

# Emeline Pettex

*Marine Ecologist*

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## Education

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2007 – 2011	PhD in Marine Ecology (University Montpellier 2, France)
1999 - 2000	Postgraduate degree in Public law and territorial development (University of Grenoble, France)
1998 - 1999	Postgraduate degree in Population biology, genetics and ecology (University of Tours, France)
1997 - 1998	Master degree in Population biology and ecosystems (University of Grenoble, France)
1994 - 1997	Bachelor degree in Biology (University of Grenoble, France)

## Additional training

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April 2016	Spatial analysis of ecological data using R, PR Statistics, Scotland
March 2013	Statistics with R, CEBC – CNRS, France
Oct. 2011	Aerial survey training, University of La Rochelle, France
Aug. 2011	Introduction and advanced techniques in Distance Sampling. Saint Andrew's University, Scotland
April 2008	Project management, University Montpellier 2, France

## Experience

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### Management of research and local development projects

Since 2015	<i>'Assessing and reducing the impact of pile driving noise on marine mammals in the English Channel'</i> Multi-disciplinary research combining physics and ecology to model the demographic impact of wind farm construction on marine mammals. Design, data analysis and coordination of the biological component. Cohabys - ADERA, University of La Rochelle. 3 years
2014 - 2015	<i>'Distribution, abundance and habitats of the marine megafauna in the eastern English Channel'</i> . Coordination, design, data analysis of an aerial survey funded the French Ministry of Environment. University of La Rochelle. 1 year
2011-2014	<i>'Seasonal distribution, abundance and habitats of the marine megafauna in the French EEZ'</i> . Coordination of large scale aerial surveys (SAMM) funded by the French Ministry of Environment, resulting in the creation of the largest French marine protected area for seabirds and cetaceans. Research design, fieldwork supervision (15 observers, 375,000 km <sup>2</sup> covered), data analysis and research writing (special issue in <i>Deep Sea Research II</i> ). University of La Rochelle. 4 years
2007-2011	<i>'Foraging ecology of Northern Gannets (Morus bassanus) in the North Atlantic Ocean at various spatio-temporal scales.'</i> Telemetry study conducted in northern Norway (5 months of fieldwork) investigating the foraging behaviour and the migration in a pelagic seabird. PhD under the supervision of Drs. Grémillet and Bonadonna (CEFE/CNRS). University of Montpellier. 3.5 years
2003 – 2006	Local development officer, Communauté de communes Entre Nièvres et Forêts, France. Project design and implementation (3 M€), work with local and regional stakeholders and citizens, team management (4 people), fund raising. 3 years
2001 – 2003	<i>'The impact of introduced mammals and the ecological restoration of Kerguelen Islands.'</i> Research program led by Prof. Chapuis (National Museum of Natural History). Biologist in Kerguelen. Fieldwork and data analysis. 1.5 years
2000 - 2001	<i>'Discovery of the American continent'</i> Educational project with 2 primary schools in Savoie, France. Conception of the project, creation of an association, fund raising, teaching and communication during a 6 months journey across the Ushuaia to Vancouver. 1 year

## Participation in research projects

- 2011 - 2013 *'Ecosystemic survey in the bay of Biscay (PELGAS) – marine mammals and seabirds.'* Annual survey on board of an oceanographic vessel. Program led by IFREMER and the University of La Rochelle. Supervision of observers.
- 2008 – 2010 *'Behavioural ecology of Brünnich's and common guillemots from the Barents Sea.'* Research program led by Drs Steen (Norwegian Polar Institute) and Grémillet (CEFE/CNRS). Data analysis.
- 2007 *'The quest of king penguins: orientation in a crowded environment.'* Research program led by Dr Nesterova (CEFE/CNRS). Field assistant in Kerguelen Islands, 2 months.
- 2006 *'Responses of Arctic marine birds to environmental constraints in the context of climate change.'* Research program led by Dr Harding and Grémillet. Field assistant in East Greenland, 2 months.
- 2003 *'Ecophysiology of the Great Cormorant in Greenland.'* Research project led by Dr Grémillet. Field assistant in Disko (Greenland), 1 month.
- 1999 – 2000 *'Speciation in the Globeflower Fly Chiastocheta spp. in relation to host plant species.'* Phylogenetic study using DNA sequencing. Postgraduate degree under the supervision of Drs Després and Pompanon (LECA/CNRS). University of Grenoble. 9 months

## Teaching and supervising activities

- 2016 Teaching assistant: Computer science (45 h). University of La Rochelle.
- 2013 Supervision of a master student (University of Paris 6) during the SAMM survey. 7 months
- 2011 - 2012 Aerial survey training for the 15 observers of the SAMM surveys. 3 weeks
- 2008 - 2009 Teaching assistant: Plant and Animal Biology (70 h). University of Montpellier 2.
- 2003 – 2006 Supervision of master and engineering school students in local development projects. 8 months
- 2000 – 2001 Teaching assistant in a primary school (100 h) for a project on the American continent.

## Skills

**Technical skills:** Telemetry, wildlife handling, aerial and boat surveys

**Software skills:** Office pack, Statistical software (R), ArcGis 10, Distance 6.0, Sighting data recording (VOR)

**Language skills:** French (native speaker), English (fluent), German, Wolof (basic).

## Miscellaneous

Godmother for a nonprofit organisation *'Elles Bougent'* encouraging girls to pursue scientific and technical careers  
Laureate of the Foundation Marcel Bleustein-Blanchet vocation award in 2006.

Hobbies and interests: Latin dances, kayaking, trekking, ornithology

Coastal boating permit

## Scientific publication

### Review activities

Reviewer for: Marine Ecology Progress Series, Functional Ecology, Marine Biology, Journal of Field Ornithology, Ibis, Ornithological monographs, Animal cognition

### Peer-reviewed publications

- Grémillet, D., White, C.R., Authier, M., Dorémus, G., Ridoux, V., **Pettex, E.**, 2017. Ocean sunfish as indicators for the 'rise of slime.' *Current Biology*. 27, R1263–R1264.
- Delavenne, J., Lepareur, F., Witté, I., Touroult, J., Lambert, C., **Pettex, E.**, Virgili, A., Siblet, J.-P., 2017. Spatial conservation prioritization for mobile top predators in French waters: Comparing encounter rates and predicted densities as input. *Deep Sea Res. Part II Top. Stud.* 141, 275–284.
- Lambert, C., Laran, S., David, L., Dorémus, G., **Pettex, E.**, Van Canneyt, O., Ridoux, V., 2017a. How does ocean seasonality drive habitat preferences of highly mobile top predators? Part I: The north-western Mediterranean Sea. *Deep Sea Res. Part II Top. Stud.* 141, 115–132.

4. Lambert, C., **Pettex, E.**, Dorémus, G., Laran, S., Stéphan, E., Canneyt, O.V., Ridoux, V., 2017b. How does ocean seasonality drive habitat preferences of highly mobile top predators? Part II: The eastern North-Atlantic. *Deep Sea Res. Part II Top. Stud.* 141, 133–154.
5. Lambert, C., Virgili, A., **Pettex, E.**, Delavenne, J., Toison, V., Blanck, A., Ridoux, V., 2017c. Habitat modelling predictions highlight seasonal relevance of Marine Protected Areas for marine megafauna. *Deep Sea Res. Part II Top. Stud.* 141, 262–274.
6. Laran, S., Authier, M., Blanck, A., Doremus, G., Falchetto, H., Monestiez, P., **Pettex, E.**, Stephan, E., Van Canneyt, O., Ridoux, V., 2017a. Seasonal distribution and abundance of cetaceans within French waters- Part II: The Bay of Biscay and the English Channel. *Deep Sea Res. Part II Top. Stud.* 141, 31–40.
7. Laran, S., **Pettex, E.**, Authier, M., Blanck, A., David, L., Dorémus, G., Falchetto, H., Monestiez, P., Van Canneyt, O., Ridoux, V., 2017b. Seasonal distribution and abundance of cetaceans within French waters- Part I: The North-Western Mediterranean, including the Pelagos sanctuary. *Deep Sea Res. Part II Top. Stud.* 141, 20–30.
8. **Pettex, E.**, David, L., Authier, M., Blanck, A., Dorémus, G., Falchetto, H., Laran, S., Monestiez, P., Van Canneyt, O., Virgili, A., Ridoux, V., 2017a. Using large scale surveys to investigate seasonal variations in seabird distribution and abundance. Part I: The North Western Mediterranean Sea. *Deep Sea Res. Part II Top. Stud.* 141, 74–85.
9. **Pettex, E.**, Laran, S., Authier, M., Blanck, A., Dorémus, G., Falchetto, H., Lambert, C., Monestiez, P., Stéfan, E., Van Canneyt, O., Ridoux, V., 2017b. Using large scale surveys to investigate seasonal variations in seabird distribution and abundance. Part II: The Bay of Biscay and the English Channel. *Deep Sea Res. Part II Top. Stud.* 141, 86–101.
10. Virgili, A., Lambert, C., **Pettex, E.**, Dorémus, G., Van Canneyt, O., Ridoux, V., 2017. Predicting seasonal variations in coastal seabird habitats in the English Channel and the Bay of Biscay. *Deep Sea Res. Part II Top. Stud.* 141, 212–223
11. **Pettex, E.**, Barrett, R. T., Lorentsen, S. H., Bonadonna, F., Pichegru, L., Pons, J. B., & Grémillet, D. (2015). Contrasting population trends at seabirds colonies: is food limitation a factor in Norway? *Journal of Ornithology*, 156(2), 397-406.
12. Péron, C., Grémillet, D., Prudor, A., **Pettex, E.**, Saraux, C., Soriano-Redondo, A., Authier, M. & Fort, J. (2013). Importance of coastal Marine Protected Areas for the conservation of pelagic seabirds: The case of 'Vulnerable' yelkouan shearwaters in the Mediterranean Sea. *Biological Conservation*, 168, 210-221.
13. Fort, J., Steen, H., Strøm, H., Tremblay, Y., Grønningsæter, E., **Pettex, E.**, Warren P. Porter & Grémillet, D. (2013). Energetic consequences of contrasting winter migratory strategies in a sympatric Arctic seabird duet. *Journal of Avian Biology*, 44(3), 255-262.
14. **Pettex, E.**, Lorentsen, S. H., Grémillet, D., Gimenez, O., Barrett, R. T., Pons, J. B., Le Bohec, C. & Bonadonna, F. (2012). Multi-scale foraging variability in Northern gannet (*Morus bassanus*) fuels potential foraging plasticity. *Marine biology*, 159(12), 2743-2756.
15. Fort J.\*, **Pettex E.\***, Tremblay Y., Lorentsen S.H., Garthe S., Votier S., Pons J.B, Siorat, F., Furness, R.W., Grecian, W.J., Bearhop, S., Montevecchi, W.A. & David Grémillet. (2012). Meta-population evidence of oriented chain migration in northern gannets (*Morus bassanus*). *Frontiers in Ecology and the Environment* 10 (5): 237-242.  
\*1<sup>st</sup> authors
16. Brodier, S., Pisanu, B., Villers, A., **Pettex, E.**, Lioret, M., Chapuis, J. L., & Bretagnolle, V. (2011). Responses of seabirds to the rabbit eradication on Ile Verte, sub-Antarctic Kerguelen Archipelago. *Animal Conservation*, 14(5), 459-465.
17. Chapuis, J. L., Pisanu, B., Brodier, S., Villers, A., **Pettex, E.**, Lioret, M., & Bretagnolle, V. (2011). Eradication of invasive herbivores: usefulness and limits for biological conservation in a changing world. *Animal Conservation*, 14(5), 471-473.
18. **Pettex, E.**, Bonadonna, F., Enstipp, M.R., Siorat, F. and Gremillet, D. (2010). Northern gannets anticipate the spatio-temporal occurrence of their prey. *Journal of Experimental Biology*, 213 (14): 2365-2371
19. Nesterova, A., Le Bohec, C., Beaune, D., **Pettex, E.**, Le Maho, Y. and Bonadonna, F. (2010). Do penguins dare to walk at night? Visual cues influence king penguin colony arrivals and departures. *Behavioral Ecology and Sociobiology*, vol 64, 7 (3): 1145-1156
20. Pompanon, F., **Pettex, E.**, Després, L. (2006). Patterns of resource exploitation in four coexisting globeflower fly species (*Chiastocheta* spp.) *Acta Oecologica*, 29 (2):233-240
21. Després, L., **Pettex, E.**, Plaisance, V., Pompanon, F., (2002). Speciation in the globeflower flies *Chiastocheta* spp. (Anthomyiidae). *Molecular Phylogenetics and Evolution* 22 (2):258-268