

Curriculum vitae
TOSCA BALLERINI

OFFICE

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PERSONAL DATA

- Date of Birth: 19/05/77
- Place of Birth: Florence (Italy)
- Citizenship: Italian

EDUCATION

- March 2007 **PhD in Polar Sciences**, University of Siena (Italy)
CURRICULUM: Ecology and Biology of Polar Habitats
- December 2001 **Diploma di Laurea, Natural Sciences**, University of Florence (Italy)
CURRICULUM: Evolution of Natural Systems
GRADE: Full marks (110/110) *cum laude*.

WORK - EXPERIENCE

- November 2008 - present **Post-doctoral research scientist**, Center for Coastal Physical Oceanography, Old Dominion University, Norfolk, VA..
- September 2007 - present **Post-doctoral student**, Department Environmental Sciences, University of Siena, Siena, Italy

COURSES AND TRAINING

- September 19-23, 2005 International Workshop: *Analysis of multistate capture-recapture data: modelling individual histories*. Centre d'Ecologie Fonctionnelle et Evolutive CNRS Montpellier (France).
- July 5-8, 2004 Statistical course: *Design and analysis of ecological experiments*. University of Florence (Italy).
- May-June 2002 Post-graduate course in *Conservation and Management of the wild fauna in protected areas*. University of Florence (Italy).

FIELD WORK EXPERIENCE

- Oct 2004 -Jan 2005 Participation to the XX Italian Antarctic expedition as field biologist. Monitoring of the Adélie penguin population of Edmonson Point (74°21'S – 165°10'E). Maintenance of an Automatic Penguin Monitoring System. Management and synthesis of collected data.
- May 2004 Participation to the “MoNIQUa-EGADI” research program for the monitoring of environmental quality in the natural marine reserve of Egadi Islands, Italy. Sampling of benthic fauna.
- Sept – Dec 2002 Vocational Internship: Binocular counts of pheasants and hares in hunting reserves. Zoologist Paolo Cavallini, Pisa (Italy).
- July –Aug 1999 Participation to the UE project *Macrobenthos of Eastern African Mangroves: life cycles and reproductive biology of exploited species (MEAM)*. Field and laboratory experiments on mangrove crabs' feeding ecology; laboratory determination of soil pH and salinity. Biological Station of Inhaca Island (Mozambique).

PUBLICATIONS

- **Ballerini T.**, Tavecchia G., Olmastroni S., Pezzo F., Focardi S. (2009) “Nonlinear effects of winter sea-ice on survival probabilities of Adélie penguins ” *Oecologia* 161 (2): 253-265.
- **Ballerini T.**, Tavecchia G., Olmastroni S., Pezzo F., Focardi S. “ Climate change could accelerate the decline of a small Adélie penguin population” (in revision).
- **Ballerini T.**, “From individual information to population models: the case of a long -lived Antarctic species, the Adélie penguin *Pygoscelis adeliae*” PhD Thesis, University of Siena, Italy. March 2007
- **Ballerini T.** “Researches on Eastern African mangroves: biotic and abiotic gradients and their influence on the zonation of the macrofauna” Master Thesis, University of Florence, Italy. December 2001

PARTICIPATION TO CONGRESSES AND WORKSHOPS

- **Ballerini T.**, Hofmann E., Marrari M., Daly K. “Southern Ocean End to End Food Web Model” *Ocean Carbon and Biogeochemistry Summer workshop*, Woods Hole Oceanographic Institution, Woods Hole, MA, July 20 -23, 2009
- **Ballerini T.**, Olmastroni S., Pezzo F., Tavecchia G., Focardi S. “Adélie Penguin: local dynamics and the effects of sea-ice on population growth” *XVIII Congress of the Italian Society of Ecology*. Parma, Italy. September 1-3, 2008
- **Ballerini T.**, Olmastroni S., Tavecchia G., Pezzo F., Focardi S. “Population growth and persistence of Adélie penguin colonies: the role of environmental variations” *SCAR-IASC-IPY Open Conference*. St Petersburg, Russia. July 8-11, 2008

- **Ballerini T.**, G. Tavecchia, S. Olmastroni, F. Pezzo, S.Focardi “Adélie penguin’s demographic parameters: the influence of large scale environmental variables and local food availability” *VI International Penguin Conference*, Hobart Tasmania. September 3-7, 2007
- **Ballerini T.**, G. Tavecchia, S. Olmastroni, F. Pezzo, S.Focardi “A population model for the Adélie penguin *Pygoscelis adeliae*” *VI International Penguin Conference*, Hobart Tasmania. September 3-7, 2007
- S. Olmastroni, **T. Ballerini**, F. Pezzo, G. Tavecchia and S. Focardi “Large-scale vs local climate effects: the case of Adélie penguin (*Pygoscelis adeliae*)” *Workshop of the Italian Antarctic biology group*, Follonica, Italy. June 3-7, 2007
- **Ballerini T.**, Olmastroni S., Pezzo F., Focardi S. “Sopravvivenza dei Pinguini di Adelia: l’influenza delle variabili climatiche marine”. *V CONISMA Congress*. Viareggio Italy. November 14-18, 2006
- Pezzo F., **Ballerini T.**, Olmastroni S., Focardi S. “Metodi per la demografia del Pinguino di Adelia: undici anni di osservazioni e riosservazioni in Antartide”. *XIII Italian Congress of Ornithology*. Varallo Italy October 4-6, 2005
- **Ballerini T.**, Olmastroni S., Tavecchia G., Pezzo F., Focardi S. “Parametri demografici della popolazione di Pinguini di Adelia a Edmonson Point, Mare di Ross, Antartide” *XIV National Congress of the Italian Society of Ecology*. Siena Italy. October 5-8, 2004
- Pezzo F., Olmastroni S., Volpi V., **Ballerini T.**, Focardi S. “Ecologia del Pinguino di Adelia: 10 anni di ricerca ad Edmonson Point” *Workshop of the Italian Antarctic Biology Working Group* Messina Italy. April 11-14, 2004
- **Ballerini T.**, Macia A. & Cannicci S. “Zonation of mangrove crabs at Inhaca Island (Mozambique): new hypothesis for interpretation”. *Meeting on Mangrove Macrobenthos*, Mombasa, Kenya. September 2000.

RESEARCH INTERESTS AND SKILLS

- Seabird population dynamics; life history trade-offs; food webs; Southern Ocean ecology.
- Techniques: generalized linear models; mark-recapture models; matrix population models, numerical models for ecosystem modelling .
- Computer knowledge:
 - Operating system: Windows
 - Programming language: R, Matlab
 - Programs U-CARE, M-SURGE, MARK, ULM

PROFESSIONAL ACTIVITIES

- Member of the Council of the Association of Polar Early Career Scientists (APECS).

KNOWN LANGUAGES

- Italian (mother tongue); English (fluent); French (good); Spanish (basic).