

PATRICK SCOTT DRUCKENMILLER

Curriculum Vitae

INSTITUTIONAL ADDRESS

University of Alaska Museum of the North
Department of Geology and Geophysics
907 Yukon Drive
PO Box 756960
Fairbanks, Alaska 99775

I. TERTIARY EDUCATION

- Ph.D.** Specialization in vertebrate paleontology
University of Calgary, Department of Biological Sciences, Alberta, Canada
March 2006 (Major advisor; A.P. Russell)
- M.Sc.** Specialization in vertebrate paleontology
Montana State University-Bozeman, Department of Biological Sciences
December 1998 (Major advisor: J.R. Horner)
- B.A.** Botany
University of Wisconsin-Madison, Department of Botany
December 1991 (Major advisor: R. Kowal).
Graduation with Distinction

II. CURRENT APPOINTMENTS

1. **Curator of Earth Sciences**, University of Alaska Museum, October 2007 to present.
2. **Assistant Professor of Geology**, Department of Geology and Geophysics, University of Alaska Fairbanks, October 2007 to present.
3. **Adjunct Curator**, Museum of the Rockies, Montana State University-Bozeman, January 2007 to present.

III. RESEARCH

Publications

- Druckenmiller, P.S.**, and A.P. Russell. 2008. A phylogeny of Plesiosauria (Sauropterygia) and its bearing on the systematic status of *Leptocleidus* Andrews, 1922. *Zootaxa* 1863:1-120.

- Druckenmiller, P.S.**, and A.P. Russell. 2008. Skeletal anatomy of an exceptionally complete specimen of a new genus of plesiosaur from the Early Cretaceous (early Albian) of northeastern Alberta, Canada. *Palaeontographica Abteilung A*, 283(1-3):1-33.
- Druckenmiller, P.S.**, and A.P. Russell. 2006. A new elasmosaurid plesiosaur from the Early Cretaceous Clearwater Formation, northeastern Alberta, Canada. *Paludicola* 5(4):184-199.
- Druckenmiller, P.S.** 2006. Early Cretaceous plesiosaurs (Sauropterygia: Plesiosauria) from northern Alberta: palaeoenvironmental and systematic implications. Ph.D. dissertation. University of Calgary. 558 pp.
- Druckenmiller, P.S.** 2002. Osteology of a new plesiosaur from the Lower Cretaceous (Albian) Thermopolis Shale of Montana. *Journal of Vertebrate Paleontology* 22(1):29-42.
- Druckenmiller, P.S.** 1998. Osteology and relationships of a plesiosaur (Sauropterygia) from the Thermopolis Shale (Lower Cretaceous) of Montana. M.Sc. thesis. Montana State University-Bozeman. 98 pp.

Publications currently in review or preparation

- Druckenmiller, P.S.**, and A.P. Russell. (Submitted March, 2008 to the *Journal of Vertebrate Paleontology*). A new genus of Early Cretaceous plesiosaur from Alberta, Canada: replacement name for the preoccupied genus *Nichollsia*.
- Druckenmiller, P.S.**, and A.P. Russell. (In preparation for the *Journal of Paleontology*). A stratigraphically early occurrence of Polycotylidae (Plesiosauria) from the Clearwater Formation (Early Cretaceous; early Albian) of northern Alberta, Canada.

Conference Presentations

- Druckenmiller, P.S.**, Hurum, J.H., Knutsen, E.M., and Nakrem, H.A. 2008. Tithonian marine reptiles of Svalbard, Norway and the Neuquén Basin, Argentina: A preliminary comparison of diversity and paleoenvironments. *Actas III Congreso Latinoamericano de Paleontología de Vertebrados*, Neuquén, Argentina. Page 85.
- Druckenmiller, P.S.**, and A.P. Russell. 2006. A phylogeny of Plesiosauria (Sauropterygia) with emphasis on the systematic status of *Leptocleidus*, Andrews 1922. *Journal of Vertebrate Paleontology* 26(supplement to number 3):57A.
- Russell, A.P., and **Druckenmiller, P.S.** 2005. Palaeoecology on an Industrial Scale: Marine Vertebrates from the Fort McMurray Oil Sands Mine. *Canadian Society of Zoologist Bulletin* 36(2):P41.
- Druckenmiller, P.S.**, and A.P. Russell. 2005. A Mine of Information: Palaeoenvironmental Associations of a Sauropterygian Community in Northern Alberta, Canada. Programme and Abstracts 5th World Congress of Herpetology. Stellenbosch, South Africa. Page 129.

- Druckenmiller, P.S.**, and A.P. Russell. 2004. A new plesiosaur from the Lower Cretaceous (Lower Albian) Clearwater Formation from northern Alberta, Canada. *Journal of Vertebrate Paleontology* 24(supplement to number 3):53A.
- Druckenmiller, P.S.**, and A.P. Russell. 2003. A preliminary report on a diverse assemblage of Early Cretaceous plesiosaurs and ichthyosaurs from the Clearwater Formation, northern Alberta, Canada. *Journal of Vertebrate Paleontology* 23(supplement to number 3):56A.
- Druckenmiller, P.S.**, and J.-P. Zonneveld. 2002. Depositional environments of an Early Cretaceous plesiosaur and ichthyosaur assemblage from the Clearwater Formation, Western Interior Basin. *Journal of Vertebrate Paleontology* 22(supplement to number 3):50A.
- Druckenmiller, P.S.** 1999. Osteology and relationships of a new plesiosaur from the Thermopolis Shale of Montana. *Journal of Vertebrate Paleontology* 19(supplement to number 3):42A
- Luikart, E.J., **P.S. Druckenmiller**, and M.A. Ivie. 1995. Fossil insects in Renova equivalents, Townsend Basin, southwestern Montana. *Geological Society of America, Rocky Mountain Section, Abstracts with programs* 27(4):45.
- Druckenmiller, P.S.**, A.J. Daun, J.C. Pladzewicz, and J.L. Skulan. 1993. Stomach contents of the Upper Cretaceous shark *Squalicorax falcatus*. *Journal of Vertebrate Paleontology, Abstracts of Papers* 13(supplement to number 3):33A.

Unpublished Research Reports

- Russell, Anthony P. and Associates. 2004. Historical Resource Impact Assessment, Canadian Natural Resources Limited Horizon Mine Project, Palaeontological overview of construction activities for the Horizon Oil Sands Project. Calgary, Alberta. (Report authored primarily by **Pat Druckenmiller**).
- Russell, Anthony P. and Associates. 2004. Historical Resource Impact Assessment, Canadian Natural Resources Limited Horizon Mine Project, Overview report determining the likelihood of impacting palaeontological resources during construction of the D-7 Drainage Works, Outfall to the Tar River, and Plant Site Drainage Outlet System. Calgary, Alberta. (Report authored primarily by **Pat Druckenmiller**).
- Russell, Anthony P. and Associates. 2002. Historical Resource Impact Assessment, Canadian Natural Resources Limited Horizon Mine Project (Royal Tyrrell Museum Project File Number 3948-74E-4; Historical Resource Management File Number 4750-047), Calgary, Alberta. (Report authored primarily by **Pat Druckenmiller**).
- Druckenmiller, P.S.** 1999. The butterflies of Pine Butte Swamp Preserve, Teton County, Montana. Research Report submitted to The Nature Conservancy, Montana Chapter.

Collaborative Research Projects

Museum of Natural History, University of Oslo, Norway

Jurassic Marine Reptiles of Svalbard, Norway

This project seeks to map, collect, describe, and interpret the diverse and well-preserved remains of plesiosaurs and ichthyosaurs from a new and prolific locality on the arctic island of Spitsbergen.

Project details found at: <http://www.nhm.uio.no/pliosaurus/english/index.html>

Manuscripts Reviewed for:

Journal of Vertebrate Paleontology, Palaios, Paludicola

Grants/Scholarships Awarded

1. U.S. Fish and Wildlife Service cost-share agreement. \$20,000 USD. Grant with University of Alaska Museum to document Ice Age Mammals of northwestern Alaska.
2. EPSCoR Alaska. \$1400 USD. Travel grant for fieldwork in Svalbard, Norway.
3. Samuel P. and Doris Welles Fund of the University of California-Berkeley Museum of Paleontology. \$600 USD, February, 2005. Travel grant to help defray costs of research on plesiosaur specimens at the UC-Berkeley campus.
4. University of Calgary Graduate Research Scholarship. \$4,100 CDN, May – August, 2004.
5. Research Excellence Envelope International. \$4,200 CDN, Academic year 2002-2003. A competitive award in graduate research excellence for international students.
6. Research Excellence Envelope International. \$4,200 CDN, Academic year 2001-2002. A competitive award in graduate research excellence for international students.
7. Department of Biological Sciences Fee Scholarship. \$500 CDN, January, 2001.
8. Corporate research grant. Syncrude Canada, Ltd. \$43,000 CDN. 2001-2003. Grant awarded for costs associated with doctoral research at the University of Calgary. Progress reports given in the form of yearly “fossil updates”. PI: A.P. Russell (proposal co-written by **Pat Druckenmiller**).

Invited Presentations

1. **Druckenmiller, P.S.** 2008. Polar Dinosaurs: living the high life in the Age of Dinosaurs. University of Alaska Geophysical Institute Science for Alaska Lecture Series; January.
2. **Druckenmiller, P.S.** 2007. From digging to display: bringing Montana marine reptiles to life. Museum of the Rockies, Montana State University; June.
3. **Druckenmiller, P.S.** 2007. Oily ichthyosaurs and polar plesiosaurs: new insights into marine reptile paleobiology from Alberta and arctic Norway. University of Alaska Fairbanks; April.
4. **Druckenmiller, P.S.** 2007. Jurassic *Marine* Park: High latitude plesiosaurs and ichthyosaurs of the Mesozoic. University of Nebraska-Lincoln; January.

5. **Druckenmiller, P.S.** 2006. Mining for marine reptiles: Unearthing ancient life from the Syncrude Mines. Canadian Institute of Mining, Ft. McMurray, Alberta; September.
6. **Druckenmiller, P.S.** 2005. Early Cretaceous marine vertebrates from northeastern Alberta, Canada. University of California-Berkeley; February.
7. **Druckenmiller, P.S.** 2005. Mega-mining for ancient marine reptiles: Plesiosaurs and ichthyosaurs from the Athabasca Oil Sands Area of northeastern Alberta. Alberta Palaeontological Society, Calgary, Alberta; February.
8. **Druckenmiller, P.S.** 2004. Plesiosaurs and ichthyosaurs from the Syncrude Oil Sands Mine, northeastern Alberta. “Research Day” event, Royal Tyrrell Museum of Palaeontology, Drumheller, Alberta; January.

Seminar Presentations (selected examples):

1. **Druckenmiller, P.S.** 2007. Svalbard’s Jurassic marine park. Department of Geology and Geophysics, University of Alaska Fairbanks, November.
2. **Druckenmiller, P.S.** 2006. Taphonomy of an exceptionally well preserved plesiosaur from the Early Cretaceous of northern Alberta. Department of Biological Sciences, University of Calgary; February.
3. **Druckenmiller, P.S.** 2005. Travels with plesiosaurs: A how-to guide for museum visitation. Department of Biological Sciences, University of Calgary; January.
4. **Druckenmiller, P.S.** 2004. If rocks could talk: interpreting ancient environments in palaeobiology. Department of Biological Sciences, University of Calgary; February.
5. **Druckenmiller, P.S.** 2002. The Loch Ness Monster: a living plesiosaur or a living legend? Department of Biological Sciences, University of Calgary; February.

IV. TEACHING EXPERIENCE

1. Course Developer and Instructor
 GEOS 492: **Vertebrate Paleontology**. Department of Geology and Geophysics, University of Alaska Fairbanks. Developed and taught a new upper-level undergraduate course in vertebrate paleobiology and evolution. This was a new class offering for UAF, and included both a lecture and lab component. Spring 2008.
2. Integrated Science Content Specialist, e-Mentoring for Student Success (eMSS).
 National Science Foundation funded program awarded to the National Science Teachers Association, University of California-Santa Cruz, and Montana State University-Bozeman. With over 800 participants, eMSS establishes online networks for beginning and experienced science teachers in 16 states that are designed to promote professional development through e-dialogue. Fall, 2006, and ongoing into 2007.

3. University Instructor/Lecturer
 Geology 330: **Paleontology Laboratory and Research Techniques**. Montana State University-Bozeman, Fall 2006.

 Geology 580: **Marine Reptile Paleobiology** (graduate seminar). Montana State University-Bozeman, Spring 2007.
4. University Teaching Assistant
 Dr. A.P. Russell, Zoology 571: **Vertebrate Palaeozoology**. Department of Biological Sciences, University of Calgary, Alberta. Spring 2003.

 Dr. A.P. Russell, Zoology 477: **Biology of Vertebrates: birds and mammals**. Department of Biological Sciences, University of Calgary, Alberta. Fall 2001.

 Dr. H. Addy, Biology 233: **Introduction to Biology II**. Department of Biological Sciences, University of Calgary, Alberta. Spring 2001.

 Dr. D. Collins, Biology 130: **Environmental Issues in Society**. Department of Biological Sciences, Montana State University-Bozeman. Fall and Spring, 1994-1996.

V. MUSEUM - RELATED EXPERIENCE

MUSEUM OF THE ROCKIES, MONTANA STATE UNIVERSITY-BOZEMAN

1. Adjunct Curator
 Researched and catalogued Mesozoic marine reptile specimens from Montana and adjacent regions. Fall 2006 – present.
2. Museum Consultant
 Consulted for the new “Hall of Giants” exhibit in the Siebel Dinosaur Exhibit. Fall 2006 – Spring 2007.
3. Fossil Bank Supervisor
 Instructed and supervised approximately 20 volunteers in fossil preparation techniques and paleontology at the Bowman Fossil Bank, a dual preparation lab and public exhibit that allows for visitor/volunteer interaction. 1999-2000.
4. Crew Chief – Paleontology Field School
 Directed research, excavation, and education activities at Egg Mountain locality, a world-famous dinosaur nesting site near Choteau, Montana. Oversaw crew of five geology/paleontology instructors and support staff, presented public lectures, and conducted fieldwork. Summers, 1996 and 1997.
6. Paleontology Instructor - Paleontology Field School
 Instructed participants in paleontology (field techniques and dinosaur science) at Camp Makela/Egg Mountain field school near Choteau, Montana. Directed excavations and data collection at dinosaur bone beds and nesting sites; presented lectures and instructed teacher workshops. June – August, 1992 – 1995.

ROYAL TYRRELL MUSEUM OF PALAEOLOGY, DRUMHELLER, ALBERTA

1. Expedition Member

Participated in field work collecting Early to Middle Triassic marine vertebrates (ichthyosaurs, thalattosaurs, sauropterygians, and fish) from Wapiti Lake locality, in a remote, mountainous region of northeastern British Columbia, under the direction of Dr. Elizabeth Nicholls, Curator of Marine Reptiles. July-August, 2001.

2. Preparator

Carried out mechanical preparation on three specimens (two plesiosaurs and one ichthyosaur) from my Ph.D. study site. May – August 2001.

3. Field Crew Member

Participated in the excavation of the world's largest ichthyosaur specimen from Triassic rocks of northeastern British Columbia, under the direction of Dr. Elizabeth Nicholls, Curator of Marine Reptiles. June-July, 1999.

UNIVERSITY OF WISCONSIN-MADISON GEOLOGY MUSEUM

1. Expedition Leader

Organized and led numerous field trips to collect fossil vertebrates and invertebrates in western Kansas, eastern Montana, eastern Colorado, Texas and Oklahoma, Kentucky and Tennessee.

2. Museum Technician

Prepared and curated fossils. Created public displays, including mounted skeletons of the duck-billed dinosaur *Edmontosaurus*, the mosasaur *Platecarpus*, and the fossil bird *Hesperornis*. Trained and supervised museum volunteers. 1986-1992.

VI. MISCELLANEOUS

Professional Society Memberships

Society of Vertebrate Paleontology
The Palaeontological Association
Arctic Institute of North America
Society of Economic Paleontologists and Mineralogists