

**CURRICULUM VITAE**  
**ODBAYAR TUMENDEMBEREL**

**EDUCATION**

- 2016-2020            Doctor of Philosophy, University of South-Eastern Norway, Bø i Telemark, Norway  
2011-2013            Master of Science, Genetics and Molecular Biology. The National University of Mongolia, Ulaanbaatar  
2003-2007            Bachelor of Science, Biology (genetics). The National University of Mongolia, Ulaanbaatar, Mongolia

**PROFESSIONAL EXPERIENCE**

- 2021–Present        Assitant Research Scientist, Haub School of Environment and Natural Resources, University of Wyoming, Laramie, Wyoming, USA  
2007–Present        Wildlife Ecologist (genetics), Gobi Bear Research Project  
2007–2016            Researcher, Genetic Laboratory of Institute of General and Experimental Biology, Mongolian Acedemy of Sciences, Ulaanbaatar, Mongolia

**PUBLICATIONS**

- 2021    **Tumendemberel, O.**, J. Tebbenkamp, A. Zedrosser, M. Proctor, E. Blomberg, D. Morin, F. Rossell, H. Reynolds, J. Adams, and L. Waits. Long-term monitoring using non-invasive DNA techniques reveals the demographic status of the critically endangered Gobi bear population. *Ecosphere*. Accepted.
- 2020    **Tumendemberel, O.** 2020. “Evolutionary history, demographics, and conservation of brown bears (*Ursus arctis*): filling the knowledge gap in Central Asia”. PhD thesis at University of South-Eastern Norway.
- 2019    **Tumendemberel, O.**, A. Zedrosser, M. Proctor, H. Reynolds, J. Adams, J. Sullivan, S. Jacobs, T. Khorloojav, T. Tserenbataa, M. Batmunkh, J. Swenson, L. Waits. 2019. Phylogeography, genetic diversity, and connectivity of brown bear populations in Central Asia. *PLOS ONE* 14-8: 1-23.
- 2016    Luvsanjamba, A., H. Reynolds, A. Yansanjav, T. Tserenbataa, B. Amgalan, **O. Tumendemberel**. 2016. Review of Gobi bear research (*Ursus arctos gobiensis*). *Arid Ecosystems* 6-3: 206-212.
- 2015    **Tumendemberel, O.**, Kulbhushansingh Suryawashi, Uma Ramakrishnan. 2015. A preliminary result for population genetics of snow leopard of Spiti valley in Northern India. *The Journal of Institute of Biology* 31. 175-181.
- 2015    **Tumendemberel, O.**, M. Proctor, H. Reynolds, J. Boulanger, A. Luvsandambaa, T. Tserenbataa, N. Yanjin, D. Craighead and D. Paetkau. 2015. Gobi Bear Abundance and Movement Survey, Gobi desert, Mongolia. *Ursus* 26-2: 129-142.
- 2015    Damdin, B., **O. Tumendemberel**, B. Gunaajav, B. Bayarlkhagva, O. Dashzeveg, E. Munkhbileg. Phylogenetic Relationships of Wild Boars (*Sus Scrofa* L. 1758) in Mongolia. 2015. *International Journal of Current Research* 7-9: 19868-19873.
- 2013    Bayarlkhagva, M., **O. Tumendemberel**, B. Damdin. 2013. Mitochondrial cytochrome b gene study of *Apodemus peninsulae* in Mongolia, *International Journal of Current Research* 5: 3892-3896.
- 2012    Damdin, B., B. Gunaajav, **O. Tumendemberel**. 2012. Mitochondrial Cytochrome B Gene Sequence Diversity in the Mongolian Red Squirrel, *Sciurus Vulgaris* L. *World Research Journal of Wildlife Research* 1: 1-4.

**PRESENTATIONS IN CONFERENCES AND PUBLIC OUTREACH**

- 2020    Tumendemberel, O. Online podcast interview/presentation for the Nature podcast (in Mongolian). November, 2020.

- 2020 Tumendemberel, O. Conservation and research of Gobi bears. Online lecture to school children of the Young Scientists Program from Institute for the Study of Mongolian Dinosaurs at the Umnugovi province, Mongolia. December 16, 2020.
- 2018 Tumendemberel, O., L. Waits, J. Adams, M. Proctor, H. Reynolds, J. Tebbenkamp, A. Luvsamjambaa, A. Zedrosser. The population size and trend of the Gobi bear (*Ursus arctos*) between 2009 and 2017. International Association for Bear Management and Research Conference. Ljubljana, Slovenia. 15-21 September 2018.
- 2016 Tumendemberel, O., H. Reynolds, M. Proctor, A. Luvsamjambaa, L. Waits. Conservation and Ecology of the Gobi Bear in the Gobi Desert Ecosystem. University of Maine. Orono, Maine USA. January 2015.
- 2014 Tumendemberel O., L. Waits\*. Great Gobi A Strictly Protected Area A, its umbrella species: Gobi bear. Idaho Wildlife Society Conference, Boise, Idaho, USA. March 2014.
- 2014 Tumendemberel O., H. Reynolds, M. Proctor, L. Waits. A preliminary assessment of Gobi bear (*Mazaalai; Ursus arctos*) systematics and population estimate. International Association for Bear Management and Research Conference, Thessaloniki, Greece. October 2014.
- 2013 Tumendemberel O., T. Khorloojav, H. Reynolds, M. Proctor. The Gobi bear: A new subspecies of brown bear (*Ursus arctos gobiensis* or *U. a. isabellinus*) from the Gobi Desert of Mongolia?. International Association for Bear Management and Research Conference, Provo, Utah, USA. September 2013. *awarded best student poster*
- 2012 Tumendemberel, O., M. Proctor\*, H. Reynolds, A. Luvsamjambaa, D. Paetkau. How many Gobi bears are left in the Gobi desert?. International Association for Bear Management and Research International Conference. Delhi, India. 2012.
- 2012 Tumendemberel, O., M. Proctor. Gobi bear population genetics. Biodiversity Asia International Conference. Bangalore. India. 2012.  
\* presenter if other than self

#### PROFESSIONAL EXPERIENCE INTERNATIONAL

- 2020 – 2021 Visiting scholar, Wildlife Demographics Laboratory, University of Maine, Orono, Maine. USA.
- 2016 - 2020 Ph.D candidate, University of South-Eastern Norway, Bø i Telemark, Norway.
- 2019 Whole genome data analysis, College of Natural Resources, University of Idaho, Moscow, Idaho, USA. May – August, 2019.
- 2018 Sequencing and microsatellite genotyping laboratory and data analysis, College of Natural Resources, University of Idaho, Moscow, Idaho, USA. January – June, 2018.
- 2017 Laboratory and data analysis of Mongolian brown bears, and courses, College of Natural Resources, University of Idaho, Moscow, Idaho, USA. January – April, 2017.
- 2016 Genetic laboratory and data analyses in Gobi bears demographics at the College of Natural Resources, University of Idaho, Moscow, Idaho, USA. June – July, 2016.
- 2013 - 2014 Training in laboratory and data analyses in population genetics and systematics at the College of Natural Resources, University of Idaho, Moscow, Idaho, USA. 2013 September – 2014 March.
- 2012 - 2013 Population genetics study of snow leopards in the Spiti Valley of Himachal Pradesh, India at the National Centre for Biological Sciences, Bangalore, India. 2012 August – 2013 March.
- 2010 Training in genetic laboratory techniques and analysis. Wildlife Genetics International, Nelson BC, Canada. February – April 2010.

#### WILDLIFE PROJECT INVOLVEMENT

- 2016 Aug. Radio telemetry of spruce grouse and vegetation sampling in Northern Maine (volunteer).
- 2007-2016 Biannual field trips, Gobi bear research and sample collections, Great Gobi Strictly Protected Area.
- 2014 Aug. Non-invasive sample collection of brown bear in Numrug Strictly Protected Area in eastern Mongolia.
- 2011 Dec. Field work for snow leopard and ibex organized by the Snow Leopard Trust, Tost soum, Omnogovi province (volunteer)

- 2011 May Mongolian bat field studies using acoustic techniques in Great Gobi Strictly Protected Area (volunteer).
- 2009-2010 Population genetic survey for Mongolian argali sheep populations. Genetic Laboratory, Biology Institute of the Mongolian Academy of Sciences and Altai Sayan Project, United Nations Development Program (UNDP Altai Sayan project funded).
- 2006 July Field sample collection and argali sheep captures in Ikh Nart National Protected Area. Biology Institute of the Mongolian Academy of Sciences and Ikh Nart Nature Reserve Zoo (volunteer).

## PROFESSIONAL DEVELOPMENT AND TRAINING

- 2019 Landscape Genomics, by Physalia courses, November 2019, Berlin, Germany.
- 2019 Capture and Immobilization of Scandinavian Mammals at Inland Norway University of Applied Sciences, October 2019, Evenstad, Norway.
- 2018 Genome-Wide Association Studies, by Physalia courses, October 2018, Berlin, Germany.
- 2017 Conservation Genetics, by Lisette Waits at University of Idaho, January-May 2017, Moscow, Idaho, USA.
- 2015 Occupancy models by Dr. David Murdoch at Mongolian Academy of Sciences, February-March 2015.
- 2011 Statistical Courses (e.g. T-test, ANOVA, Chi-square), by Dr. Ellen Cheng and Dr. Kirk Olson, 2011 September, Ulaanbaatar, Mongolia.
- 2006 GIS and Database Short Courses, organized by UNDP under the Conservation of the Great Gobi Ecosystem and its Umbrella Species project, 2006 September, Ulaanbaatar, Mongolia.
- 2005 Estimating plant abundance course, organized by the Steppe Forward Program and Zoological Society of London and Mongolian National University, July 2005, Khan Khentii Strictly Protected Area, Khentii, Mongolia.
- 2004 Small mammals biological field course, organized by the Steppe Forward Program and Zoological Society of London and Mongolian National University, June - July 2004, Borzong Gobi, Umnugovi province, Mongolia.

## SKILLS AND ABILITIES

### DATA COLLECTION AND FIELD EXPERIENCE

- Fieldwork organization in Mongolia.
- Radio tracking, genetic sampling and vegetation sampling.
- Bear, bat, and small mammal capture and handling under supervision.
- Extensive camping, horse riding and backpacking experience.
- Proper collection and storage techniques for genetic samples.

### TECHNICAL AND ANALYTICAL

- Laboratory analysis in genetics/genomics
- Population genetics and phylogenetics data analysis
- Bioinformatics on whole genome resequencing
- Theory and application of generalized linear models
- Population demographics data analyses (spatial and non-spatial capture recapture)
- R and Python scripting

### LANGUAGE

- Bilingual in Mongolian and English

### AWARDS

- Best TOYP (Ten Outstanding Young Person) Award, Junior Chamber International (JCI) Mongolia, 2016 September

- Best Young Researcher, Institute of Biology, Mongolian Academy of Sciences, 2014 December
- Best Student Poster Award at the International conference of International Association for Bear Research and Management, Provo, USA, 2013 September
- Third place at the Scientific Competition within Graduate Students of Mongolian National University, School of Biology and Biotechnology, Ulaanbaatar, Mongolia, 2013 April

#### **PROFESSIONAL ORGANIZATIONS AND MEMBERSHIPS**

2021 February – present    Member, Asian Brown Bear Expert Team of the IUCN SSC Bear Specialist Group  
2014, 2016 – present        Member, International Association for Bear Research and Management.  
2009 – present                Member, Mongolian Young Researchers Association.