

Name: Fitsum Abadi Gebrelassie
Current Address: Department of Fish, Wildlife and Conservation Ecology
New Mexico State University
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EDUCATION

Feb 2007 – June 2010 Ph.D., Quantitative Population Ecology, University of Bern, Switzerland
(*Aim: Development and application of statistical methods to study wildelife demography*)
Oct 2004 – Sep 2006 M.Sc., Applied Statistics & Biostatistics, Hasselt University, Belgium
Sep 2001 – June 2003 M.Sc., Statistics, Addis Ababa University, Ethiopia
Sep 1995 – June 1999 B.Sc., Statistics, Addis Ababa University, Ethiopia

RESEARCH INTERESTS

Statistical ecology, Capture-recapture models, Integrated population models, Hierarchical models,
Biostatistics, Bayesian inference

PROFESSIONAL/RESEARCH EXPERIENCE

Dec 2016 – Present Assistant Professor, Department of Fish, Wildlife and Conservation Ecology, New Mexico State University (NMSU), USA
Jan 2014 – Nov 2016 Lecturer, School of Statistics and Actuarial Science, University of the Witwatersrand, South Africa
Jan 2013 – Dec 2013 Postdoctoral fellow, Animal Demography Unit, University of Cape Town & South African National Biodiversity Institute (SANBI), South Africa
Jan 2012 – Dec 2012 Postdoctoral fellow, Biostatistics & Biology of Populations Group, Centre of Evolutionary & Functional Ecology (CEFE), CNRS, France
Sep 2010 – Dec 2011 Postdoctoral fellow, Animal Demography Unit, University of Cape Town & South African National Biodiversity Institute, South Africa
Sep 2003 – Aug 2004 Lecturer, Hawassa University, Ethiopia
Aug. 1999 – Aug. 2001 Statistician, Africa Insurance Company, Ethiopia

TEACHING EXPERIENCE

Dec 2016 – Present	New Mexico State University, USA - Instructor: Quantitative population ecology, Ecological Biometry
Jan 2014 – Nov 2016	University of the Witwatersrand, South Africa - Lecturer: Biostatistics, Nonparametric statistics, Statistical research design and analysis
Feb 2007 – June 2010	University of Bern, Switzerland - Teaching/Lab assistant: Habitat selection modeling, Capture-recapture analysis using R and program MARK
Sept 2003 – Aug 2004	Hawassa University, Ethiopia - Instructor: Introduction to probability and statistics, Statistical methods, Medical statistics, Statistical computing (SPSS)
Sept 2001 – June 2003	Addis Ababa University, Ethiopia - Teaching assistant (part-time): Introduction to probability and statistics, Statistical computing (SPSS)

PROFESSIONAL AFFILIATION/MEMBERSHIP

- Ecological Society of America (May 2017 – Present)
- The Wildlife Society (Sep 2017 - Present)
- Honorary research associate, University of Cape Town, South Africa (April 2017 - Present)
- Honorary research associate, University of the Witwatersrand, South Africa (Dec 2016 - June 2016)

GRANTS/FELLOWSHIPS/SCHOLARSHIPS

- National Research Foundation (NRF), South Africa (2016)
- DST-NRF Centre of Excellence in Mathematical & Statistical Sciences, South Africa (2015)
- Faculty of Science research startup grant, University of the Witwatersrand, South Africa (2014 – 2016)
- Claude Leon Foundation postdoctoral fellowship, South Africa (2011, 2013)
- Swiss National Science Foundation postdoctoral fellowship, Switzerland (2012)
- University of Cape Town postdoctoral fellowship, South Africa (2011)
- BirdLife South Africa (2010)
- Berne University Research Foundation, Foundation Germaine de Staël, Switzerland (2008, 2009)
- VLIR-UOS scholarship, Belgium (2004 – 2006)

PUBLICATIONS

Note that my name appears as **Abadi, F.** in publications.

17 peer-reviewed journal articles, 581 total citations, h-index = 13 (Google Scholar, 09/15/2017)

- Abadi, F.**, Barbraud, C., and Gimenez, O. (2017). Integrated population modeling reveals the impact of climate on the survival of juvenile emperor penguins. *Global Change Biology*, **23**, 1353-1359.
- Abadi, F.**, Barbraud, C., Besson, D., Bried, J., Crochet, P-A., Delord, K., Forcada, J., Grosbois, V., Phillips, R.A., Sagar, P., Thompson, P., Waugh, S., Weimerskirch, H., Wood, A.G., and Gimenez, O. (2014). Importance of accounting for phylogenetic dependence in multi-species mark-recapture studies. *Ecological Modelling*, **273**, 236-241.
- Sherley, R.B., **Abadi, F.**, Ludynia, K., Barham, B.J., Clark, A.E., and Altwegg, R. (2014). Age-specific survival and movement among major African Penguin *Spheniscus demersus* colonies. *Ibis*, doi: 10.1111/ibi.12189.
- Altwegg, R., Jenkins, A., and **Abadi, F.** (2014). Nestboxes and immigration drive the growth of an urban Peregrine Falcon *Falco peregrinus* population. *Ibis*, **156**, 107-115.
- Jansen, D.Y.M., **Abadi, F.**, Harebottle, D., and Altwegg, R. (2014). Does seasonality drive spatial patterns in demography? Variation in survival in African reed warblers *Acrocephalus baeticatus* across southern Africa does not reflect global patterns. *Ecology and Evolution*, **4**, 889-898.
- Lloyd, P., **Abadi, F.**, Altwegg, R., and Martin, T.E. (2014). South temperate birds have higher apparent adult survival than tropical birds in Africa. *Journal of Avian Biology*, **45**, 493-500.
- Martin, R.O., Sebele, L., Koeslag, A., Curtis, O., **Abadi, F.**, and Amar, A. (2014). Phenological shifts assist colonisation of a novel environment in a range-expanding raptor. *Oikos*. doi: 10.1111/oik.01058.
- Ludynia, K., Waller, L.J., Sherley, R.B., **Abadi, F.**, Galada, Y., Geldenhuys, D., Crawford, R.J.W., Shannon, L.J., and Jarre, A. (2014). Processes influencing the population dynamics and conservation of African penguins on Dyer Island, South Africa. *African Journal of Marine Science*, **36**, 253-267.
- Abadi, F.**, Botha, A., and Altwegg, R. (2013). Revisiting the effect of capture heterogeneity on survival estimates in capture-recapture studies: does it matter? *PLoS ONE*, **8(4)**, e62636. doi:10.1371/journal.pone.0062636.
- Gimenez, O., **Abadi, F.**, Barnagaud, J.-Y., Blanc, L., Buoro, M., Cubaynes, S., Desprez, M., Gamelon, M., Guilhaumon, F., Lagrange, P., Madon, B., Marescot, L., Papadatou, E., Papaix, J., Péron, G., and Servanty, S. (2013). How can quantitative ecology be attractive to young scientists? Balancing computer/desk work with field work. *Animal Conservation*, **16**, 134-136.
- Abadi, F.**, Gimenez, O., Jakober, H., Stauber, W., Arlettaz, R., and Schaub, M. (2012). Estimating the strength of density dependence in the presence of observation errors using integrated population models. *Ecological Modelling*, **242**, 1-9.

- Schaub, M., Reichlin, T.S., **Abadi, F.**, Kéry, M., Jenni, L., and Arlettaz, R. (2012). The demographic drivers of local population dynamics in two rare migratory birds. *Oecologia*, **168**, 97-108.
- Arlettaz, R., Maurer, M. L., Mosimann-Kampe, P., Nusslé, S., **Abadi, F.**, Braunisch, V., and Schaub, M. (2012). New vineyard cultivation practices create patchy ground vegetation, favouring woodlarks. *Journal of Ornithology*, **153**, 229-238.
- Schaub, M., and **Abadi, F.** (2011). Integrated population models: A novel analysis framework for deeper insights into population dynamics. *Journal of Ornithology*, **152 (Suppl 1)**, S227-S237.
- Abadi, F.**, Gimenez, O., Ullrich, B., Arlettaz, R., and Schaub, M. (2010). Estimation of immigration rate using integrated population models. *Journal of Applied Ecology*, **47**, 393-400.
- Abadi, F.**, Gimenez, O., Arlettaz, R., and Schaub, M. (2010). An assessment of integrated population models: bias, accuracy, and violation of the assumption of independence. *Ecology*, **91**, 7-14.
- Schaub, M., Martinez, N., Tagmann-Ioset, A., Weisshaupt, N., Maurer, M., Reichlin, T.S., **Abadi, F.**, Zbinden, N., Jenni, L., and Arlettaz, R. (2010). Patches of bare soil as a staple commodity for declining insectivorous farmland birds. *PLoS ONE* **5(10)**, e13115. doi:10.1371/journal.pone.0013115.

ACADEMIC CITIZENSHIP

Invited talks

Empowering population-level inference through study of avian life histories with integrated population models symposium, North American Ornithological Conference VI, 16-20 August 2016, Washington, D.C., USA

- An introduction to integrated population models in avian biology

Advances in design and analysis for seabird demographic studies symposium, 2nd World Seabird Conference, 26-30 October 2015, Cape Town, South Africa

- Estimation of demographic parameters of emperor penguin using integrated population modeling

Joint meeting of the Environmental Statistics Section of the Royal Statistics Society, the Biometric society and the computational ecology group of the British ecology society, 24 September 2012, London, England

- Combining demographic and population count data to estimate immigration rate and the strength of density dependence

Swiss Ornithological Institute, 24 June 2010, Sempach, Switzerland.

- Regulation of local bird populations: Deeper insights from integrated population models

2nd Workshop "Applied Statistics in Life Sciences", 24 April 2009, Bern Switzerland

- Estimation of immigration rate using integrated population models

Conference contributions

8th *European Conference on Ecological Modelling 'Beyond boundaries: next generation modelling, 27-30 October 2014, Marrakech, Morocco*

- Dealing with imperfect detection and phylogenetic dependence in multi-species mark-recapture studies (*Abstract accepted*)

96th *Ecological Society of America (ESA) meeting, 07-12 August 2011, Austin, USA*

- Combining population counts and demographic data to estimate vital rates of wildlife populations

1st *International Statistical Ecology Conference, 09-11 July 2008, St Andrews, Scotland*

- What is the impact of violating the independence assumption in integrated population modeling? A simulation study

EURING 2009 analytical meeting and workshop, 14-20 September 2009, Pescara, Italy

- Estimation of immigration rate using integrated population models (*Poster*)

Departmental seminar

School of Statistics and Actuarial Science, University of the Witwatersrand, South Africa

- Survival estimation in animal populations with imperfect detection (27 March 2014).

Department of Statistical Sciences, University of Cape Town, South Africa

- Estimation of vital rates of wild animals using integrated population modeling (22 March 2011).

Animal Demography Unit, University of Cape Town, South Africa

- Capture-recapture analysis using state-space formulation (09 March 2011).

Journal manuscripts review

> 25 manuscripts

Journals: *Methods in Ecology and Evolution, Ecological Modelling, PLoS ONE, Ecological Applications, Animal Conservation, Journal of Applied Ecology, Ecology and Evolution, Ibis, Oikos, Journal of Avian Biology, Global Change Biology, Journal of Evolutionary Biology, Journal of Wildlife Management and Wildlife Monographs, Ardea, Ursus*

Proposal reviewer and research report (dissertation) examiner

1 PhD proposal (School of Statistics and Actuarial Science, University of the Witwatersrand)

3 MSc proposals (School of Statistics and Actuarial Science, University of the Witwatersrand)

2 BSc Honours research report (School of Statistics and Actuarial Science, University of the Witwatersrand)

1 MSc research report (School of Animal, Plant and Environmental Sciences (APES), University of the Witwatersrand)

Administrative/Organizational experience

- Organizer of a workshop on "Demographic Modelling of Animal Populations", 02-03 November 2015, University of the Witwatersrand, South Africa (with Dr. Roger Pradel (CEFE-CNRS, France), and Dr. Jason Marshall (Wits University))
- Organizer of a series of fortnightly mini-seminar, 2013 (with Dr. Res Altwegg (University of Cape Town))

SUPERVISION

M.Sc. student (School of Statistics and Actuarial Science, University of the Witwatersrand)

B.Sc. honours student (School of Statistics and Actuarial Science, University of the Witwatersrand)

COMMITTEE INVOLVEMENT

Graduate students committee, NMSU (Jan 2017 - Present)

Scholarship committee, NMSU (Jan 2017 - Present)

COMPUTER SKILLS

Statistical Software: R, WinBUGS, JAGS, SAS, SPSS, MARK, E-SURGE, U-CARE

Application: Ms Office, LATEX

Learning Management System: Canvas, Sakai

Operating System: Windows, Mac

Reference Management Software: EndNote, Mendeley

ACADEMIC TRAINING/DEVELOPMENT

Getting our students to work in every class, 30 Jan 2017, NMSU, USA

Assignments in Canvas, 19 Jan 2017, NMSU, USA

Introduction to Canvas and iClicker, 11-12 Jan 2017, NMSU, USA

ResearchAfrica - Finding new sources of research funding using the ResearchAfrica Database, 28 July 2015, University of the Witwatersrand, South Africa

An introduction to R-INLA - The R package to do Bayesian inference for latent Gaussian models using the INLA method, 17-18 November 2014, University of the Witwatersrand, South Africa

Statistics of extremes and applications: An introduction, 06 November 2014, University of Pretoria, South Africa

Teaching and learning in science, *10-12 September 2014, University of the Witwatersrand, South Africa*

Teaching and learning in science, *10-12 September 2014, University of the Witwatersrand, South Africa*

Postgraduate supervision, *21 August 2014, University of the Witwatersrand, South Africa*

Modelling individual histories with state uncertainty, *12-16 March 2012, CEFE/CNRS, Montpellier, France*

Bayesian population analysis Using WinBUGS, *15-19 February 2010, Sempach, Switzerland*

Mixed models in statistics course, *01-03 July 2009, Lausanne, Switzerland*

How to sell science to good journals, *05,19,26 November 2007, Lausanne, Switzerland*

Effective public speaking, *06,19 December 2007, Lausanne, Switzerland*

Workshop in hierarchical models in ecology, *10-14 September 2007, Zurich, Switzerland*

Workshop in quantitative population dynamics, *06-10 June 2007, Aagon, Greece*

Survival analysis, *19 May 2006, Hasselt, Belgium*