

CURRI CULUM VI TAE

STEFFEN OPPEL, PH. D.

Department of Biology and Wildlife • 211 Irving 1 • University of Alaska Fairbanks
Fairbanks, AK 99775-6100, USA • +1-907-474-6051 (office phone)
steffen.oppel@gmail.com (e-mail) • <http://www.steffen-oppel.com> (homepage)

■ EDUCATION

Doctor of Philosophy in Wildlife Biology (2008), University of Alaska Fairbanks, USA;
Dissertation title: ‘King Eider migration and seasonal interactions at the individual level’ (Advisor: Prof. Abby N. Powell)

Master of Science in Landscape Ecology (2003), University of Oldenburg, Germany;
Thesis title: ‘The role of breeding biology, habitat selection, and cowbird parasitism for the conservation of the Pale-headed Brush-Finch in southern Ecuador’ (Advisors: Dr. Boris Schröder and Prof. Franz Bairlein)

■ PROFESSIONAL APPOINTMENTS

Post-doctoral Research Fellow, University of Alaska Fairbanks, Fairbanks, AK, USA
(present): examining juvenile movements and recruitment in sea ducks.

Graduate Research Assistant, University of Alaska Fairbanks, Fairbanks, AK, USA (2005-2008): examining seasonal interactions in a large migratory sea duck species through design and application of novel stable isotope techniques.

Research Associate, Wildlife Conservation Society, Crater Mountain Wildlife Management Area, Papua New Guinea (2004): studying forest bird and dragonfly communities to assess the importance of natural rainforest to indigenous wildlife.

Avian Ecologist/Nature Warden, NABU Nature Conservation Society, Trischen Island, Germany (2003-2004): monitoring marine and wetland birds on a conservation island, analysing long-term data sets, and presenting results to the general public.

Biodiversity Monitoring Consultant, Department of Conservation, Stewart Island, New Zealand (2001-2002): evaluating the success of an island restoration program.

■ RESEARCH EXPERIENCE

I conduct ecological research to address conservation and management issues, and am familiar with the application of a wide variety of field research and analytical techniques. My experience in research and conservation is based on 14 years of involvement in various projects around the world. I have conducted research on tropical bird and dragonfly communities (Ecuador, Papua New Guinea), temperate forest and open country bird and invertebrate communities (Germany, Sweden, USA, New Zealand), and arctic-breeding migratory birds (Alaska, Germany, Sweden). Recently, I have become proficient in the use of stable isotope applications, satellite telemetry, and advanced modelling techniques to address scientific questions of interest.

■ GRANTS, SCHOLARSHIPS AND AWARDS

- 2008 Best Student Presentation Award, Alaska Marine Science Symposium
2008 Best Student Presentation Award, Alaska Bird Conference
2008 Best Student Presentation Award, North American Sea Duck Conference
2005 Ph.D. Research Fellowship, German Academic Exchange Service
2004 Research grant, Worldwide Dragonfly Association
2004 Conservation research grant, International Dragonfly Fund
2003 Extraordinary Student Achievements Award, University of Oldenburg, Germany
2003 Award for best M.Sc. thesis in 2003, Faculty of Biology, University of Oldenburg, Germany
2002 M. Sc. Research stipend, German Academic Exchange Service
2000 Undergraduate travel grant, German Academic Exchange Service

■ PUBLICATIONS

Peer-reviewed

- Oppel, S. and Powell, A. N. 2009. Does winter region affect spring arrival body mass of king eiders in northern Alaska? *Polar Biology* in press.
- Oppel, S., Dickson, D. L., and Powell, A. N. 2009. International importance of the eastern Chukchi Sea as a staging area for migrating king eiders. *Polar Biology* in press.
- Oppel, S., Powell, A. N., and Dickson, D. L. 2009. Using an algorithmic model to reveal individually variable movement decisions in a wintering sea duck. *Journal of Animal Ecology* in press.
- Oppel, S., Powell, A. N., and O'Brien, D. M. 2009. Using eggshell membranes as a non-invasive tool to investigate the source of nutrients in avian eggs. *Journal of Ornithology* 150: 109-115.
- Oppel, S. and Powell, A. N. 2008. Assigning king eiders to wintering regions in the Bering Sea using stable isotopes of feathers and claws. *Marine Ecology Progress Series* 373: 149-156.
- Oppel, S., Powell, A. N., and Dickson, D. L. 2008. Timing and distance of king eider migration and winter movements. *Condor* 110: 296-305.
- Michalski, J. and Oppel, S. 2007. *Papuagrion carcharodon* sp. nov. from southern New Guinea (Odonata, Coenagrionidae). *International Journal of Odonatology* 10: 81-86.
- Mack, A. L. and Oppel, S. 2006. Nidification of the Dwarf Whistler, *Pachycare flavogrisea*, a little-known New Guinea endemic. *Bulletin of the British Ornithologists' Club* 126: 61-64.
- Oppel, S. 2006. Using distance sampling to quantify Odonata density in tropical rainforests. *International Journal of Odonatology* 9: 81-88.
- Oppel, S. 2006. Comparison of two Odonata communities from a natural and a modified rainforest in Papua New Guinea. *International Journal of Odonatology* 9: 89-102.
- Oppel, S. 2006. Site fidelity and dispersal of adult *Neurobasis awamena* Michalski in tropical rainforest streams in Papua New Guinea (Zygoptera: Calopterygidae). *Odonatologica* 35: 357-365.

- Oppel, S. 2005. Long-term changes in the breeding community of coastal bird species on a small island - does natural succession compromise conservation values? *Biodiversity and Conservation* 14: 3407-3422.
- Oppel, S. 2005. Habitat associations of an Odonata community in a lower montane rainforest in Papua New Guinea. *International Journal of Odonatology* 8: 243-257.
- Oppel, S. 2005. Die Heuschreckenfauna der jungen Düneninsel Trischen im schleswig-holsteinischen Wattenmeer. *Drosera* 1/2005: 1-5.
- Oppel, S. and Beaven, B. M. 2004. Habitat use and foraging behaviour of Mohua (*Mohoua ochrocephala*) in the podocarp forest of Ulva Island, New Zealand. *Emu* 104: 235-240.
- Oppel, S. and Beaven, B. M. 2004. Survival and dispersal of mohua (*Mohoua ochrocephala*, Pachycephalidae) after transfer to Ulva Island, New Zealand. *Notornis* 51: 116.
- Oppel, S. and Beaven, B. M. 2004. Juvenile Stewart Island robins (*Petroica australis rakiura*) disperse up to 16 km. *Notornis* 51: 55-56.
- Oppel, S., Schaefer, H. M., Schmidt, V., and Schröder, B. 2004. How much suitable habitat is left for the last known population of the Pale-headed Brush-Finch? *Condor* 106: 429-434.
- Oppel, S., Schaefer, H. M., Schmidt, V., and Schröder, B. 2004. Habitat selection by the pale-headed brush-finch (*Atlapetes pallidiceps*) in southern Ecuador: implications for conservation. *Biological Conservation* 118: 33-40.
- Oppel, S., Schaefer, M., Schmidt, V., and Schröder, B. 2004. Cowbird parasitism of Pale-headed Brush-finch *Atlapetes pallidiceps*: implications for conservation and management. *Bird Conservation International* 14: 63-75.
- Oppel, S. and Stock, M. 2004. Reconsidering species extinctions in National Parks: a reply to Berger. *Conservation Biology* 18: 845-846.
- Oppel, S., Schaefer, H. M., and Schmidt, V. 2003. Description of the nest, eggs and breeding behavior of the endangered Pale-headed Brush-Finch in Ecuador. *Wilson Bulletin* 115: 360-366.
- Oppel, S. and Beaven, B. M. 2002. Stewart Island robins (*Petroica australis*) fly home after transfer to Ulva Island. *Notornis* 49: 180-181.
- Oppel, S. 2001. Die Vögel des Vehnemoores (Landkreis Cloppenburg). *Jahresbericht der Ornithologischen Arbeitsgemeinschaft Oldenburg* 16: 59-77.
- Oppel, S. and Steinborn, B. 2001. Brut- und Rastvögel der Klärschlammdeponie Edeweicht (Landkreis Cloppenburg) 1998-2000. *Jahresbericht der Ornithologischen Arbeitsgemeinschaft Oldenburg* 16: 30-58.

Under review

- Michalski, J. and Oppel, S. in review. Three new species of *Argiolestes* Selys (Odonata: Megapodagrionidae) from Papua New Guinea. *International Journal of Odonatology*.
- Oppel, S., Federer, R., Powell, A. N., and Hollmén, T. in review. Effects of lipid extraction on stable isotope ratios in avian egg yolk – is arithmetic correction an alternative? *Auk*.
- Oppel, S. and Mack, A. L. in review. Bird assemblage and visitation pattern at fruiting *Elmerrillia tsiampaca* (Magnoliaceae) trees in a lower montane rainforest in Papua New Guinea. *Biotropica*.
- Oppel, S., Powell, A. N., and O'Brien, D. M. in review. Nutrient allocation in an arctic sea duck - king eiders use an income strategy to produce eggs. *Oecologia*.
- Oppel, S. and Powell, A. N. in review. Carbon isotope turnover in blood as a measure of arrival time in migratory birds. *Journal of Ornithology*.

Oppel, S. and Powell, A. N. in review. Spring activity patterns of pre-breeding King Eiders on nesting areas in Alaska. *Journal of Field Ornithology*.

Book chapters

Oppel, S. and Huettmann, F. (2010). Using a Random Forest model and public data to predict the distribution of prey for marine wildlife management. In *Spatial information management in animal science* (eds S. Cushman & F. Huettmann), pp. in press. Springer, Tokyo, Japan.

Non-refereed

Oppel, S. 2005. Increasing awareness of dragonflies in Papua New Guinea. *Agrion* 9: 15-16.

Oppel, S. 2005. Odonata in the Crater Mountain Wildlife Management Area, Papua New Guinea. *IDF-Report* 7: 1-28.

Oppel, S. 2004. Natural dynamics shaping the bird community on an island. *Wadden Sea Newsletter* 1/04: 11-12.

Oppel, S. 2003. Hat Trischen als Vogelinsel ausgedient? *Wattenmeer International* 12/3: 17-18.

Online Data and Metadata

Oppel, S. and Powell, A. N. 2009. Satellite telemetry of King Eiders in the western Arctic. Available at: <http://seamap.env.duke.edu/datasets/detail/487>

Oppel, S. and Powell, A. N. 2008. Stable isotope ratios (C,N,S) from King Eider feathers, claws, muscle, body fat, blood plasma, and red blood cells collected in northern Alaska 2005-2007. Available at: <http://mercdev3.ornl.gov/nbii/>

Oppel, S. and Powell, A. N. 2008. King Eider egg stable isotopes (C,N,S) from northern Alaska 2005-2007. Available at: <http://mercdev3.ornl.gov/nbii/>

■ CONFERENCE PRESENTATIONS

Oral presentations

- **Oppel, S.** and A. N. Powell. 2009 - Assigning birds to regions in the Bering Sea using stable isotopes of feathers. Pacific Seabird Group Annual Meeting, February 22-25, Hakodate, Japan.
- **Oppel, S.** and A. N. Powell. 2008 - Does choice of winter region affect nest survival of King Eiders in northern Alaska? 3rd North American Sea Duck Conference, November 10-14, Quebec City, QC, Canada.
- Dickson, D. L., **S. Oppel**, G. Raven, A. N. Powell, and T. Bowman. 2008 - Importance of Eastern Chukchi Sea and southeastern Beaufort Sea as spring staging areas for King and Common Eiders. 3rd North American Sea Duck Conference, November 10-14, Quebec City, QC, Canada.
- Powell, A. N and **S. Oppel**. 2008 - Movements and survival of first-year King Eiders. 3rd North American Sea Duck Conference, November 10-14, Quebec City, QC, Canada.

- **Oppel, S.**, A. N. Powell, and D. M. O'Brien. 2008 - Individual variation in nutrient allocation to egg production in an arctic sea duck. 6th International Conference on the Applications of Stable Isotope Techniques to Ecological Studies, August 25-29, Honolulu, HI, USA.
- **Oppel, S.**, D. L. Dickson, and A. N. Powell. 2008 - Importance of the Eastern Chukchi Sea for King Eiders on migration. 13th Alaska Bird Conference, March 3-7, Fairbanks, AK, USA.
- **Oppel, S.** and A. N. Powell. 2008 - Assigning birds to regions in the Bering Sea using stable isotopes of feathers. Alaska Marine Science Symposium, January 20-23, Anchorage, AK, USA.
- **Oppel, S.**, A. N. Powell, and D. L. Dickson. 2007 - Factors influencing King Eider winter movements in the Bering Sea. Pacific Seabird Group Annual Meeting, February 8-11, Asilomar, CA, USA.
- **Oppel, S.**, A. N. Powell, and D. L. Dickson. 2007 - Winter movements of King Eiders in the Bering Sea tracked via satellite telemetry. Alaska Marine Science Symposium, January 21-24, Anchorage, AK, USA.
- **Oppel, S.**, A. N. Powell, and D. L. Dickson. 2006 - Migration patterns and winter movements of King Eiders in the Bering Sea. 4th North American Ornithological Conference, October 3-7, 2006, Veracruz, Mexico.
- Phillips, L. M., **S. Oppel**, and A. N. Powell. 2006 - Movements of King Eider (*Somateria spectabilis*) during the non-breeding period in the Bering Sea. 24th International Ornithological Congress, August 13-19, 2006, Hamburg, Germany.
- **Oppel, S.** and A. N. Powell. 2006 - Migration strategies and winter movements of King Eiders in the Bering Sea. 12th Alaska Bird Conference, February 7-9, 2006, Juneau, AK, USA.

Poster presentations

- **Oppel, S.**, A. N. Powell, and D. M. O'Brien. 2008 - How important are body reserves for King Eider egg formation in northern Alaska? 3rd North American Sea Duck Conference, November 10-14, Quebec City, QC, Canada.
- **Oppel, S.** and A. N. Powell. 2008 - Assigning sea ducks to wintering regions in the Bering Sea using stable isotopes of feathers. 3rd North American Sea Duck Conference, November 10-14, Quebec City, QC, Canada.
- **Oppel, S.**, R. Federer, A. N. Powell, and T. Hollmén. 2008 - Effects of lipid extraction on $\delta^{13}\text{C}$, $\delta^{15}\text{N}$, and $\delta^{34}\text{S}$ in avian egg yolk. 6th International Conference on the Applications of Stable Isotope Techniques to Ecological Studies, August 25-29, Honolulu, HI, USA.
- **Oppel, S.**, A. N. Powell, and D. M. O'Brien. 2008 - King Eiders in northern Alaska depend on food from breeding grounds for egg production. 13th Alaska Bird Conference, March 3-7, Fairbanks, AK, USA.
- Huettmann, F. and **S. Oppel**. 2007 - A modelling method for predicting benthic biomass: using RandomForest to link survey data with environmental data for the Bering Sea region. Alaska Marine Science Symposium, January 21-24, Anchorage, AK, USA.
- **Oppel, S.**, B. M. Beaven, and I. G. Jamieson. 2006 - Re-introduction of endangered forest birds to restored islands: lessons learned from Ulva Island, New Zealand. 24th International Ornithological Congress, August 13-19, 2006, Hamburg, Germany.

- **Oppel, S.** 2005 - Dragonflies and damselflies of a tropical montane rainforest in Papua New Guinea. 5th Worldwide Dragonfly Association Symposium of Odonatology, July 26-30, 2005, Pontevedra, Spain.

■ PUBLIC OUTREACH PRESENTATIONS

- December 2008 - The Wildlife Society Student Chapter, University of Alaska Fairbanks: Restoring a native bird community in New Zealand.
- November 2008 - National Parks Service, Fairbanks, AK: King Eider migration and seasonal interactions at the individual level.
- May 2008 - Kachemak Bay Shorebird Festival, Homer, AK: King Eider journeys in Alaskan waters.
- October 2007 - The Wildlife Society Student Chapter, University of Alaska Fairbanks: Tracking King Eiders in the Bering Sea.
- February 2007 - Alaska Bird Observatory, Fairbanks, AK: King Eider journeys in the Bering Sea.
- June 2006: Barrow Arctic Science Consortium, Barrow, AK: King Eider research on Alaska's North Slope.
- November 2005 - The Wildlife Society Student Chapter, University of Alaska Fairbanks: Papua New Guinea – Land of the Unexpected.
- June 2004 - Wildlife Conservation Society, Goroka, Papua New Guinea: The German Wadden Sea as a hub for bird migration.
- December 2002 - Institute for Avian Research, Wilhelmshaven, Germany: The role of breeding biology and habitat selection for the conservation of the Pale-headed Brush-Finch in southern Ecuador.
- January 2002 - Department of Conservation, Stewart Island, New Zealand: Mohua monitoring on Ulva Island.

■ TEACHING AND MENTORING EXPERIENCE

- 2009 – Co-instructor, Ornithology 426, University of Alaska Fairbanks.
- 2009 – Substitute Instructor, Conservation Biology 622, University of Alaska Fairbanks.
- 2009 – Guest lecture, Animal Stable Isotope Ecology, University of Alaska Fairbanks.
- 2007 – Guest lecture, Landscape Ecology, University of Alaska Fairbanks.
- 2007 – Mentor for Undergraduate Research Assistant conducting a project on the effect of incubation on eggshell membrane stable isotope ratios.
- 2006 and 2007 – Mentor for high-school student science projects.
- 2006 – Guest lecture, Ornithology, University of Alaska Fairbanks.
- 2004 – Mentor for Undergraduate Researchers at the Wildlife Conservation Society, Goroka, Papua New Guinea

■ PROFESSIONAL SERVICE

Journal Reviews

Emu, Wilson Bulletin

Proposal Reviews

North Pacific Research Board

National Fish and Wildlife Foundation

Center for Global Change, University of Alaska Fairbanks

Collaborations and consulting

U.S. Fish and Wildlife Service (USA), Canadian Wildlife Service (Canada), National Park Wadden Sea (Germany), Department of Conservation (New Zealand), Arctic Audubon Society (USA), Wildlife Conservation Society (Papua New Guinea and USA), Fundación Jocotoco (Ecuador), World Wide Fund for Nature (Germany and USA)

■ PROFESSIONAL AFFILIATIONS

Society of Conservation Biology

Cooper Ornithological Society

Pacific Seabird Group

Worldwide Dragonfly Association