

Biographical Sketch---Joseph Anthony Cook

Professional Preparation:

Western New Mexico University, Silver City, BS, Biology 1980
University of New Mexico, Albuquerque, M.S. 1982 Zoology; Ph.D. Biology, 1990

Appointments:

Now

University of New Mexico

Regents' Professor (2018-), Biology Department
Curator of Mammals, Museum of Southwestern Biology (2003-)

Past Director, Museum Southwestern Biology (2011-2017)

Professor of Biology, Biology Department (2004-)
Curator of Genomic Resources (2008-2017)
Scientist in Residence, Sitka Sound Science Center, Alaska (2013)

Idaho State University

Chair and Professor of Biology (2000-2003)

University of Alaska Fairbanks

Curator of Mammals, University of Alaska Museum (1990-2001)
Assistant/Associate/Full Professor of Biology, University of Alaska
Member, Biochemistry and Molecular Biology Program
Faculty Adjunct, Universidad Gabriel Rene Moreno, Santa Cruz, Bolivia (1997)
Faculty Adjunct, Universidad de la Republica, Montevideo, Uruguay (1993-1996)
J. William Fulbright Fellowship (Uruguay 1993)

Publications (of 219 total, including 3 monographs):

- Colella, J. P., T. Lan, S. C. Schuster, S. L. Talbot, J. A. Cook, C. Lindqvist. 2018. Climate-mediated cyclic hybridization drives evolution at high-latitudes. *Nature Communications Biology* 51: Schmitt, C. J., J. A. Cook, K. Zamudio, and S. V. Edwards. 2018. Museum specimens of terrestrial vertebrates are sensitive indicators of environmental change in the Anthropocene. *Philosophical Transactions Royal Society B* 374: 20170387.
- Cook, J.A., Galbreath, K.E., Bell, K.C., et al. 2017. The Beringian Coevolution Project: Holistic collections of mammals and associated parasites reveal novel perspectives on evolutionary and environmental change in the North. *Arctic Science* 3:585-617.
- Pauli, J.N., Newsome S.D., Cook J.A., et al. 2017. Opinion: Why we need a centralized repository for isotopic data. *Proceedings National Academy Sciences, USA*. 114: 2997-3001
- Cook, J. A., S. Greiman, et al. 2016. Transformational principles for NEON sampling of mammalian parasites and pathogens: a response to Springer and colleagues. *BioScience* 66: 917-919.
- Cook, J.A., B.S. McLean, D.J. Jackson, J.P. Colella, S. E. Greiman, V.V. Tkach, T.S. Jung, J.L. Dunnun. 2016. First record of the Holarctic Least Shrew (*Sorex minutissimus*) and associated helminths from Canada: New light on northern Pleistocene refugia. *Canadian Journal of Zoology* 92: 367-372.
- Cook, J.A., S. V. Edwards, E. Lacey, R. P. Guralnick, P. S. Soltis, et al. 2014. Natural history collections as emerging resources for innovative education in biology. *BioScience* 64:725-734.
- Hope, A. G., E. C. Waltari, D. C. Payer, J. A. Cook, and S. L. Talbot. 2013. Future distribution of tundra refugia in Alaska. *Nature Climate Change* 3:931-938.
- Cook, J. A., C. Brochmann, S. L. Talbot, V. Fedorov, E. B. Taylor, R. Väinölä, E.P. Hoberg, M. Kholodova, K. P. Magnusson. 2013. Genetic Perspectives on Arctic Biodiversity. Pp. 459-483 in *Arctic Biodiversity Assessment. Conservation of Arctic Fauna and Flora Committee*, Copenhagen.
- Cook, J. A. and S. O. MacDonald. 2013. Island life: Coming to grips with the insular nature of North Pacific Coastal Forests. Pp. 19-42, in *Conservation of North Pacific Coastal Forests*, Orians, G. H., and J. W. Schoen, eds. Univ. Washington Press, Seattle.

Lessa, E. P., J. A. Cook, and J. L. Patton. 2003. Genetic footprints of demographic expansion in North America, but not Amazonia, following the Late Pleistocene. *Proceedings of National Academy Sciences USA* 100:10331-10334.

Synergistic Activities

- 1) **Infrastructure Enhancement:** Natural History Museum Activities in **Alaska:** Curation of University of Alaska Museum Mammal Collection until 2001 (>400% increase in size to 79,000 specimens). Initiated and Curated the Alaska Frozen Tissue Collection until 2001 (>60,000 specimens---4th largest for wild mammals worldwide; average > 70 loans annually). **New Mexico:** Curation of MSB Mammal Collection since 2003 and Division of Genomic Resources since 2007. Initiated web-based database (ARCTOS) at MSB and added 190,000 specimens to date (Mammal Collection 150% increase to become 3rd largest worldwide; DGR now largest frozen mammal tissue worldwide). Initiated the Division of Parasitology with acquisition of Rausch Collection, 2009 (3rd largest helminth in US).
- 2) **Program Development:** Co-founded ISLES, BCP & CIIBA. ISLES is a federal agency-academic partnership focused on integrating conservation biogeography into management of the Alexander Archipelago, Alaska. BCP (Beringian Coevolution Project) was a museum-based field project aimed at uncovering the history of the dynamic nexus between Asia and North America with significant international collaborative ties (Siberia, Mongolia, Canada, Finland). CIIBA (Collaborative Integrative Investigations of Arctic Biomes) is an extension of BCP that is exploring the biogeographic boundaries and history of Beringia. Those projects have produced >250 publications and graduate theses since 1991.
- 3) **Student Training:** Director, UNO (Undergraduate Opportunities) Program (\$1M) at UNM that paired underrepresented students with graduate and faculty members and supported professional development (46 students; 2007-2013). Also, sponsored participation of 10 Native American students (3 masters, 2 senior honors project), numerous US Hispanic and African American, and 18 Latin American (Chile, Mexico, Paraguay, Bolivia, Uruguay, Ecuador, Mongolia) students in my research group (95 undergrad, 22 masters, 13 doctoral, and 10 postdoctoral associates completed). In 2016, I was recognized nationally by the American Society of Mammalogists with the Joseph Grinnell Award, which is presented for “Excellence in Education in Mammalogy”.
- 4) **Courses in Latin America:** Taught in Uruguay, Paraguay, Bolivia, Costa Rica, Ecuador, and Panama on molecular and specimen-based approaches to evolution and conservation (since 1993).
- 5) **Professional Service:** National Academy of Sciences panel on the “Future of Natural History Collections” (2018-2020), Former Board of Directors and Past-President, Natural Science Collections Alliance; Steering Committee, VertNet; Steering Committee, CollectionsWeb Research Coordinating Network; Chair, Steering Committee, AIM-UP!---PI, Research Coordinating Network in Undergraduate Biology Education (40 institutions 2010-2016); Steering Committee and Chair, ARCTOS (2010-2017); Convener and Lead, Genetic Resources (2008-2013), Arctic Biodiversity Assessment, Conservation of Arctic Fauna and Flora (CAFF); NIBA writing committee for implementation (2013); Steering Committee, BCoN (Biodiversity Collections Network 2013-2017). American Society of Mammalogists (ASM)---Board of Directors, (9 years); Assoc. Editor, Journal of Mammalogy (2000-2002); service on 7 committees over 30 years, including Chair of Conservation (2015-current), Conservation Awards (2012-2015), & Latin American Awards (2010-2012) committees.

Extramural Support: As PI, I was awarded, managed, and completed >120 grants/contracts totaling >\$10M (an additional >\$6M as co-PI or as in-kind support). Also developed several large endowment funds (e.g., Hayward Fund, \$250K) and built museum collections resources valued >\$20M (\$3M appraised value in vertebrate parasites alone in last decade).