done through the AGS web page at http://www.alaskageology.org/membershipSUBMIT.htm or by e-mail to membership@alaskageology.org, respectively. If you want to find out your membership status please contact the AGS at membership@alaskageology.org and we will be happy to reply with a check of our records. The AGS membership dues cycle starts on November 1st of each year.

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ALASKA FOSSILS OF THE MONTH

ALASKOTHYRIS FROSTI, A RECENTLY NAMED DEVONIAN BRACHIOPOD GENUS AND SPECIES FROM THE BROOKS RANGE OF ALASKA

ROBERT B. BLODGETT[1] & VINCENT L. SANTUCCI [2]

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One of the most fascinating aspects of paleontological research is the discovery of new fossil genera and species of once living elements of former biotic worlds. In the case of Alaska this is an extremely common occurrence, due to its remoteness from other parts of the globe where active characterization of their past faunal and flora components has been undertaken. The Brooks Range of northern Alaska is a prime example of this phenomenon. Despite the abundance of field work conducted there since the late 1940's, many portions of the stratigraphic column have been little studied paleontologically, especially the Devonian System, resulting in a strong knowledge gap when to compared to its closest neighboring regions in Northeast Russia and the Canadian Arctic Islands.

The most common groups of megafossils found in Devonian strata of the Brooks Range are brachiopods and rugose corals, both of which have been poorly characterized despite the existence of many collections lying about in both federal and industry repositories. This lack of published knowledge results in a very impoverished picture of the stratigraphic succession there, as well as the correlation and determination of faunal alliances between the various component terranes of the Arctic Alaska Superterrane.

In a recent trip to the Smithsonian Institution in Washington D.C. to examine and evaluate fossil collections from Glacier Bay National Park & Preserve, the authors found a collection of large stringocephaloid brachiopods from the Howard Pass quadrangle in and amongst collections that had formerly belonged to the U.S. Geological Survey. These eye-catching (at least to a paleontologist) specimens were notable both in representing a new genus and species, but also because we have so little published data from this part of Alaska. Previous publications providing illustration and description of Devonian brachiopods from the Brooks Range are limited to a handful of publications and include Sartenaer (1969), Blodgett et al. (1988), Blodgett and Dutro (1992), Popov et al. (1994), Baxter and Blodgett (1994), Dutro et al. (1994), Blodgett et al. (2002), Blodgett and Baranov (2012), and Baranov and Blodgett (2013).

In a recent paper (Blodgett, Baranov, and Santucci, 2015) we formerly established this new genus and species with the name of *Alaskaothyris frosti* (see Figs. 1 and 2). The fossil material containing this species was collected in 1968 by A.K. (Gus) Armstrong of the U.S. Geological Survey. The locality (USGS locality 8451-SD) is situated in the Howard Pass 1:250,000 scale quadrangle and was also the source of a single dipnoan fish tooth plate which was described as *Dipterus* sp. by Perkins (1971). In the preceding article it was noted that the collection included numerous specimens of the brachiopod *Stringocephalus* identified by J.T. Dutro, Jr. (identified by us as *Alaskothyris frosti* n. gen., n. sp.). The locality data provided in the paper was that the specimens come "from a small hill on the east side of Howard Pass, approximately two miles southeast of Nigtun Lake (68°13'N, 156°50'W.)" (Perkins, 1971, p. 555).

Etymology: The new species is named in honor of Dr. Herbert C. Frost (Fig. 3), National Park Service, Alaska Regional Director, Anchorage, Alaska, for his support to science, management and stewardship of National Park Service paleontological resources. His strong support has lead to the National Park Service becoming the foremost source of new information on Alaskan paleontology during the past decade! Dr. Frost holds a PhD in wildlife ecology from the University of Maine and has research experience with black bears, white-tailed deer, fishers, and martens. During his tenure with the National Park Service, Dr. Frost served as the Associate Director, Natural Resource Stewardship and Science in Washington, D.C.

ACKNOWLEDGMENTS

We thank the National Park Service for providing funding which allowed Blodgett to locate this fossil collection in the holdings of the Department of Paleobiology, U.S. National Museum (Smithsonian Institution), Washington, D.C. The collection was formerly property of the Branch of Paleontology & Stratigraphy of the U.S. Geological Survey, but was transferred to the USNM after the disbanding of the P&S Branch following the 1995 Reduction-In-Force (RIF) of the USGS. We thank Kathy Hollis and Mark Florence, both of the Department of Paleobiology, U.S. National Museum, for arranging a loan of the collection for study. The work was partly supported by the Russian Fund of Basic Researches (grant 13-05-00520), Program of Presidium of the Russian Academy of Science No 23, Project No 23.1.

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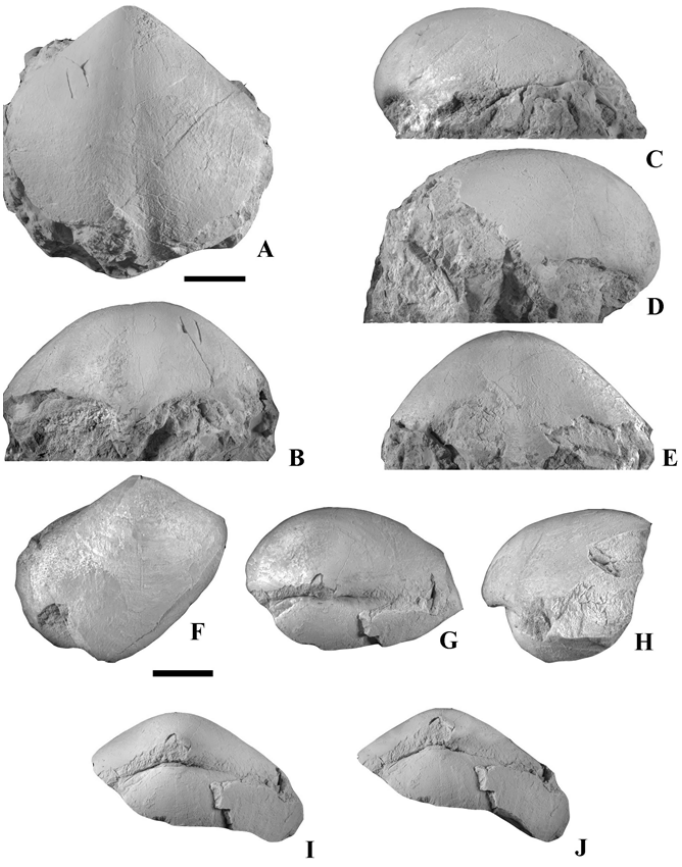


Figure 1. *Alaskothyris frosti* n. gen., n. sp., A-E, holotype, USNM 604946, in A, ventral, B, posterior, C, lateral, D, opposing lateral, and E, anterior views of ventral valve. F-J, paratype, USNM 604947, in F, ventral, G, posterior, H, lateral, I, oblique posterior, J, even more obliquely posterior (almost dorsal) views of an articulated specimen in which only the posterior-most portion is preserved. Scale bars = 1 cm.

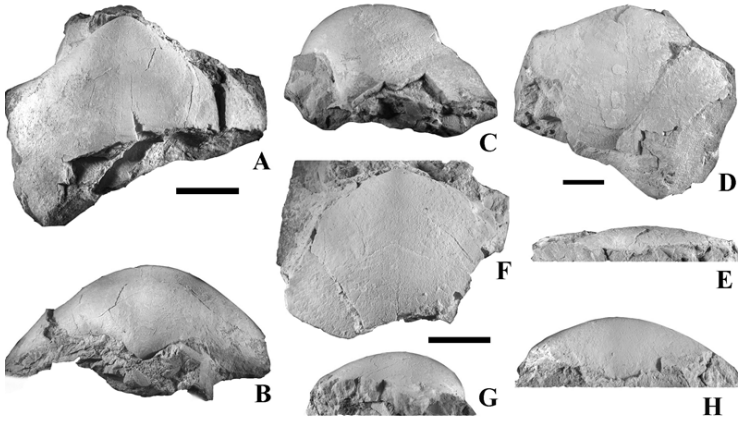


Figure 2. *Alaskothyris frosti* n. gen., n. sp., A-C, paratype, USNM 604948, in A, ventral, B, posterior, and C, lateral views of ventral valve. D-E, paratype, USNM 604949, in D, dorsal and E, posterior views of dorsal valve. F-H, paratype, USNM 604950, in F, dorsal, G, lateral, and H, posterior views of dorsal valve. Scale bars = 1 cm.



Figure 3. Dr. Herbert C. Frost, National Park Service, Alaska Regional Director, Anchorage, Alaska

Alaska Geological Society

May 2015 Election Ballot for Officers and Board Members

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☐ _____
Position and Name

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☐ *Board Member* - *Jamey Jones*

☐ *Board Member* - *Mick Bradway*

Write-in Candidate(s)

☐ _____
Name

2014-2016 Board Member (vote for one)

☐ *Board Member* - *Al Hunter*

Write-in Candidate

☐ _____
Name

Please mail your ballot by May 13th to:
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Ballots will also be available at the May 12th luncheon at UAA

Calendar of Events

Date	Time	Organization	Event	Location
April 9th	11:30am – 1:00pm	Geophysical Society of Alaska	Dr. Peter Cary - Known Knowns, Known Unknowns and Unknown Unknowns in Land Exploration Seismology	Conoco Phillips Building
April 16th	11:30am – 1:00pm	Alaska Geological Society	Peter Haeussler, USGS - Focused exhumation along megathrust splay faults in Prince William Sound, Alaska	BP Energy Centre Anchorage
May 12th	11:30 – 1:00pm	Alaska Geological Society	AMA luncheon - Ray Troll "Dinosaurs, Sharks, Mammoths and More/ Ray Troll's Prehistoric Alaska"	UAA, CPISB building Ground floor
11th – 15th May 2015		GSA	Geological Society of America - Cordilleran Section Meeting	UAA campus, Anchorage
June 3rd	5:00pm – 7:00pm	GSA/AGS	Annual picnic	Kincaid Park
Aug 31 – Sept 3rd		NMLRW	Northern Latitudes Mining Reclamation Workshop	Juneau, Alaska
Sept 19 – 22nd 2015		AIPG	American Association of Professional Geologists – Annual Meeting	Hilton Hotel, Anchorage

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The Alaska Geological Society is an organization which seeks to promote interest in and understanding of Geology and the related Earth Sciences, and to provide a common organization for those individuals interested in geology and the related Earth Sciences.

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Contact membership coordinator Ken Helmold with changes or updates (e-mail: ken.helmold at alaska.gov; phone: 907-269-8673)

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