Philippine **CHAMBAULT**

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Presentation

I am a marine scientist with a broad interest in animal movement and ocean dynamics. I have expertise in quantitative analyses using diverse data sets (*e.g.*, time series, spatial and environmental data) to examine the movement ecology of marine megafauna species in relation to oceanographic processes and how they drive species distribution and diving behaviour.

Education

DEPE - IPHC - CNRS - University of Strasbourg   *Strasbourg - FRANCE*

PhD in Quantitative Ecology and Oceanography   *Jun 2014-Jun 2017*

- Habitat use of the French Guianese sea turtles using satellite tracking and oceanographic data

University of Pierre et Marie Curie (UPMC)   *Paris - FRANCE*

MSc in Physical Oceanography and Marine Environment   *Sep 2011-Jun 2013*

- Conservation and modeling of marine ecosystems

Experiences

Greenland Institute of Natural Resources, University of California Santa Cruz   *USA - DENMARK*

Marie Skłodowska-Curie Fellow: Physiological and behavioral responses of Arctic whales to climate change   *Oct 2021-Present*

- Thermal biology, Movement ecology, Acoustics, Species Distribution Modeling (packages: *ncdf4, data.table, ggplot2*)

Aquarium La Rochelle   *La Rochelle - FRANCE*

Post-doctoral Researcher: Thermal ecology of stranded juvenile loggerhead turtles   *Jan 2021-Jul 2021*

- Satellite tracking, Habitat use (packages : *tidyverse, performance, ncdf4, rWind, cvTools, PresenceAbsence, mgcv*)

Greenland Institute of Natural Resources   *Copenhagen - DENMARK*

Post-doctoral Researcher: Projections of climate change on polar species   *May 2020-Dec 2020*

- Machine learning: classification (Random Forest, KNN), regression (logistic, additive), climate models (CMIP6)
- Packages : *caret, CAST, gstat, ncdf4, raster, dplyr, doParallel, foreach*

IFREMER - MARBEC   *Sète - FRANCE*

Post-doctoral Researcher: Habitat use of juvenile green turtles in the Indian Ocean   *Nov 2018-Apr 2020*

- Habitat modeling: logistic models, pseudo-absences, SDMs (packages: *adehabitatHR, adehabitatHS, rgdal*)

University of the Azores - IMAR   *Azores - PORTUGAL*

Post-doctoral Researcher: Interactions between marine litter and juvenile loggerhead turtles   *Apr 2018-Oct 2018*

- Spatial modeling: physical oceanography, mixed models, drifter data

Greenland Institute of Natural Resources   *Paris - FRANCE*

Post-doctoral Researcher: Habitat affinities of satellite tracked bowhead whales   *Oct 2017-Apr 2018*

- Habitat modeling: GAMs, GLMs, Copernicus database (packages: *mgcv, ncdf4, glmer*)

Institut Pluridisciplinaire Hubert Curien - CNRS   *Strasbourg - FRANCE*

PhD student: Influence of oceanographic structures on sea turtles movements in the North Atlantic   *Jun 2014-Jun 2017*

- Habitat use: residence time, state space model, kernel density, diving behaviour

Centre d'Études Biologiques de Chizé - CNRS   *Beauvoir-sur-Niort - FRANCE*

Research assistant: Habitat use of the bottlenose dolphin of the Normand-breton Gulf   *Feb 2013-Jun 2013*

- Geostatistics & habitat modeling: variogram, kriging, GAMs

Publications

23 ARTICLES, 17 AS 1st AUTHOR, 2.6 ARTICLES/YEAR, CITATIONS: 571

2024 — P. Lelong, [...], **P. Chambault**, et al. Demography of endangered juvenile green turtles in face of environmental changes: 10 years of capture-mark-recapture efforts in Martinique. 291, 110471. (IF: 5.9 , cites: 0). j.biocon.2024.110471 — *Biol. Conserv.*

2024 — **P. Chambault**, et al. The nightscape of the Arctic winter shapes the diving behavior of a marine predator. (IF: 4.6, cites: 0). 10.1038/s41598-024-53953-w — *Sci. Rep.*

2023 — **P. Chambault**, et al. Extremely low seasonal prey capture efficiency in a deep diving whale, the narwhal. (IF: 3.812, cites: 4). doi.org/10.1098/rsbl.2022.0423 — *Bio. Lett.*

2023 — Heide-Jørgensent, **P. Chambault**, et al. A regime shift in the Southeast Greenland marine ecosystem. 29(3). 668-685. (IF: 10.863, cites: 12). doi.org/10.1111/gcb.16494 — *Glob. Chang. Bio.*

2022 — **P. Chambault**, et al. Future seasonal changes in habitat for Arctic whales during predicted ocean warming. 8(29). (IF: 14.136, cites: 22). 10.1126/sciadv.abn242 — *Sci. Adv.*

2021 — **P. Chambault**, et al. Ecological trap or favorable habitat? First evidence that immature sea turtles may survive at their range-limits in the North-East Atlantic. (IF: 4.435, cites: 6). doi.org/10.3389/fmars.2021.736604 — *Front. Mar. Sci.*

2021 — **P. Chambault**, et al. A methodological framework to predict the individual and population-level distributions from tracking data. 11(3). 1432-1445. (IF: 6.5, cites: 12). doi.org/10.1111/ecog.05436 — *Ecography*

2021 — **P. Chambault**, et al. Predicting seasonal movements and distribution of the sperm whale using machine learning algorithms. 44(5). 766-777. (IF: 3.17, cites: 25). doi.org/10.1002/ece3.7154 — *Ecol. Evol.*

2020 — **P. Chambault**, et al. The impact of rising sea temperatures on an Arctic top predator, the narwhal 10(1). 1-10. (IF: 4.996, cites: 35). doi.org/10.1038/s41598-020-75658-6 — *Sci. Rep.*

2020 — F. Siegwalt, [...], **P. Chambault**, et al. High site fidelity of immature green turtles (*Chelonia mydas*) to their foraging grounds revealed by satellite tracking and capture-mark-recapture and consequences for key marine conservation areas. (IF: 5.99, cites: 33). doi.org/10.1016/j.biocon.2020.108742 — *Biol. Conserv.*

2020 — **P. Chambault**, et al. Contrasted habitats and individual plasticity drive the fine scale movements of juvenile green turtles in coastal ecosystems. 8(1). 1-15. (IF: 3.6, cites: 24). 10.1186/s40462-019-0184-2 — *Mov. Eco.*

2019 — M. Bonola, [...], **P. Chambault**, et al. Fine scale geographic residence and annual primary production drive body condition of wild immature green turtles (*Chelonia mydas*) in Martinique Island (Lesser Antilles). 8(12). (IF: 2.33, cites: 8). 10.1242/bio.048058 — *Bio. Open*

2019 — **P. Chambault**, et al. Swirling in the ocean: immature loggerhead turtles seasonally target old anticyclonic eddies at the fringe of the North Atlantic gyre. 175. 345-358. (IF: 3.95, cites: 23). 10.1016/j.pocean.2019.05.005 — *Prog. Oceanogr.*

2018 — **P. Chambault**, et al. Distribution and composition of floating litter off the Azores archipelago and Madeira (NE Atlantic) using opportunistic surveys. 141. 225-232. (IF: 3.13, cites: 34). 10.1016/j.marenvres.2018.09.015 — *Mar. Environ. Res.*

2018 — **P. Chambault**, et al. Connecting paths between juvenile and adult habitats in the Atlantic green turtle using genetics and satellite tracking. 8(24). 12790-12802. (IF: 3.17, cites: 30). doi.org/10.1002/ece3.4708 — *Ecol. Evol.*

2018 — **P. Chambault**, et al. Sea surface temperature predicts the movements of an Arctic cetacean: the bowhead whale. 8(1). 9658. (IF: 4.996, cites: 78). 10.1038/s41598-018-27966-1 — *Sci. Rep.*

2018 — M. Nivière, **P. Chambault**, et al. Identification of marine key areas across the Caribbean to ensure the conservation of the critically endangered hawksbill turtle. 223. 170-180. (IF: 5.99, cites: 31). 10.1016/j.biocon.2018.05.002 — *Biol. Conserv.*

2017 — **P. Chambault**, et al. The Gulf Stream frontal system: A key oceanographic feature in the habitat selection of the leatherback turtle? 123. 35-47. (IF: 2.955, cites: 27). 10.1016/j.dsr.2017.03.003 — *Deep. Sea Res. I*

2016 — **P. Chambault**, et al. Habitat use and diving behaviour of gravid olive ridley sea turtles under riverine conditions in French Guiana. 165. 115-123. (IF: 2.96, cites: 8). 10.1016/j.jmarsys.2016.10.005 — *J. Mar. Syst.*

2016 — **P. Chambault**, et al. Inter-nesting behavioral adjustments of green turtles to an estuarine habitat in French Guiana. 555. 235-248. (IF: 2.915, cites: 28). 10.3354/meps11813 — *Mar. Ecol. Prog. Ser.*

2016 — **P. Chambault**, et al. The influence of oceanographic features on the foraging behavior of the olive ridley sea turtle *Lepidochelys olivacea* along the Guiana coast. 142. 58-71. (IF: 3.95, cites: 48). 10.1016/j.pocean.2016.01.006 — *Progr. Oceanogr.*

2015 — **P. Chambault**, et al. Dispersal and diving adjustments of the green turtle *Chelonia mydas* in response to dynamic environmental conditions during post-nesting migration. 10(9). e0137340. (IF: 3.240, cites: 24). 10.1371/journal.pone.0137340 — *PloS one*

2015 — M. Baudouin, B. de Thoisy, **P. Chambault**, et al. Identification of key marine areas for conservation based on satellite tracking of post-nesting migrating green turtles (*Chelonia mydas*). 184. 36-41. (IF: 5.99, cites: 59). 10.1016/j.biocon.2014.12.021 — *Biol. Conserv.*

Conferences

Mar. 2024	**P. Chambault**, The nightscape of the Arctic winter shapes the diving behavior of a marine predator. BLS8th International Biologging Society.	*Poster-JAPAN*
Mar. 2022	**P. Chambault,** Ecological trap or favorable habitat? First evidence that immature sea turtles may survive at their range-limits in the North-East Atlantic. International Sea Turtle Symposium.	*Talk-Virtual*
Dec. 2021	**P. Chambault**, Narwhals in a sauna. NAMMCO Working Group on Narwhal in West Greenland (invited speaker).	*Talk-CANADA*
Oct. 2021	**P. Chambault**, Arctic whales in warming waters: demographic and behavioural consequences? BLS7th International Biologging Society (invited speaker).	*Plenary-Virtual*
Dec. 2019	**P. Chambault**, Sea surface temperature drives narwhals' movements in the Arctic. World Marine Marine Mammal Conference.	*Oral-SPAIN*
Nov. 2018	**P. Chambault,** Argos and genetics reveal connecting paths between juvenile and adult habitats in green turtles. Argos conference. Collecte Localisation Satellite.	*Oral-FRANCE*
Oct. 2016	**P. Chambault**, Distribution and diving behavior of the French Guianese sea turtles satellite tracked via Argos. Argos conference. Collecte Localisation Satellite.	*Oral-FRANCE*
Mar. 2016	**P. Chambault**, The influence of oceanographic features on the foraging behavior of the olive ridley sea turtle *Lepidochelys olivacea* along the Guiana coast. 36th Annual Sea turtle Symposium.	*Oral-PERU*
Mar. 2016	**P. Chambault**, Developmental habitat and migratory pathways: identifying key areas to protect future breeding green turtles across the Caribbean. 36th Annual Sea turtle Symposium.	*Poster-PERU*
May. 2015	**P. Chambault**, Dispersal and diving adjustments of green turtles in response to dynamic environmental conditions during post-nesting migration. 11th Ecology & Behaviour meeting.	*Oral-FRANCE*
Apr. 2015	**P. Chambault**, Post-nesting migration of green turtles to their foraging grounds: Dispersal and diving adjustments in response to dynamic environmental conditions. 35th Annual Sea turtle Symposium.	*Oral-TURKEY*
Apr. 2015	**P. Chambault**, Migration over the Guyana continental shelf: distribution and diving behavior in relation to mesoscale features. 35th Annual Sea turtle Symposium.	*Poster-TURKEY*

Awards & Honours

2021	**Marie Sklodowska-Curie grant**, Global fellowship of 3 years, €289,000	*DENMARK-USA*
2018	**Young researchers award**, Foundation for the Research on Biodiversity (FRB)	*FRANCE*
2016	**Finalist - 1st place**, Regional final of the "3 minutes thesis" (3MT®)	*FRANCE*
2016	**Finalist - 1st place**, Best poster at the 36th International Sea Turtle Symposium	*PERU*
2016	**Finalist**, Travel grant for the 36th International Sea Turtle Symposium	*PERU*

Skills

Programming	R, R Markdown, Quarto, LaTeX, ArcGIS
Writing	Grant applications, scientific papers (23 published), reporting
Communication	Lectures, interviews, plenary at conferences, finalist of the 3 minute thesis contest
Language	French (native), English (fluent, TOEFL), Spanish & Portuguese (beginner))

Teaching & Supervising

PhD students	2
MSc students	8
Lectures	R lessons on data wrangling (2017), R lessons on spatial data (May 2023, UCSC)

Fieldwork Experiences

Aerial survey for abundnace estimates of cetaceans
GINR

GREENLAND
Au-Sep 2024

- Species identification and counting of whales and dolphins from a Twin Otter aircraft over Greenland.

Thermal biology of captive whales and dolphins
UCSC & Georgia Aquarium

USA
Apr 2022-Nov 2023

- Tag development, tag assembling, experimental design, data collection from bottlenose dolphins and beluga whales.

Tagging of bowhead whales
GINR

GREENLAND
May 2022-May 2023

- Bowhead whale tagging from boats in Qeqertarsuaq (West Greenland).

Tagging of harbour porpoises
GINR

GREENLAND
July 2022

- Harbour porpoises capture using nets and tagging in Maniitsoq (Southwest Greenland).

Tagging of juvenile green turtles
DEPE-IPHC

MARTINIQUE
Jun. and Oct. 2016

- Turtle capture at-sea, measurements (length, width and body mass), tagging (flipper and satellite tags).

Tagging of adult female sea turtles
DEPE-IPHC

FRENCH GUIANA
Jun. 2016

- Nocturnal beach patrols (7h duration), measurements (length, width), eggs counting.

Photo-identification of bottlenose dolphins
Murdoch University

WESTERN AUSTRALIA
Apr-Jun. 2012

- Boat surveys, photographs of dorsal fins.

References

Philippe Gaspar
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OCEANOGRAPHER
FRANCE

- Mercator Ocean International, CLS

Mads Peter Heide-Jørgensen
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PROFESSOR
DENMARK

- Greenland Institute of Natural Resources, Copenhagen, Denmark

Terrie Williams
tmwillia@ucsc.edu

PROFESSOR
UNITED STATES of AMERICA

- University of Canifornia Santa Cruz, Santa Cruz

Extracurricular Activities

Art Wildlife photography, drawing, painting (alcohol inks)

Water Scuba diving (PADI Advanced Open Water and CMAS level II, 40 dives), snorkelling

Indoor Vinyasa yoga (twice a week), bouldering

Outdoor Skiing (since I am 4 years old!), Horse riding (dressage and jumping for 12 years, 8 years in competition), hiking, travelling