

James W. Burnham, III
Curriculum Vitae

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Education

Ph.D. University of Wisconsin-Madison, 2017. Department of Forest and Wildlife Ecology

Dissertation: Multi-scale and anthropogenic factors influencing endangered waterbird ecology wintering at two Chinese wetlands.

M.S. University of Wisconsin-Madison, 2007. Conservation Biology and Sustainable Development

Thesis: Environmental drivers of Siberian Crane (*Grus leucogeranus*) habitat selection and wetland management and conservation in China.

B.A. Denison University, 1999. Biology, Minor in East Asian Studies/Chinese

Research and Work Experience

2009-2017 PhD student and candidate. Duties include designing and implementing a six-year research project, analyzing data produced from this project, collaborating with local and international problems, and communicating results through a variety of written and verbal media. Publications include peer-review scientific articles, book chapters and policy recommendations. Talks include scientific conferences, university lectures, general public presentations, reports to private donors and communication with press in multiple languages.

2007-2009 Poyang Lake Project Coordinator, International Crane Foundation. Duties include coordinating long-term environmental monitoring efforts at Poyang Lake National Nature Reserve, ensuring data quality, analyzing data, maintaining communication among research partners, preparing reports and technical documents and securing funding through grant writing.

2003-2007 Research Associate, International Crane Foundation. Duties included collecting and analyzing data within long term monitoring project at Poyang Lake National Nature Reserve, ensuring data are collected in a methodological manner and training nature reserve staff in data collection methods.

2004-2005 Consultant, Global Environmental Facility, Siberian Crane Wetland Project. Duties included the development of a fully functional database for long-term ecological monitoring data collected within Poyang Lake National Nature Reserve and training reserve staff in the use of computer programs for data management and analysis.

2000-2002 Volunteer, United States Peace Corps, Mongolia. Duties included training national park staff in systematic data collection to estimate Snow Leopard presence/absence, environmental education to secondary school students, alternative income projects for local residents and distributing disaster relief supplies to communities.

1999 Field Technician, Mourning Dove mortality study, Clemson University. Duties included capturing Mourning Doves, assisting in surgery to implant sub-dermal radio-transmitters, tracking released birds and maintaining vehicle and radio tracking equipment.

Publications

J. W. Burnham, V. Radeloff, J. Barzen, A. Pidgeon, M. Baumann, H.Q. Wu, X. J. Yang, C. Huber and H. Yesou. *In prep.* Land cover associations by wintering Black-necked Cranes (*Grus nigricollis*) and habitat change 1990-2009 at China's Napahai wetland.

J.W. Burnham, J. Barzen, A. Pidgeon, B.T. Sun, J. D. Wu, G. H. Liu, and H.X. Jiang. 2017. Novel foraging by wintering Siberian Cranes (*Leucogeranus leucogeranus*) at China's Poyang Lake indicates broader changes in the ecosystem and raises new challenges for a critically endangered species. *Bird Conservation International*. 27 (2): 204-223.

I. Dronova, S. R. Beissinger, **J.W. Burnham**, P. Gong. 2016. Landscape-level associations of wintering waterbird diversity and abundance from remotely sensed wetland characteristics of Poyang Lake. *Remote Sensing* 8:6, 462. doi:[10.3390/rs8060462](https://doi.org/10.3390/rs8060462)

C. Huber, F.S. Li, X. J. Lai, S. Haouet, A. Durand, S. Butler, **J. Burnham**, C. Tinel, Y.Z. Liu, H. M. Qin, and H. Yesou. 2015. Using Pléiades data to understand and monitor a dynamic socio-ecological system: China's Poyang Lake. *Revue Française de Photogrammétrie et de Télédétection* 209: 125-131.

Wu, J.D., Li, F.S. and **J.W. Burnham**. 2013. Numerical distribution of Siberian Cranes and their relation to food and water depth in Sha Hu at Poyang Lake, China. *Wetland Sciences* 11 (3): 305-312. (in Chinese).

Burnham, J.W. and E. M. Wood. 2012. Woolly-necked Stork (*Ciconia episcopus*) at Napahai wetland, Yunnan, China. *Forktail* 28: 158-159.

Li, F., Wu, J., Harris, J., and **J.W. Burnham**. 2012. Number and distribution of cranes wintering at Poyang Lake, China during 2011-2012. *Chinese Birds* 3(3): 180-190.

Barzen J., **Burnham, J.W.**, Li, F., and J. Harris. 2011. How do Siberian Cranes and other tuber feeding birds respond to a flood-induced lack of tubers at Poyang Lake. *Wetlands*, 4:6-8.

Yesou, H., Huber, C., Lai, X.J., Averty, S., Li, J.R., Daillet, S., Berge-Nguyen, M., Chen, X.L., Huang, S.F., **Burnham, J.W.**, Cretaux, J.F., Marie, T., Li, J.G., Andreoli, R. and C. Uribe. 2011. Nine years of water resources monitoring over the middle reaches of the Yangtze River, with ENVISAT, MODIS, Beijing-1 time series, altimetric data and field measurements. *Lakes & Reservoirs* 16 (3): 231-247.

de Leeuw, J., Shankman, D., Wu, G.F., de Boer, W.F., Barzen, J., **Burnham, J.W.**, and J. Xiao. 2010. Strategic environmental assessment of the impact of sand mining in Poyang Lake, China. *Regional Environmental Change* 10(2):95-102.

Burnham, J. W., Barzen, J., Li, F., Zeng, N., Wu, J., and W. Ji. 2009. Ecological Monitoring at Poyang Lake, People's Republic of China. in *Conservation of Flyway Wetlands in East and West/Central Asia*, C. Prentice ed. Proceedings of the Project Completion Workshop of the UNEP/GEF Siberian Crane Wetland Project, 14-15 October 2009, Harbin, China. International Crane Foundation, Baraboo, Wisconsin , USA.

Barzen, J., Engels, M., **Burnham, J.W.**, Harris, J., and G.F. Wu. 2009. Phase 2 report: How development projects may impact wintering waterbirds at Poyang Lake. Unpublished report submitted to Hydro-ecology Institute of the Chinese Academy of Sciences. International Crane Foundation, Baraboo, Wisconsin, USA. 53 pp.

Li F. and **J.W. Burnham**. 2008. Juvenile Recruitment rate of Siberian Cranes wintering at Poyang Lake in Winter 2007. *China Crane News*, 12(1):21–22. (in Chinese)

Burnham, J.W. 2007. Environmental drivers of Siberian Crane (*Grus leucogeranus*) habitat selection and wetland management and conservation in China. M.S. Thesis. 111p. University of Wisconsin-Madison.

Burnham, J.W., and J. Barzen. 2007. Final technical report on preliminary data trends at multiple scales at Poyang Lake National Nature Reserve: 1998-2005. Siberian Crane Wetland Project: Regional Program Report 2712-3-4645.

Wu, G.F., de Leeuw, J., Best, E.P.H., Barzen, J., Venus, V., **Burnham, J.W.**, Liu, Y.L., and W.T. Ji. 2007. A conceptual framework to integrate a simulation model of plant biomass for *Vallisneria spiralis* L. with remote sensing and a geographical information system. In *Wetland and Water Resource Modeling and Assessment: A Watershed Perspective*. Wei Ji (Ed).

Teaching Experience

2017 Teaching Assistant, University of Wisconsin-Madison, Zoology 520/521. Undergraduate/Graduate course in Ornithology with lab in Birds of Southern Wisconsin. Level of Appointment: 50%

2016 Teaching Assistant, University of Wisconsin-Madison, Zoology 430. Undergraduate/Graduate lab course in Comparative Vertebrate Anatomy Lab. Level of Appointment: 50%

2015 Teaching Assistant, University of Wisconsin-Madison, Zoology 430. Undergraduate/Graduate lab course in Comparative Vertebrate Anatomy Lab. Level of Appointment: 50%

Teaching Assistant, University of Wisconsin-Madison, Zoology 102. Undergraduate lab course in Animal Biology. Level of Appointment: 50%

2014 Teaching Assistant, University of Wisconsin-Madison, Zoology 430. Undergraduate/Graduate lab course in Comparative Vertebrate Anatomy Lab. Level of Appointment: 50%

2007 Teaching Assistant, University of Wisconsin-Madison, Zoology 520/521. Undergraduate/Graduate course in Ornithology with lab in Birds of Southern Wisconsin. Level of Appointment: 50%

2006 Teaching Assistant, University of Wisconsin-Madison, Zoology 101/102. Undergraduate course in Animal Biology with lab. Level of Appointment: 50%

2005-2006 Program Assistant, University of Wisconsin-Madison, Nelson Institute of Environmental Studies. Co-created and co-instructed course on campus-based environmental initiatives as part of Doris Duke Conservation Fellowship. Also assisted in the organization of semester retreat for graduate students. Level of Appointment: 50%

2004 Teaching Assistant, University of Wisconsin-Madison, Zoology 151/152. Undergraduate course in Biology with lab. Level of Appointment: 33.3%

2000-2002 Instructor, Bouyant Soum Secondary School, Hovd Aimag, Mongolia. Duties included teaching English and Environmental Education to school students, school teachers and community members.

Press and Interviews

Mike Ives, “**As China’s Largest Freshwater Lake Shrinks, Solution Faces Criticism**” [The New York Times](#). December 28, 2016

John R. Platt, “**New Wetlands Are Being Created in Weird Ways – and That’s Good for Birds**” [Takepart](#). July 27, 2016

John Dyer, “**Sand: It’s as Precious as Oil – and its Extraction is Destroying the World’s Coasts and Rivers**” [VICE News](#). March 21, 2016.

Adam Voiland, “**Sand Mining at Poyang Lake**” [NASA Earth Observatory](#). March 18, 2016

David Koehler, “**Investing in the People and Science of Crane Conservation.**” [The ICF Bugle](#). August 2008.

Presentations

Ph.D. Dissertation Exit Seminar Madison, Wisconsin, 2017: Waterbirds like water*!
Landscape and anthropogenic factors influencing endangered species wintering at two Chinese wetlands. *except when they don't. ([link](#))

University of Wisconsin-Madison, 2017: Guest lecture for Ornithology on the wintering ecology of waterbirds at Poyang Lake.

Society for Conservation Biology, 2016: Poster presentation on using multi-sensor data to measure change in habitat for wintering Black-necked Cranes from 1990-2009 in China's Napahai wetland.

Ignite Madison Madison, Wisconsin, 2016: I get away to get to work for conservation ([link](#))

University of Wisconsin-Madison, 2016: Guest lecture for Ornithology on the migratory ecology of wintering waterbirds

University of Wisconsin-Madison, 2014: Guest lecture for Vertebrate Ecology on Siberian Cranes and Poyang Lake

University of Wisconsin-Madison, 2012: Guest lecture for Introduction to GIS on logistics of collecting spatial data in heterogeneous landscapes and challenges of analysis.

Jiangxi Agricultural University Nanchang, China, 2012: Siberian Cranes exhibit new habitat selection patterns at Poyang Lake following a major flood event

Society for Conservation Biology bi-annual conference, 2011: Necessity spawns plasticity: Siberian Cranes abandon specialist foraging behaviors after and extreme flood event and implications for conservation.

North Eastern Forestry University, Harbin, China, 2010: Poyang Lake: a unique system under threat

Society for Conservation Biology annual conference, 2009: Cranes, crabs and communities

Society for Conservation Biology annual conference, 2008: Habitat selection by wintering Siberian Cranes at multiple spatial scales

International Crane Foundation annual meeting, 2008: ICF at China's Poyang Lake

Crane Meadows Spring Migration Fest 2006: Poyang Lake's Siberian Cranes

Awards, Grants and Fellowships

2016 Research Associate, International Crane Foundation

2015 Trust for Mutual Understanding Environmental Grant (\$10,000 to fund a two-week workshop training Mongolians in satellite imagery analysis)

2012-2014 Research Associate, International Crane Foundation

2011-2012 Research Associate, UW-Madison Forestry and Wildlife Ecology

2010 Planet Action SPOT Satellite Imagery Grant (\$50,000 in satellite imagery)

2009-2011 NSF IGERT Trainee, SW China biodiversity program

2009 Windway Corporation private research grant (\$109,000)

2006 North Star Science and Technology PTT grant (\$15,000 in equipment)

2005-2006 Doris Duke Conservation Fellow, University of Wisconsin-Madison

1994 Eagle Scout Award, Boy Scouts of America

Additional Skills

Languages: Conversant in Chinese (Mandarin) and Mongolian (Kalkh), basic Spanish.

Computer: R-stats, ENVI, Geospatial Modeling Environment, ERDAS Imagine, eCognition, SAS, ArcGIS, MS Office, MS Access, Mac OS