

## Phil Jean-François Bouchet MRes PhD

Quantitative ecologist

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### METRICS

Years since PhD graduation: **3** | Peer-reviewed articles: **13** | h-index: **9** | Citations: **242**

### PROFESSIONAL SUMMARY

I am a quantitative ecologist with a background in marine science, statistical modelling and GIS. I have a strong interest in data analysis and the application of predictive models to real-world wildlife conservation problems, using both frequentist and (increasingly) Bayesian approaches. With over a decade of experience conducting research on marine megafauna species (eg. whales, dolphins, seabirds, fishes and sharks), I have a wide range of practical and numerical skills. My work is predominantly computational, and my portfolio spans numerous ecosystems (coastal, offshore), spatial scales (local to global), bioregions (temperate to tropical), and field techniques (line transects to underwater videography). I am a skilled communicator capable of clearly conveying scientific results and methodologies to both academic and non-specialist audiences through a variety of traditional and emerging media platforms.

### RESEARCH VISION

My current research vision is articulated around three core themes:

#### Model

#### Transferability

**Summary** | Statistical models are vital for informing natural resource management and policy-making in a rapidly changing world. However, their ability to yield reliable predictions under novel environmental scenarios is seldom testable or tested, undermining confidence in their potential to fill ecological knowledge gaps in data-poor habitats and systems. This theme seeks to identify the key drivers of model success or failure in non-analogue conditions to improve the practical utility of model transfers in ecology.

**Importance** | Key areas of application include: disease control and surveillance, mitigation of biological invasions, and forecasting of population responses to environmental change.

**Key collaborators** | University of Salford, University of St Andrews, University of Western Australia.

**Ongoing projects** | [ 1-2 ] (see forthcoming publications section)

#### Conservation Ecology

**Summary** | Populations of marine mega-vertebrates (eg. cetaceans, seabirds, sharks) are under increasing pressures from anthropogenic threats and activities including overfishing, bycatch, vessel traffic, or renewable energy developments. Addressing these threats requires quantitative assessments of cumulative risk, in addition to rigorous audits of existing management measures. This theme seeks to resolve the spatio-temporal distributions and behaviours of marine species at a variety of scales to predict human-wildlife conflicts, inform spatial planning, and support evaluations of protected area effectiveness in coastal and pelagic waters.

**Importance** | Key areas of application include: threatened species monitoring, marine protected area evaluation, and conservation planning optimisation.

**Key collaborators** | University of Portsmouth, Bangor University, University of Western Australia, University of St Andrews, Marine Scotland Science, Western Australian Department of Biodiversity, Conservation and Attractions, Zoological Society of London, Organisation Cetacea.

**Ongoing projects** | [ 3-7 ] (see forthcoming publications section)

Theoretical  
Ecology &  
Quantitative  
Methods

**Summary** | Effective solutions to conservation challenges in the Anthropocene demand unified approaches to field sampling and data analysis that can guarantee maximum transparency and consistency in scientific outputs. Innovative modelling approaches are also required to deal with increasingly big and complex datasets. This theme seeks to develop new tools and protocols for enhancing the practice of statistical ecology.

**Importance** | Key areas of application include: abundance estimation for rare and cryptic species, standard operating procedures for ecological modelling, and horizon scans of emerging disciplines such as seascape ecology.

**Key collaborators** | University of St Andrews, Duke University, University of Salford, University of Freiburg, Swiss Federal Research Institute, University of Melbourne, University of Kansas, University of Plymouth, Western Australian Department of Biodiversity, Conservation and Attractions.

**Ongoing projects** | [ 8-12 ] (see forthcoming publications section)

## EDUCATION

- 2011-15 **PhD Marine Ecology** (*Distinction*)  
University of Western Australia (Perth, Australia)  
Thesis: [Submarine topography as a predictor of mobile predator hotspots: Relevance and applications to conservation planning in the pelagic ocean](#)
- 2008-09 **MRes Marine Mammal Science** (*Distinction*)  
University of St Andrews (St Andrews, Scotland)  
Thesis - Don't count your whales before they migrate: Using aerial surveys to assess the status of breeding stock 'D' humpbacks (*Megaptera novaeangliae*) in Western Australia
- 2008 **Marine Mammal Management course** (*Distinction*)  
Nova Southeastern University (Fort-Lauderdale, FL, USA)
- 2007 **MSc Marine and Coastal Sciences**  
European Institute of Marine Studies, University of Western Brittany (Brest, France)
- 2003-06 **BSc. Zoology** (*First class*)  
University of Western Brittany (Brest, France)

## KEY RESEARCH EXPERIENCE

- 2019-now **Postdoctoral Research Associate**, Centre for Ecological and Environmental Modelling, University of St Andrews (Scotland, UK) [6 months]  
Review of extrapolation in density surface models for cetacean species. This role contributed to a collaborative project undertaken with the United States Navy and the National Oceanographic and Atmospheric Administration (NOAA), and required frequent liaison with overseas partners. Specific duties included data synthesis and R package development.
- 2018-19 **Postdoctoral Marine Top Predator Ecologist**, Bangor University (Wales, UK) [4 months]  
Mapping of risk from two key anthropogenic activities (shipping traffic and fisheries bycatch) to 24 of the most common species of cetaceans and seabirds found across northwestern Europe. This work formed part of the NERC-funded 'Marine Ecosystems Research Programme'. Duties included the synthesis, analysis and mapping of fishing effort and vessel movement data.

- 2016-18**     **Postdoctoral Fellow**, University of Western Australia (Australia) & Australian Government's National Environmental Science Programme (NESP Marine Biodiversity Hub)
- Research in model transferability, spatial modelling and marine biodiversity monitoring, including standard operating protocols for pelagic sampling. This role required leading large teams of 10 to 50 collaborators. Specific duties included data collection, synthesis and management; training and supervision of students; stakeholder liaison; data analysis and modelling; preparation of technical reports and peer-reviewed journal articles; website maintenance; production of sampling designs for field campaigns; and communication products (videos, maps, blog posts) for outreach. As part of this role I authored/co-authored 4 peer-reviewed publications and 7 technical reports, with a further 5 articles in various stages of preparation.
- 2014-16**     **Data Analyst**, WA Department of Biodiversity, Conservation and Attractions (Australia)
- Responsible for deriving estimates of (i) the extent of occurrence and area of occupancy of the endemic snubfin dolphin (*Orcaella heinsohni*) in northwestern Australia, and (ii) population abundance at a key site (Roebuck Bay) based on vessel-based line transect survey data. Duties included database management, processing of remote sensing imagery, data treatment and mapping using GIS, and extensive programming in R. As part of the research team on this project, I was co-awarded \$46,000 in grant funding from the Australian Marine Mammal Centre. The project has resulted in two scientific publications in preparation.
- 2010-12**     **Assistant Field Coordinator**, Southwest Whale Ecology Study (Australia)
- Land-based monitoring project investigating the movement patterns, habitat use and acoustic behaviour of baleen whales (mainly pygmy blue *Balaenoptera musculus brevicauda* and humpback *Megaptera novaeangliae*). Duties included theodolite tracking; field data collection and database curation; volunteer management; equipment maintenance; community engagement activities and assistance with funding applications, reports, and scientific papers, as appropriate.
- 2010**         **Research Assistant**, Centre for Whale Research WA Inc. (Australia)
- Research on baleen whales (mainly pygmy blue *Balaenoptera musculus brevicauda* and humpback *Megaptera novaeangliae*), including genetics (biopsy) sampling, photo-identification mark-recapture, line transect counts and behavioural observations. This role also included community engagement activities as a naturalist/tour guide onboard whale watching cruises departing daily from Fremantle, WA during the whales' southbound migration.
- 2008**         **Research Assistant**, Centre for Whale Research WA Inc. (Australia)
- Large-scale biodiversity surveys conducted offshore under contract with industry to characterise the little known migration path of pygmy blue whales (*Balaenoptera musculus brevicauda*). Additional satellite tagging surveys of humpbacks whales on coastal waters. Duties included data collection (visual line transects), database management, and general vessel maintenance.

## SKILLS

- Software**     Data analysis, visualisation and modelling (R, MATLAB, Python); Bayesian inference (R2WinBUGS, RJAGS); Spatial statistics, mapping and survey planning (ArcGIS, QGIS, R); Multivariate analyses (PRIMER, PERMANOVA add-on); Version control (Git); Academic writing (LaTeX); Web design (WordPress, CSS, HTML); Scientific illustration (Photoshop, Illustrator); Stereo-video processing (EventMeasure).
- Field work**     >150 days at sea. Photo-identification and satellite tagging of blue and humpback whales; vessel-based line transect sampling of marine megafauna (inshore and offshore); aerial surveys for large cetaceans; baited remote underwater video systems (BRUVS) surveys; acoustic tagging of reef sharks; theodolite tracking of cetaceans from a land-based station.
- Languages**     French (mother tongue), English (Cambridge Advanced English score: 210), Spanish (basic).

## FORTHCOMING PUBLICATIONS

### Theme: Model Transferability

- [ 01 ] (In prep) Transferability of cetacean density models from line transect data.  
**Bouchet P**, Péron C, Mannocci L, Ridoux V, Virgili A, Sequeira A, Yates K, Laran S, Thomas L, Thuiller W, Williams R, Mouillot D.  
[ Analysis: Generalised additive models ]
- [ 02 ] (In prep) Transferability of biodiversity models across a large temperate seascape  
Yates KL, Caley MJ, Meeuwig JJ, **Bouchet P**, Radford BT, Mellin C.  
[ Analysis: Boosted regression trees ]

### Theme: Conservation Ecology

- [ 03 ] (In prep) Spatial dimensions of pelagic diversity in an offshore marine park  
**Bouchet P**, Letessier TBL, Caley MJ, Nichol SL, Hemmi JM, Meeuwig JJ.  
[ Analysis: Generalised additive models, hotspot analysis ]
- [ 04 ] (In prep) Risk assessment of cetacean and seabird bycatch risk in the North-East Atlantic  
**Bouchet P**, Waggit JJ, Evans PGH, Hiddink JG.  
[ Analysis: Logistic regression, Productivity-Susceptibility Analysis ]
- [ 05 ] (In prep) Conserving the bold and beautiful: Behaviour and nursery use by juvenile shortfin makos  
Forrest AH, Turner J, Tickler D, **Bouchet P**, Meeuwig JJ.  
[ Analysis: Chi-square tests, linear regression ]
- [ 06 ] (In prep) Regional conservation assessment of snubfin dolphins in northern Australia  
**Bouchet P**, Thiele D, Waples K, Marley S, Weisenberger F, Dambimangari Rangers, Unguu Rangers, Balangarra Rangers, Raudino H.  
[ Analysis: GIS mapping, Bootstrap resampling ]
- [ 07 ] (In prep) Distribution and habitat use of blue whales in the Timor Trough during 2007-08  
Burton C, Hoskins A, **Bouchet P**, Marley S, Gill P.  
[ Analysis: Generalised additive models ]

### Theme: Theoretical Modelling & Quantitative Methods

- [ 08 ] (In prep) Comparison of abundance estimates obtained with mark-recapture and model-based distance sampling methods: A dolphin case study  
**Bouchet P**, Raudino H, Thiele D, Miller DL, Brooks L, Waples K.  
[ Analysis: Bayesian zero-inflated spatial model, Pollock's Robust Design model. ]
- [ 09 ] (In prep) Practical recommendations for extrapolating cetacean density models to novel conditions  
**Bouchet P**, Miller D, Roberts J, Mannocci L, Harris C, Thomas L.  
[ Analysis: R package development ]
- [ 10 ] (In prep) Optimal survey planning for humpback whale abundance estimation  
**Bouchet P**, Salgado-Kent CP, Jenner CSK.  
[ Analysis: Numerical simulations based on different sampling scenarios, power analyses ]
- [ 11 ] (In prep) A standard protocol for describing species distribution models  
Zurell D, Franklin J, Serra-Diaz JM, **Bouchet P**, Dormann C, Elith J, Xiao F, Guillera-Aroita G, Guisan A, Leitão PJ, Lahoz-Monfort J, Park D, Pearson R, Peterson AT, Rapacciuolo G, Schröder B, Thuiller W, Yates K, Zimmermann N, Merow C.  
[ Analysis: Review and expert elicitation. ]
- [ 12 ] (In prep) Priority knowledge gaps in seascape ecology  
Pittman S, Álvarez D, Bell S, Berkstrom C, Devillers R, Eggleston D, Gilby B, Gullstrom M, Halpern B, Halpin P, Holstein D, Hovel K, Jackson E, Kavanau M, Kot C, Lecours V, Lepczyk C, Olds A, Oleson K, Santos Corujo R, Saul S, Scales K, Schneider D, Suthers I, Trembl E, Young M, Yates K, **Bouchet P**.  
[ Analysis: Review and expert elicitation. ]

## PEER-REVIEWED PUBLICATIONS

- Submitted** Salgado-Kent CP, Parnum I, Wellard R, **Bouchet P**, Fouda L, Erbe C. Cetacean hotspots at steep canyon edges of the Bremer Sub-Basin, south-western Australia: First insights from multiple platforms. *Austral Ecology* (Submitted Mar 2019).
- Letessier TB, Mouillot D, **Bouchet P**, Vigliola L, Fernandes M, Friedlander A, Sala E, Thompson C, Turner J, Juhel JB, Boussarie G, Caley J, Koldewey H, Maire E, Meeuwig J. Remote reefs and seamounts are the last refuges for marine predators across the Indo-Pacific. *PLoS Biology* (Submitted Mar 2019).
- Forrest JAH, **Bouchet PJ**, Barley SC, Meeuwig JJ. Stable patterns in ocean wildlife support the establishment of marine protected areas. *Ecosphere* (Submitted Apr 2019).
- In press** **Bouchet PJ**, Peterson AT, Zurell D, Dormann CF, Schoeman D, Ross RE, Snelgrove P, Sequeira AMM, Whittingham MJ, Wang L, Rapacciuolo G, Oppel S, Mellin C, Lauria V, Krishnakumar PK, Jones AR, Heinänen S, Heikkinen RK, Gregr EJ, Fielding AH, Caley MJ, Barbosa AM, Bamford AJ, Lozano-Montes H, Parnell S, Wenger S, Yates KL. Better model transfers require knowledge of mechanisms. *Trends in Ecology and Evolution*.
- 2019** Przeslawski R, Foster S, Monk J, Barrett N, **Bouchet P**, Carroll A, Langlois T, Lucieer V, Williams J, Bax N. [A suite of field manuals for marine sampling to monitor Australian waters](#). *Frontiers in Marine Science*, 6: 177.  
Impact factor: 2.4 | Altmetric score: 15 | Citations: n/a
- Thompson C, **Bouchet P**, Meeuwig J. [First underwater sighting of Shepherd's beaked whale \(\*Tasmacetus shepherdi\*\)](#). *Marine Biodiversity Records*, 12(6). DOI: 10.1186/s41200-019-0165-6  
Impact factor: 0.99 | Altmetric score: 37 | Citations: n/a
- 2018** **Bouchet P/Yates K**, Caley JM, Mengersen K, Randin C, Parnell S, Fielding AH, Bamford AJ, Ban S, Barbosa AM, Dormann CF, Elith J, Embling CB, Ervin GN, Fisher R, Gould S, Graf RF, Gregr EJ, Halpin P, Heikkinen RK, Heinänen S, Jones AR, Krishnakumar PK, Lauria V, Lozano-Montes H, Mannocci L, Mellin C, Mesgaran MB, Moreno-Amat E, Mormede S, Novaczek E, Oppel S, Ortuño Crespo G, Peterson AT, Rapacciuolo G, Roberts JJ, Ross RE, Scales KL, Schoeman D, Snelgrove P, Sundblad G, Thuiller W, Torres LG, Verbruggen H, Wang L, Wenger S, Whittingham MJ, Zharikov Y, Zurell D, Sequeira AMM. [Outstanding challenges in the transferability of ecological models](#). *Trends in Ecology and Evolution*, 33(10): 790-802.  
Impact factor: 15.94 | Altmetric score: 118 | Citations: 5
- Sequeira A, **Bouchet P**, Yates K, Mengersen K, Caley J. [Transferring biodiversity models for conservation: Opportunities and challenges](#). *Methods in Ecology and Evolution*, 9(5): 1250-1264.  
Impact factor: 6.36 | Altmetric score: 34 | Citations: 8
- 2017** Allen S, Pollock K, **Bouchet P**, Kobryn H, McElligott D, Nicholson K, Smith J, Loneragan N. [Preliminary estimates of the abundance and fidelity of dolphins associating with a demersal trawl fishery](#). *Scientific reports*, 7: art4995. Impact factor: 4.259 | Altmetric score: 192 | Citations: 3
- Bouchet P**, Meeuwig J, Huang Z, Letessier T, Nichol S, Caley J, Watson R. [Continental-scale hotspots of pelagic fish abundance inferred from commercial catch records](#). *Global Ecology and Biogeography*, 26: 1098-1111. Impact factor: 5.958 | Altmetric score: 42 | Citations: 4
- Letessier TB, **Bouchet PJ**, Meeuwig JJ. [Sampling mobile oceanic fishes and sharks: Implications for fisheries and conservation planning](#). *Biological Reviews*, 92(2): 627-646.  
Impact factor: 11.7 | Altmetric score: 41 | Citations: 13
- 2015** **Bouchet PJ**, Meeuwig JJ. [Drifting baited stereo-videography: A novel sampling tool for surveying pelagic wildlife in offshore marine reserves](#). *Ecosphere*, 6: art137.  
Impact factor: 2.67 | Altmetric score: 13 | Citations: 16

**Bouchet PJ**, Meeuwig JJ, Salgado Kent CP, Letessier TBL, Jenner CKS. [Topographic determinants of mobile vertebrate predator hotspots: Current knowledge and future directions](#). *Biological Reviews*, 90(3): 699-728. Impact factor: 11.7 | Altmetric score: 7 | Citations: 38

Parsons ECM, Baulch S, Bechshoft T, Bellazzi G, **Bouchet PJ**, Cosentino AM, Godard-Coding CAJ, Gulland F, Hoffmann-Kuhnt M, Hoyt E, Livermore S, MacLeod CD, Matrai E, Munger L, Ochiai M, Peyman A, Recalde-Salas A, Regnery R, Rojas-Bracho L, Salgado-Kent CP, Slooten E, Wang JY, Wilson SC, Wright AJ, Young S, Zwamborn E, Sutherland WJ. [Key research questions of global importance for cetacean conservation](#). *Endangered Species Research*, 27(2): 113-118.  
Impact factor: 1.325 | Altmetric score: 243 | Citations: 26

Letessier T, **Bouchet P**, Reisser J, Meeuwig J. [Baited videography reveals remote foraging and migration behaviour of sea turtles](#). *Marine Biodiversity*, 45(4): 609-610.  
Impact factor: 1.646 | Altmetric score: 4 | Citations: 4

2013 Letessier TBL, Meeuwig JJ, Gollock M, Groves L, **Bouchet PJ**, Chapuis L, Vianna G, Kemp K, Koldewey HJ. [Assessing pelagic fish populations: The application of demersal techniques to the mid-water environment](#). *Methods in Oceanography*, 8: 41-55.  
Impact factor: 1.9 | Altmetric score: 14 | Citations: 36

2012 Salgado Kent CP, Jenner KCS, Jenner MN, **Bouchet PJ**, Rexstad E. [Southern Hemisphere breeding stock "D" humpback whale population estimates from North West Cape, Western Australia](#). *Journal of Cetacean Research and Management*, 12(1): 29-38.  
Impact factor: 0.8 | Altmetric score: n/a | Citations: 32

## TECHNICAL REPORTS & BOOK CHAPTERS

In prep **Bouchet PJ**, Miller DL, Roberts J, Mannocci L, Harris C, Thomas L. [From here and now to there and then: Practical recommendations for extrapolating cetacean density surface models to novel conditions](#). CREEM Technical report 2109-01, University of St Andrews, 35 p.

2018 **Bouchet P**, Phillips C, Huang Z, Meeuwig J, Foster S, Przeslawski R. [Comparative assessment of pelagic sampling methods used in marine monitoring](#). Report to the National Environmental Science Programme (NESP) Marine Biodiversity Hub, University of Western Australia, 149 p.

**Bouchet P**, Meeuwig J, Huveneers C, Langlois T, Letessier T, Lowry M, Rees M, Santana-Garcon J, Scott M, Taylor M, Thompson C, Vigliola L, Whitmarsh S. [Chapter 6: Marine sampling field manual for pelagic BRUVS \(Baited Remote Underwater Videos\)](#). In: Field Manuals for Marine Sampling to Monitor Australian Waters. National Environmental Science Programme (NESP), pp 105-132.

Langlois T, Williams J, Monk J, **Bouchet P**, Currey L, Goetze J, Harasti D, Huveneers C, Lerodiatonou D, Malcolm H, Whitmarsh S. [Chapter 5: Marine sampling field manual for benthic stereo BRUVS \(Baited Remote Underwater Videos\)](#). In: Field Manuals for Marine Sampling to Monitor Australian Waters. National Environmental Science Programme (NESP), pp 82-104.

**Bouchet P**, Meeuwig J, Erbe C, Salgado-Kent C, Wellard R, Pattiaratchi C. [Bremer Canyon Emerging Priorities Project EP2: Occurrence and distribution of marine wildlife in the Bremer Bay region - Final Report](#). National Environmental Science Programme (NESP) Marine Biodiversity Hub, 32 p.

**Bouchet P**, Wellard R, Erbe C, Meeuwig J. [Aerial visual survey of cetaceans and other megafauna in the Bremer Marine Park and surrounding areas](#). Short communication prepared for the National Environmental Science Programme (NESP), Marine Biodiversity Hub, 5 p.

2017 Miller K, Puotinen M, Przeslawski R, Huang Z, **Bouchet P**, Radford B, Li J, Kool J, Picard K, Thums M, Meeuwig J, Nichol S. [NESP Project D1 Ecosystem understanding to support sustainable use, management and monitoring of marine assets in the North and North-West regions - Final Report 2016](#). Report to the National Environmental Science Programme, Marine Biodiversity Hub. Australian Institute of Marine Science, 146 p.

2016 Meeuwig J, Turner J, **Bouchet P**. [Bremer Canyon Science Report: Workshop held 25 October 2016](#). Report to the National Environmental Science Programme, Marine Biodiversity Hub, 27 p.



- 2015 Przeslawski R, Miller K, Nichol S, **Bouchet P**, Huang Z, Kool J, Radford B, Thums M. [NESP D1: Developing a toolbox of predictive models for the monitoring and management of KEFs and CMRs in the North and North-west regions](#). Scientific workshop report to the National Environmental Science Programme Marine Biodiversity Hub, 23 p.
- Caley J, **Bouchet P**, Kool J, Meeuwig J, Nichol S, Przeslawski R. [Oceanic Shoals Commonwealth Marine Reserve - A guide](#). Brochure produced for the National Environmental Research Programme (NERP), 13 p.
- 2013 Huang Z, Przeslawski R, Kool J, Li J, **Bouchet P**, Nichol S. [Australian marine environmental data: Descriptions and metadata](#). Record 2013/21. Geoscience Australia: Canberra, 214 p.
- Nichol SL, Howard FJF, Kool J, Stowar M, **Bouchet P**, Radke L, Siwabessy J, Przeslawski R, Picard K, Alvarez de Glasby B, Colquhoun J, Letessier T, Heyward A. [Oceanic Shoals Commonwealth Marine Reserve \(Timor Sea\) Biodiversity Survey: GA0339/SOL5650 – Post Survey Report](#). Record 2013/38. Geoscience Australia: Canberra, 112 p.
- 2010 Salgado Kent C, Jenner C, Jenner M, **Bouchet P**. Southern Hemisphere breeding stock “D” humpback whale population estimates from North West Cape, Western Australia. Report to the Australian Marine Mammal Centre, 61 p.
- Jenner C, Jenner M, Salgado Kent C, **Bouchet P**, Rexstad E, Noad M, Dunlop R, Burton C. A comparison of group IV humpback whale population estimates from two key locations along the Western Australian coast. Report to the Australian Marine Mammal Centre, 17 p.

## KEY TEACHING EXPERIENCE

- Carpentries **Certified Instructor**, Software / Data / Library Carpentries.
- 2018-now **Part-Time Lecturer**, University of Portsmouth (UK)
- Co-supervision of several postgraduate students in marine biology (MSc level).
- 2011-13 **Academic Tutor**, University of Western Australia (Australia)
- Tutor and/or demonstrator for several science units (i.e. science communication/literacy, R programming for ecologists) at undergraduate and postgraduate level. Duties included writing and presenting material, conducting and marking examinations, and providing student support in class.
- 2013 **Sessional Academic**, Curtin University of Technology (Australia)
- Supervisor in undergraduate unit on scientific photography. Duties included preparing and running lab practicals, and offering hands-on support for student assessments.
- 2011 **Workshop co-lead**, Murdoch University (Australia)
- Presenter and co-organiser of workshop on ‘Sampling elusive wildlife: Accounting for detectability’ held at Murdoch University in July 2011. Duties included designing workshop content, lecturing, and delivering a practical on the use of the Distance software for the analysis of line transect data.

## ADDITIONAL EXPERIENCE

- 2012-13 **Library officer**, University of Western Australia (Australia)
- 2011 **Administrative assistant**, Vice-Chancellery of the University of Western Australia (Australia)
- 2010 **Marine tour guide and sales assistant**, Rottneest Express (Australia)
- 2010 **Data manager assistant**, Macquarie University (Australia)
- 2009-10 **IT Consultant**, TMF Group (Switzerland)
- 2007-08 **IT Analyst & Reporting Manager Assistant**, Kemnay Services Ltd. (Switzerland)
- 2006 **Research and animal care assistant**, Marine Mammal Research Lab of Oceanopolis (France)
- 2004 **Field volunteer**, Mingan Island Cetacean Study (Quebec)

## HONOURS & AWARDS

- 2017 **Winner**, *Frontiers in Marine Science* Field Work Photography Competition [GBP £450]
- 2016 **Valedictorian**, March PhD Graduation, University of Western Australia  
Watch speech online at: <http://bit.ly/pjbouchet-Valedictorian>
- 2015 **Special commendation**, Graduate Research School Publication Prize, University of Western Australia
- 2016 Allen Award (Recipient), Australian Marine Science Association [GBP £1,500]

## GRANTS & FUNDING

- 2014 Research grant (Co-investigator), Australian Marine Mammal Centre (AMMC) [GBP £25,000]
- 2013 Research grant (Principal investigator), Australian Academy of Science (AAS) [GBP £8,500]  
Student travel grant (Recipient), Society for Marine Mammalogy [GBP £150]
- 2011 PhD studentship & top-up scholarship (Recipient), University of Western Australia [GBP £70,000]

## MENTORING & SUPERVISION

- Masters**
- Stephanie Hollanda** (University of Portsmouth, 2018-2019)  
Thesis - Predictive models of harbour porpoise distribution from platform-of-opportunity data
- Cheyenne Le May** (University of Portsmouth, 2018-2019)  
Thesis - Spatial and temporal trends in river fish and invertebrates communities across an urbanisation gradient
- Alex McLennan** (University of Western Australia, 2018)  
Thesis - Impacts of camera field of view on the abundance, richness and composition of fish assemblages surveyed using baited remote underwater video systems (BRUVS)
- Thelma Paianotis** (University of Western Australia & ENS Paris-Saclay, 2017-2018)  
Thesis - Dynamics of fish schooling behaviour in relation to predator abundance

## CONTRIBUTED PRESENTATIONS

- 2019 **Bouchet P.** Extrapolation in density surface models (DSMs).  
Talk @ DenMod technical meeting, University of St Andrews, UK
- Bouchet P.** Transferring models in ecology and conservation: What, why, how and where to now?  
Invited seminar @ Centre for Ecological and Environmental Modelling, University of St Andrews, UK
- 2018 Sequeira A, **Bouchet P**, Yates K, Mengersen K, Caley J. Transferring biodiversity models for conservation: Opportunities and challenges.  
Talk @ British Ecological Society Conference, Birmingham, UK
- Bouchet P**, Letessier TBL, Caley MJ, Nichol SL, Hemmi JM, Meeuwig JJ. Spatial dimensions of pelagic diversity in a geodiverse offshore marine park.  
Talk @ International Statistical Ecology Conference, St Andrews, UK
- Przeslawski R, Picard K, Nichol S, Radford B, **Bouchet P**. Applying geoscience to biodiversity monitoring: Case studies from an Australian marine park (*PeerJ Preprints*, 6: e26520v1).  
Talk @ 4th World Conference on Marine Biodiversity, Montreal, Canada
- 2017 Thiele D, **Bouchet P**, Waples K, Weisenberger F, Dambimangari Rangers, Uunguu Rangers, Balangarra Rangers, Raudino H. Cross-cultural knowledge, citizen science and expert elicitation inform the predicted distribution of snubfin dolphins in the Kimberley, Western Australia.  
Poster @ 22nd Conference of the Society for Marine Mammalogy, Halifax NS, Canada



**Bouchet P.** Going the distance and beyond when estimating the abundance of a little known cetacean in a proposed marine protected area.

Invited talk @ DenMod workshop, 22nd Conference of the Society for Marine Mammalogy, Halifax NS, Canada

**Bouchet P.** BRUV research in Ascension waters.

Public Talk @ The Saints Club, Ascension Island, UK Overseas Territory

2016

**Bouchet P,** Sequeira A, Peterson E, Mengersen K, Caley J, Yates K. Model transferability: Lessons learnt and ways forward (Symposium & focus group on 'Increasing the utility of predictive models: Understanding model transferability').

Talk @ 4th International Marine Conservation Congress (IMCC4), St John's NL, Canada

**Bouchet P,** Meeuwig J, Huang Z, Letessier T, Nichol S, Caley J, Watson R. Continental-scale hotspots of pelagic fish abundance inferred from commercial catch records.

Talk @ 4th International Marine Conservation Congress (IMCC4), St John's NL, Canada

Letessier T, Mouillot D, **Bouchet P,** Meeuwig J. Human footprint, habitat refuges, and conservation priorities for open ocean vertebrates.

Talk @ 4th International Marine Conservation Congress (IMCC4), St John's NL, Canada

2014

**Bouchet P,** Meeuwig J, Huang Z, Letessier T, Nichol S, Caley J, Watson R. Finding big fish in a big pond: Continental-scale models of pelagic predator hotspots around Western Australia.

Talk @ Biology seminar series, University of WA, Perth, Australia

Friedlander A, Ballesteros K, **Bouchet P.** National Geographic expedition to Rapa Iti.

Public talk @ PEW Charitable Trust, Papeete office, Tahiti, French Polynesia

2013

**Bouchet P,** Salgado-Kent C, Jenner C. Assessing the effects of survey planning on abundance estimates of breeding stock 'D' humpback whales from North West Cape, Western Australia.

Talk @ 20th Conference of the Society for Marine Mammalogy, University of Otago, Dunedin New Zealand

Burton C, Salgado-Kent C, Glencross R, Marley S, Recalde-Salas A, Attard C, **Bouchet P,** Moller L. Southwest Whale Ecology Study (SouWEST): An integrated collaborative project using multiple platforms to investigate the ecology and behaviour of baleen whales in southwestern Australia.

Talk @ 3rd Biennial Southwest Marine Conference, Dunsborough, Australia

Letessier T, **Bouchet P,** Meeuwig J. Large marine reserves and pelagic species: The missing piece in open ocean management.

Talk @ UWA Oceans Institute seminar series, University of Western Australia, Perth, Australia

Letessier T, **Bouchet P,** Meeuwig J. Pelagic stereo-BRUVS - update on recent work.

Talk @ National Environmental Program (NERP) Marine Biodiversity Hub meeting, Perth, Australia

**Bouchet P,** Letessier T, Meeuwig J. Peering into the deep blue: Development and application of a midwater video system to monitor pelagic wildlife.

Talk @ Centre for Marine Science and Technology (CMST) seminar series, Curtin University, Perth, Australia

2012

**Bouchet P,** Meeuwig J. Predictive models of mobile oceanic predator (MOP) hotspots in the Eastern Indian Ocean.

Talk @ National Environmental Program (NERP) Marine Biodiversity Hub annual researchers' meeting, Natural History Museum, Sydney, Australia

2011

**Bouchet P,** Meeuwig J, Salgado-Kent C, Jenner C. Predictive models of mobile oceanic predator (MOP) hotspots in the Eastern Indian Ocean.

Poster @ Australian National Network in Marine Science conference, University of WA, Perth, Australia

**Bouchet P,** Salgado-Kent C, Jenner C. Breeding stock 'D' humpback whale population estimates from North West Cape, Western Australia.

Talk @ Workshop on 'Sampling elusive wildlife species: Accounting for detection probability', Murdoch University, Perth, Australia

Salgado Kent C, Marley S, **Bouchet P,** Nagy J. A theodolite tracking study of baleen whales in Geographe Bay, Western Australia.

Talk @ 48th Annual Australian Marine Science Association (AMSA) Conference, Fremantle, Australia.

- 2010 **Bouchet P**, Salgado-Kent C, Jenner C. Visibility bias in aerial surveys of cetaceans: An application to breeding stock 'D' humpback whales.  
Talk @ Centre for Marine Science and Technology (CMST) seminar series, Curtin University, Perth, Australia
- Bouchet P**, Jenner C. Modelling strategies for studying blue whales in the Sub-Tropical Convergence.  
Talk @ Southern Hemisphere Blue Whale Workshop, University of Adelaide, Adelaide, Australia

## TECHNICAL TRAINING

- 2019 Marine Mammal Medic and Rescue (British Divers Marine Life Rescue)  
@ Portsmouth, UK
- 2018 Combining different data types in a single model (Taught by Dr. Nick Golding, Dr. Nick Isaac)  
@ University of St Andrews, UK
- Hierarchical modelling of species communities (Taught by Dr. Otso Ovaskainen)  
@ University of St Andrews, UK
- Statistical models for animal movement (Taught by Dr. Mevin Hooten, Dr. Brett McClintock)  
@ University of St Andrews, UK
- 2017 Bayesian capture-recapture models (Taught by Dr. Robert Rankin)  
@ Dalhousie University, Halifax, Canada
- Analysis of data from high-resolution animal-borne tags (Taught by Dr. Stacy DeRuiter)  
@ Dalhousie University, Halifax, Canada
- Bayesian modelling using *inlabru* (Taught by Dr. Janine Illian, Prof. David Borchers, Prof. Finn Lindgren)  
@ Centre for Research into Ecological and Environmental Modelling, St Andrews, Scotland, UK
- 2016 Spatial analysis of ecological data (Taught by Prof. Jason Matthiopoulos)  
@ Millport Field Station, Isle of Cumbrae, UK
- Research Bazaar (ResBaz)  
@ Murdoch University, Perth, Australia
- 2015 Advanced spatial analysis (Taught by Dr. Jennifer Miller)  
@ University of Western Australia, Perth, Australia
- 2014 Bayesian modelling (Taught by Prof. Kerrie Mengersen)  
@ University of Western Australia, Perth, Australia
- 2013 Spatial models for distance sampling data (Taught by Dr. Jason Roberts)  
@ University of Otago, Dunedin, New Zealand
- 2012 Multivariate statistics using PRIMER (Taught by Dr. Bob Clarke, Dr. Marti Anderson)  
@ University of Western Australia, Perth, Australia
- 2011 Bayesian modelling (Taught by Prof. Kerrie Mengersen)  
@ University of Western Australia, Perth, Australia
- 2010 Qualitative modeling workshop (Taught by Dr. Jeff Dambacher)  
@ Murdoch University, Perth, Australia
- 2008 Advanced Distance Sampling (Taught by Prof. Len Thomas, Prof. David Borchers)  
@ Centre for Research into Ecological & Environmental Modelling, University of St Andrews, UK

## FIELDWORK EXPERIENCE

- 2017 Pelagic baited camera surveys of the Ascension Island EEZ (UK Overseas Territory)  
Ascension Island Government, 2 weeks
- 2016 Recovery of acoustic logger equipment in Roebuck Bay, northern Australia  
Curtin University of Technology, 3 days
- 2014 Pelagic baited camera surveys around the islands of Rapa and Marotiri, French Polynesia  
National Geographic Society (Pristine Seas Programme), 2 weeks

Theodolite tracking of Indo-Pacific bottlenose dolphins in Fremantle Inner Harbour, Australia  
Curtin University of Technology, 1 week

2013 Pelagic baited camera surveys of the Perth submarine canyon, south-western Australia  
Australian Academy of Science & University of Western Australia, 5 days

2012 Biodiversity survey of the Oceanic Shoals Australian Marine Park, northern Australia (pelagic and benthic videography, sled sampling, visual observations, sediment sampling, water profiling)  
University of Western Australia & partners, 1 month

Acoustic tagging of reef sharks at the Rowley Shoals, north-western Australia  
Australian Institute of Marine Science, 1 week

2010-12 Land-based theodolite tracking of cetaceans in Geographe Bay, south-western Australia  
Southwest Whale Ecology Study, 9 weeks

2007-10 Cetacean and marine biodiversity research incl. seabirds (satellite tagging, visual line/strip transects, biopsy sampling, photo-identification, biophysical measurements, acoustic logger deployments/retrievals) along the West Australian coast  
Centre for Whale Research WA Inc., 15 months

2008 Vessel-based line transect surveys of coastal dolphins in Roebuck Bay, northern Western Australia  
World Wildlife Fund Australia, 5 days

Aerial survey of humpback whales in the Kimberley region of northern Western Australia  
Centre for Whale Research WA Inc., 1 day

2006 Daily visual monitoring of grey and harbour haul-outs, Normandy, France  
Association Picardie Nature, 4 weeks

Land-based observations of grey seal responses to vessel traffic, Brittany, France  
Marine Mammal Research Lab of Oceanopolis, 4 weeks

2004 Vessel-based surveys and biopsy sampling of cetaceans, Gulf of St Lawrence, Canada  
Mingan Island Cetacean Study, 2 weeks

## MEDIA & IMPACT

ImpactStory Global reach: Research shared in 33 countries (top 25%)  
Greatest hit: Top publication saved and shared 691 times (top 1%)  
Open License: 30% of research has a CC-BY, CC0, or public domain license  
Global South: 10% of people who saved and shared my research

Other See my webpage at <https://pjbouchet.github.io/media/> for more information and highlights.

## ACADEMIC SERVICE

Editor **Associate Editor**, Remote Sensing in Ecology and Conservation [2018-now]  
**Review Editor**, Frontiers in Marine Science (Marine Megafauna section) [2017-now]

Reviewer British Ecological Society (BES) Grant Review College [2018-now]  
Nature Communications, Proceedings of the Royal Society B, Methods in Ecology and Evolution, Frontiers in Marine Science, Diversity and Distributions, Marine Environmental Research, Journal of the Marine Biological Association of the United Kingdom, Journal of Wildlife Management.  
xSee my Publons profile at [bit.ly/pjbouchet-Publons](http://bit.ly/pjbouchet-Publons).

Societies British Ecological Society (BES) [Member, 2017-now]  
BES Quantitative Ecology Special Interest Group [Member & Web Coordinator, 2018-now]  
Society for Marine Mammalogy (SMM) [Member, 2009-now]  
Australian Marine Sciences Association (AMSA) [Member, 2016-2019]  
Ecological Society of Australia (ESA) [Member, 2017-2018]  
Society for Conservation Biology [Member, 2016-2018]

## REFERENCES

### **Dr. David Miller**

*Research Fellow*

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### **Dr. James Waggitt**

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