

MARTIN Jodie

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Curriculum vitae



Personal information

PhD

31 years old – French

Driving licence

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2193 Johannesburg

Professional information

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University of the Witwatersrand

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Research Profile

Area of focus: Spatial Ecology

I'm interested in the study of movements and habitat selection of large mammals at different spatial and organisational scales (from population level to individual level). In parallel, I'm working on the understanding of fine-scale habitat selection processes through the integration of individual movements in habitat selection studies. I have a deep interest in the study of the influence of direct and indirect effects of human and anthropogenic structures on habitat selection patterns and individual movements. Overall, my research fit strongly into the context of tradeoffs individuals have to make between security and resource quality.

Professional experience

2011 – present
Sept – Dec 2010

Postdoctoral position, University of the Witwatersrand, South Africa
Postdoctoral position, Office National de la Chasse et de la faune Sauvage, France

2009 – 2010
2008 – 2009

Lecturer at the University of Lyon 1, France
Lecturer at the University of Lyon2, France

2008 – present **Reviewer** for scientific papers: Wildlife biology (2), Ecological Research (1), Pakistan Journal of Zoology (1), Forest Ecology and Management (1), Oikos (1).

Education

2009 **PhD degree** at the University of Lyon1 (France) and the Norwegian University of Life Sciences (Norway): “Habitat selection and movement by brown bears in multiple-use landscapes”. Supervisors: Pr. D. Allainé (University of Lyon) and Pr. J.E. Swenson (University of Norway).

2004 **Master degree** in “Analysis and modelling of biological systems”, University of Lyon 1, France.

2003 **Licence degree** (~B.Sc.) in Organismal Biology, University of Lyon 1, France.

Skills

Fieldwork Radio-tracking, helicopter survey, capture and marking of bears

Technics GPS and VHF data analyses, Creation and use of different Geographical Information System layers

Statistics Multivariate analyses (generalized linear models, principal component analyses, ge-neralized additive models etc.); Habitat selection analyses (K-select, MADIFA, ENFA, RSF (GLM)...)

Informatics Word, Excel, Powerpoint, R (good knowledge), Geographical Information System (ARCVIEW 3.2 et ARCGIS 9), Programming in LaTeX

Language French: mother tongue
English: fluent
German: basic knowledge
Spanish: basic knowledge

Teaching Experience

Statistical tools for Biology: 2nd year licence courses (Biology of organisms and populations). Lecture (L) 3h, supervised practical work (SPW) 3h and practical work (PW) 3h. Content: linear regression applied to a biological problem in biogeography. Theory, methodology and application.

Mathematics applied to Biology: 1st year licence courses (Biology). PW 14h. Content: modelling (classical growth models) and statistics (probabilities, inferential statistics, variance analysis)

Evolutionary Ecology : 1st year master courses (Ecology Evolution). PW 21h. Content : genetic tools (microsatellites)and statistical tools (statistical tests) used in evolutionary ecology. Analyses of experimental data : SPW 48h. 1st year master courses (Ecology Evolution).

Content: link between biological questioning and statistical methods to use during experimental approach, from hypotheses development to data analysis.

Managing a professional project: SPW 26h. 1st year licence courses (Biology). Content: tools for implementing a professional project, from field research to results communication.

Probability and statistics: L, SPW and PW, 32h. 1st year of university degree of technology. Content: descriptive statistics, probability laws.

Probability and statistics: L, SPW and PW, 17h. 3rd year of university degree of technology. Content: Statistical tests.

Publications

Published papers

4. **Martin, J.**, M. Basille, J. Kindberg, B. Van Moorter, D. Allainé, J.E. Swenson. 2010. Coping with human disturbance: spatial and temporal tactics of brown bear. *Canadian Journal of Zoology*, 88 : 875 - 883.
3. **Martin, J.**, V. Tolon, B. Van Moorter, M. Basille, C. Calenge. 2009. On the use of telemetry in habitat selection studies. In: "Telemetry: Research, Technology and Applications". Editors Barculo D & Daniels J, Nova Science Publishers Inc.
2. **Martin, J.**, C. Calenge, P.-Y. Quenette, D. Allainé. 2008. Importance of movement constraints in habitat selection studies. *Ecological Modelling* 213:257-262.
1. Nellemann, C., O.-G. Støen, J. Kindberg, J. E. Swenson, I. Vistnes, G. Ericsson, J. Katajisto, B. P. Kaltenborn, **J. Martin**, and A. Ordiz. 2007. Terrain use by an expanding brown bear population in relation to age, resorts and human settlements. *Biological Conservation* 138:157-165.

Submitted papers

- **Martin J.**, Revilla E., Quenette P.-Y., Naves J., Allainé D., Swenson J. E. Linking coarse and fine scales to assess the suitable habitats of very small populations.
- Nawaz M.A., **Martin J.**, Swenson J. E. Habitat selection by brown bears in Deosai National Park, Pakistan, and implications for park management.
- Tolon, V., **J. Martin**, S. Dray, A. Loison C. Fischer & E. Baubet. Predator-prey spatial game as a tool to understand reserves effects on harvesters-wildlife interactions and harvested species mortality.

Papers in preparation

- **Martin J.**, Van Moorter B., Revilla E., Blanchard P., Dray S., Quenette P.-Y., Allainé D., Swenson J. E. Tradeoffs between internal and external factors on female brown bear movements: the importance of scale.

Oral communications

- **Martin, J.,** C. Calenge, P.-Y. Quenette, D. Allainé, J.E. Swenson. Integration of movement constraints in habitat selection studies. *“Annual meeting of the SBBRP”*, Himalayan Wildlife Fundation, Pakistan, July 2005.
- **Martin, J.,** P.-Y. Quenette, D. Allainé, J.E. Swenson. Habitat use by mammals, integration of biological and environmental constraints in analyses. *“Annual meeting of the SBBRP”*, University of Helsinki, Finland, June 2006.
- **Martin J.,** P.-Y. Quenette, D. Allainé, J.E. Swenson. Sélection de l’habitat par les mammifères : application à la conservation de l’ours brun (*Ursus arctos*). *“Conseil Scientifique de l’ONCFS”*, Siège de l’ONCFS – Paris, France, November 2006.
- **Martin J.,** P.-Y. Quenette, D. Allainé, J.E. Swenson. Sélection de l’habitat par l’ours brun dans les Pyrénées. *“Réunion annuelle du Centre National d’Etude et de Recherche Appliquée - Prédateur et Animaux Déprédateurs”*, France, October 2007.
- **Martin, J.,** P.-Y. Quenette, D. Allainé, J.E. Swenson. Movements and habitat selection by mammals: application to conservation of brown bears. *“Annual meeting of the SBBRP”*, Sweden, May 2007.
- **Martin, J.,** M. Basille, J. Kindberg, B. Van Moorter, D. Allainé, J.E. Swenson. Scale-dependent effects of human disturbance on large mammals: brown bears in Scandinavia. Le réveil du Dodo III, Journées Francophones des Sciences de la Conservation de la Biodiversité, Montpellier, France, March 2009.
- **Martin J., et al.** Movements and habitat selection of brown bears in multiple-use landscapes – Implications in conservation and management. Invited seminar, School of Animal, Plant and Environmental Sciences, Johannesburg, March 2011.