

Information on candidate for SCB Board of Governors

Name: Dr Nathalie Pettorelli

City and Country of residence: London, UK

Professional Affiliation: Institute of Zoology, Zoological Society of London

SCB member since: 2007

Previous SCB activities (include Section membership and activity): NA

Elected Office Sought: Member at Large

1) Why do you want to serve as an SCB Governor? What is your vision of SCB's mission?

I believe SCB's mission is to support biodiversity conservation by providing a diverse, integrative platform for knowledge exchange, collaboration and coordination; for synthesizing scientific outputs and inform natural resource management policies; and for communicating conservation biology priorities and achievements to the general public. I also believe that SCB's mission should be to provide opportunities to its members, particularly in terms of career development and training. I want to serve as an SCB Governor to help SCB better achieve this mission.

2) What role should SCB play in shaping global conservation science, policy, and practice? How can you help fulfil that role?

I believe SCB should be a main international platform to coordinate global conservation science and a key structure informing conventions and initiatives such as the CBD, the IUCN, Ramsar, CITES, and the IPBES. I do think there is much to do for SCB to fill this role. I can help by supporting to the best of my abilities any kind of action leading the SCB to reach this place, and this through my skills and hard work, my network, my editorial positions, and my affiliations.

3) What do you think is most important to the organizational development of SCB? Describe experiences that have prepared you to promote SCB's development as an organization.

SCB is currently heavily biased in terms of national engagement, with strongholds mainly present in developed, English-speaking countries: to become a significant international voice for conservation biology, I believe the Society needs to reach other audiences. Links between the SCB and international policy structures (e.g., international conventions) could then be reinforced, by developing mechanisms for SCB members to actively contribute to enquiries and calls sent by these organizations. I finally think that SCB is currently not as diverse as it could be and overly top-down orientated, which prevent members to engage and seize opportunities within the society.

4) Describe you interest and experience with budgeting, fundraising, and development of nonprofit organizations.

My main interest and experience is in fundraising and development of nonprofit organization. In 2011, I founded (together with Dr Seirian Sumner) Soapbox Science (www.soapboxscience.org), a nonprofit organization that aims to promote and support women in Science, Technology, Engineering and Mathematics (STEM) through the organization of public outreach activities by female scientists and explicit exposure of the issues surrounding the loss of women

in science in the media. Thanks to this experience, I gained substantial experience in organization development, fundraising, communication and budgeting. I am then involved with the development of the Zoological Society of London (ZSL), through my work as a Climate Change coordinator, Animal Conservation editor (Animal Conservation is a ZSL publication) and Conservation committee member.

Dr Nathalie Pettorelli, Institute of Zoology, Zoological Society of London, NW1 4RY London, UK
Tel: +44 (0) 207 449 6334; Email: Nathalie.Pettorelli@ioz.ac.uk; Webpage: www.zsl.org/nathaliepettorelli
h-index: 23; *i10+index*: 38; >90 publications published in peer-reviewed journals

Educational qualifications & Positions

- *04/2009 – Present*: Research Fellow at the Institute of Zoology
- *09/2012–Present*: Invited lecturer, Global Change Ecology Programme, Elite Network of Bavaria
- *08/2011–Present*: Honorary lecturer at University College London (UCL)
- *08/2009–11/2009*: Secondment at the World Conservation Monitoring Centre (UNEP-WCMC)
- *04/2006–03/2009*: Postdoctoral Research Assistant position at the Institute of Zoology
- *1999–2002*: Ph.D. Thesis (UMR CNRS 5558, University of Lyon I; State funded)
- *1998–1999*: Advanced graduate degree in “Analysis and modelling of biological systems”, Lyon I
- *1996–1998*: Master of Science in “Biology of Populations and Ecosystems”, University of Paris VI

Fellowships

- *08/2010–12/2011*: L'Oréal-UNESCO Fellowship for Women in Science 2010
- *09/2005–03/2006*: Postdoctoral Fellowship at the University Laval, Québec
- *12/2003–08/2005*: European Fellowship, University of Oslo (Marie Curie)
- *12/2002–11/2003*: Lavoisier Fellowship, University of Oslo (French Ministry of Foreign Affairs)

Languages

French – native
English – fluent
German & Norwegian – spoken & written
Spanish - notions

Research Interests

I head the Environmental Monitoring and Conservation Modelling team, which is interested in developing tools and methodologies supporting the sustainable management of natural resources. My own research is about assessing and predicting the impacts of global environmental change on biodiversity and ecosystem services, with a particular focus on climate change; the aim is to conduct high quality, innovative and internationally recognized research through a multi-disciplinary approach involving statistics, remote sensing and programming. Extensive experience with remote sensing data and its usefulness in ecology and conservation drives my interest in promoting a better integration of satellite-based data in global monitoring programs.

Service activities

- Member of the editorial board of *Journal of Applied Ecology* (AE since 2007), *Animal Conservation* (AE since 2007, Editor since 2008)
- Invited expert on Ramsar's Scientific and Technical Review Panel since 2010
- ZSL Climate Change Coordinator since 2011
- Group on Earth Observations Biodiversity Observation Network (GEO-BON) member since 2011
- Committee on Earth Observation Systems (CEOS) Biodiversity Steering Committee Member since 2012
- IUCN Mangrove Specialist Group since 2013
- ZSL Conservation Committee member since 2013
- National Science Competition judge (British Science Association, 2009)
- Project reviewer for the French Foundation for Research on Biodiversity, Earthwatch, ERC, NERC
- Soapbox Science (www.soapboxscience.org) co-founder and co-organizer
- Reviewer for *Wildlife Biology*; *Proceedings of the Royal Biology*; *Biology Letters*; *Ecography*; *European Journal of Wildlife Research*; *Journal of Wildlife Management*; *Oryx*, *Oikos*; *Forest Ecology & Management*; *American Naturalist*; *Journal of Mammalogy*; *Wildlife Society Bulletin*; *Ecology Letters*; *Ecological Research*; *Journal of Animal Ecology*; *Journal of Applied Ecology*; *American Naturalist*; *Journal of Zoology*; *Animal Conservation*; *Biological Conservation*; *Environmental Conservation*; *Tropical Conservation Science Journal*; *Philosophical Transactions of the Royal Society B*; *Global Ecology and Biogeography*; *Applied Vegetation Science*; *Agriculture, Ecosystems & Environment*; *PLOS ONE*; *Methods in Ecology and Evolution*; *Theoretical Population Biology*; *Global Change Biology*; *Mammal Biology*; *Avian Conservation and Ecology*

Major publications over the past 5 years

- **Pettorelli** (2013) *The Normalised Difference Vegetation Index: principles & ecological applications*. Oxford University Press.
- Collen, **Pettorelli**, Durant, Baillie (2013) *Biodiversity monitoring and conservation: bridging the gap between global commitment and local action*. Wiley
- Chauvenet, Ewen, Armstrong & **Pettorelli** (2013) Saving the hihi under climate change: a case for assisted colonisation. *Journal of Applied Ecology*, in press
- Ameca y Juarez, Mace, Cowlshaw, Cornforth & **Pettorelli** (2013) Assessing exposure to extreme climatic events for terrestrial mammals. *Conservation Letters*, in press
- Pereira, Ferrier, Walters, Geller, Jongman, Scholes, Bruford, Brummitt, Butchart, Cardoso, Coops, Dulloo, Faith, Freyhof, Gregory, Heip, Höft, Hurtt, Jetz, Karp, McGeoch, Obura, Onoda, **Pettorelli**, Reyers, Scharlemann, Stuart, Walpole & Wegmann (2013) Essential Biodiversity Variables. *Science* 339: 277.
- Ameca y Juarez, Mace, Cowlshaw & **Pettorelli** (2012) Natural population die-offs: causes and consequences for terrestrial mammals. *Trends in Ecology and Evolution* 27: 272-277.
- Durant, **Pettorelli** et al. (2012) Forgotten biodiversity in desert ecosystems. *Science* 336: 1379-1380.
- **Pettorelli** (2012) Climate change as a main driver of ecological research. *Journal of Applied Ecology* 49: 542-545.
- Safi & **Pettorelli** (2010) Phylogenetic, spatial and environmental components of extinction risk in carnivores. *Global Ecology and Biogeography* 19:352-362.
- **Pettorelli**, Bro-Jørgensen, Durant, Blackburn & Carbone (2009) Energy availability and density estimates in African ungulates. *American Naturalist* 173: 698-704.

Supervision

BSc& MSc students: 04-09/2013: Clare Duncan (Imperial College); 01-04/2013: Filip Reznick and Chris Chandler (UCL); 09/2010-11/2011: J. Duffy, University of Sussex; 09/2010-11/2011: W. Cornforth, University of Toronto; 10/2011-06/2012: T. Freemantle, University College London (UCL); 04-09/2011: A. Hilborn, Imperial College London; 04-09/2011: A. English, Imperial College London; 09/2010-04/2011: L. Pidgeon, UCL; 09/2009-04/2010: A. Fowler, UCL; 04-09/2009: A. Chauvenet, Imperial College London; 09/2009-02/2010: A. Meillere, INRA Toulouse; 09/2008-04/2009: I. Garonna, UCL; 04-09/2007: F. Broekhuis, Zoological Society of London.

Past and Present PhD students: 01/2008-Present: F. Belbachir (UCL); 10/2009-09/2012: A. Chauvenet, (Imperial College); 10/2009-01/2013: E. Ameca (Imperial College); 10/2009-Present: C. Douglas (King College); 10/2010-Present: T. Davies (St Andrews); 10/2010-Present: C. Amphlett (UCL); 10/2010-Present: S. Brooke (UCL); 01/2013-Present: A. Jacobson (UCL); 10/2011-Present: G. Gliozzo (UCL); 10/2013-Present: C. Duncan (UCL)

Visiting & associated PhD students: T. Borowik (04-06/2010, Polish academy of sciences); G. Escribano (09-12/2011; Universidad Rey Juan Carlos, Spain); A. Hilborn (01/2012–Present; Virginia Tech, USA)

Post Doctoral Research Assistant: A. Chauvenet (10/2012–Present)

Post Graduate Research Assistant: Judith Reise (03/2013-09/2013)

Symposium/Workshop/course organization over the past 5 years

- May 2014: Organization of the ZSL symposium entitled “Remote Sensing for biodiversity monitoring and conservation”
- November 2013: Organization of the ZSL symposium entitled “Carnivore responses to environmental change”
- August 2013 & April 2014: 2 week summer school on Remote Sensing and Movement Ecology, in Germany (MPI) and the USA (SCBI) respectively (www.animove.org)
- October 2012 & October 2013: Committee of Earth Observation Systems (CEOS) Social Benefit Area (SBA) Biodiversity workshops, in Germany & Italy (<http://www.remote-sensing-biodiversity.org/ceos>)
- August 2009: Organization of a symposium entitled “The use of satellite-based data in assessing ecological responses to environmental change” at the International Mammal Conference, Mendoza (Argentina)
- June 2009: : Organization of the ZSL symposium entitled “Biodiversity monitoring and conservation: bridging the gaps between global commitment and local action”
- October 2008: 1 week workshop on species distribution models in TAWIRI, Tanzania

Society membership

- Member of the Centre for Ecology and Evolution since 2006; Steering Committee member since 2013
- Member of the Society for Conservation Biology since 2007
- Member of the British Ecological Society since 2007, joined the BES Climate Change Advisory Group and the Conservation Ecology Group in 2010

Non-profit organization grants

- 2011- 2013: For Women In Science grants to fund the Soapbox Science event (~£50,000 in total)
- 2012- 2013: Summer school organization grant (Elite Network of Bavaria, £8,000)

Public outreach activities

- Active professional tweeter accounts (@Pettorelli & @soapboxscience), reaching >850 and >1350 followers respectively, every day
- Annually, since 2008: Organization of ZSL free scientific evenings
- June 2010: Participated in "I'm a scientist, get me out of here" IAS 2010
- March 2010: Presentation of my work at the British Parliament, London
- March 2009: National Science Competition judge (British Science Association)
- 2007-Present: Give regular presentations of my work to A level students (Education Centre, Zoological Society of London)

Examples of press and publicity generated over the past 5 years

- The Telegraph, 09/2013 "Moving animals could beat climate threat", Nature notes
- The Guardian, 06/2013, "A soapbox for Women in Science", Letter (p.43, 28/6/2013)
- The Guardian, 01/2013, "Tigers under threat from disappearing mangroves", John Vidal
- Daily Mail, 12/2012, "Bleak future for mammals", Emily Payne
- Earthzine, 06/2012, "Remote Sensing Emerges as an Important Tool for Habitat and Species Conservation", John Platt
- Times of India, 12/2011, "Wildlife under unprecedented threat from natural disasters"
- The Guardian, 07/2011, "You don't need a beard to bring alive the surface of Mars", Zoe Williams
- Conservation Magazine, 12/2011, "Vaccinating the Serengeti's lions and cheetahs", David Malakoff
- Telegraph, 11/2010, "Tigers and polar bears among most vulnerable to climate change"
- Daily Mail, 11/ 2010, "Tigers and polar bears most at risk because they have to work so hard for their food"
- Science Daily, 07/2010 "Nest Incest Targets Males, Finds Study of Rare New Zealand Bird"
- Wildlife Extra, 10/2009, "Major survey of East African carnivores has some surprising results"
- Science Daily, 10/2009, "No Place Like Home: Africa's Big Cats Show Postcode Preference"
- Daily global, 10/2009, "Africa's Big Cats Show Postcode Preference"
- Today program, radio 4 (BBC), interviewed in 04/2009 on monitoring biodiversity from space.
- Telegraph, 04/2009, "Satellite to be used to predict animal extinction" by Louise Gray
- New Scientist, Summer 2008, "Can memory save elephants from climate change?", Catherine Brahic
- USA Today, Summer 2008, "Elephants' long memories may save young lives", Jess Zielinski