



## PROFILE

I'm a molecular ecologist with wide-ranging interests in pathogens, microbiomes, and the use of genomics and bioinformatics to understand them in relation to host and ecosystem health. I have diverse experience in research, teaching and consulting, and a drive to improve outcomes for the natural world in the face of significant challenges.

## CONTACT

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## HOBBIES

Wildlife photography  
Tramping  
Skiing  
Bouldering  
SCUBA diving

# PHOEBE CHAPMAN

Research Fellow and Molecular Ecologist

## EDUCATION

**The University of Queensland 2017**

Doctor of Philosophy (PhD) - Diversity, impacts and diagnosis of pathogenic parasites in sea turtles from Queensland, Australia

**Curtin University 2017**

Graduate Certificate with Distinction - Geographic Information Science

**The University of Queensland 2004**

Bachelor of Science (Hons) – Zoology and Marine Biology

## WORK EXPERIENCE

**Postdoctoral Research Fellow****University of Otago - Department of Marine Science**

March 2024 - Present

Genomics-based research on kelp, microbiome, and parasitology/diagnostics projects

**Teaching Fellow****University of Otago – Department of Marine Science**

February 2024 - Present

MARI301 Marine Ecology – content development, admin, and lecturing

**Postdoctoral Research Fellow****University of Otago - Department of Zoology**

August 2020 – March 2024

Primary research fellow on RSNZ Marsden funded project investigating the role of microbes in *Xenopus laevis* tadpole tail regeneration

**Senior Ecologist****JWA Ecological Consultants**

2016 - 2020

Field surveys of flora and fauna, monitoring, management, rehabilitation, impact assessment and reporting spanning a range of projects and development types in eastern Australia

**Research Scholar and Teaching Assistant****The University of Queensland - School of Veterinary Science**

2012 - 2017

PhD scholar and concurrent teaching assistant contributing to undergraduate teaching in the parasitology and One Health components of the Bachelor of Veterinary Science degree

**Senior Ecologist****JWA Ecological Consultants**

2007 - 2012

**Research and Teaching Assistant****The University of Queensland - Department of Integrative Biology**

2004 - 2005

Aquatic field surveys, data analysis and reporting. Concurrent teaching assistant in animal biology, marine ecology, and fisheries science.

## AWARDS, GRANTS AND SCHOLARSHIPS

**2022 & 2023** New Zealand Performance Based Research Fund (PBRF) NZD \$2500/year allocation

**2017** Letter of Commendation (semester average > 90%) – Curtin University Dept. Spatial Sciences

**2016** Uni of Queensland School of Veterinary Science Paper of the Week (three occasions)

**2015** Best Oral Presentation (Wildlife theme) - Uni of Queensland School of Veterinary Science Research Conference (AUD \$500 prize)

**2015** People's Choice Award - 3 Minute Thesis School of Veterinary Science Finals

**2015** Uni of Queensland Advantage Sponsorship Grant (AUD \$3,000) (as part of Veterinary Science Postgraduate Association Committee)

**2014** Uni of Queensland Graduate School International Travel Award (AUD \$3,855)

**2012 - 2016** Australian Postgraduate Award Scholarship (approx. AUD \$90,000)

**2002** Dean's Commendation for High Achievement – University of Queensland Science Faculty

## OTHER QUALIFICATIONS AND TRAINING

- Quantitative Genetics short course – Genetics Otago (March 13-16, 2023)
- Strategies and Techniques for Analysing Microbial Population Structures – Marine Biological Laboratory, Woods Hole, MA, USA (July – August 2022)
- Regression Methods in R - Biostatistics Centre, University of Otago (Feb 2022)
- Bioinformatics Spring School - Otago Carpentries & Genomics Otago (Oct 2021)
- R Programming Workshops - University of Queensland (2014, 2015)
- Natural History Illustration certificate – University of Newcastle (EdX - 2017)
- PADI Rescue Diver (Nitrox and Deep Certified - 40 m)
- Pony Club Association of Queensland Level C Instructor
- Wildlife Handling and First Aid (Wildcare Australia)
- Queensland Blue Card (Working with Children Check)
- Queensland White Card (Construction Site Safety)
- Queensland Recreational Marine Driver license (Boat) and Personal Watercraft license (Jet ski)
- Queensland Marine Radio VHF/MF/HF Operators Certificate of Proficiency
- Queensland Driver License - C Class manual (car) and New Zealand full driver licence (car)

## SERVICE AND OUTREACH

**2025** **Scientist – BLAKE Expedition** March 2025, I had the opportunity to travel on the HMNZ Canterbury to the sub-Antarctic Campbell and Auckland Islands. My role as an expedition scientist was not just to collect data, but to work with student and teacher expeditioners from around the country to inspire a sense of kaitiakitanga (environmental guardianship).

**2025** **Co-leader** Genetics Otago eDNA Hub

**2022 - 2024** **Administrator** Department of Zoology Twitter account, University of Otago (@zoology\_otago)

**2022** **Panel Member** Mason and Fairlea Prizes for best postgraduate paper in 2021 (Department of Zoology, University of Otago)

**2019** **Editorial Board - Review Editor** Frontiers in Veterinary Science (Zoological Medicine)

**2017 - 2019** **Administrator** School of Veterinary Science VET-MARTI (Veterinary Marine Research, Training and Investigation) Facebook page

**2018 - 2019** **Expert Panel Member** Confirmation and Mid-Candidature Milestone Reviews of PhD student Christabel Hannon

**2016 - 2024** **Journal Peer Reviewer** Various international peer-reviewed journals

**2015** **School academic recruitment selection panel Postgraduate representative** School of Veterinary Science, University of Queensland

**2015 - 2016** **Secretary - Veterinary Science Postgraduate Association (VeSPA)** Various roles including planning committees for the Inaugural School of Vet Science Research Conference and the Postgraduate Writing Retreat; Funding applications; Liaison and point of contact for school admin, staff and students

## STUDENT SUPERVISION

**2022** **Campbell Nicholas** (BSc Honours) Does TLR2 play a role in regeneration of *Xenopus laevis* tails by binding bacterial lipopolysaccharides?

**2017** **Ida Ayu Dian Kusuma Dewi** (MVSc) Detection of spirorchiid ova in blood samples from the green sea turtle (*Chelonia mydas*) by realtime polymerase chain reaction

**2014** **Kristen Nielson** (BVSc 5th year research) Molecular identification of spirorchiid parasites and their potential hosts and pathological effects on Hawaiian and Queensland green sea turtles (*Chelonia mydas*)

## PEER REVIEWED PUBLICATIONS

Low Z., Greay T.L., Abdullah S., **Chapman P.A.**, Gonzalez-Astudillo V. (2025). Renal myxosporidiosis by an unknown Bivalvulidan myxozoan parasite in Murray River turtles (*Emydura macquarii*) in Australia. International Journal for Parasitology: Parasites and Wildlife 101061

**Chapman P.A.**, Hudson D.T., Morgan X.C., Beck C.W. (2024). The role of family and environment in determining the skin microbiome of captive aquatic frogs, *Xenopus laevis*. FEMS Microbiology Ecology 100(11): fiae131

Panthi, S., **Chapman, P.A.**, Szyszka, P., & Beck, C.W. (2023). Characterisation and automated quantification of induced seizure-related behaviours in *Xenopus laevis* tadpoles. Journal of Neurochemistry 168(12): 4014-4024

**Chapman, P.A.**, Gilbert, C.B., Devine, T.J., Hudson, D.T., Ward, J., Morgan, X.C. & Beck C.W. (2022). Manipulating the microbiome alters regenerative outcomes in *Xenopus laevis* tadpoles via lipopolysaccharide signalling. Wound Repair and Regeneration 30(6): 636-651

Hudson, D. T., **Chapman, P.A.**, Day, R.C., Morgan, X.C. & Beck C.W. (2021). Complete genome sequences of *Kinneretia* sp. XES5, *Shinella* sp. XGS7, and *Vogesella* sp. XCS3, isolated from *Xenopus laevis* skin. Microbiology Resource Announcements 10(50): e0105021

Cribb, T.H., **Chapman, P.A.**, Cutmore S.C., Huston, D.C. (2020). Pseudocephaloid cercariae (Platyhelminthes: Trematoda) from gastropods of the Queensland coast, Australia. Journal of Helminthology 94: e105

Ban de Gouvea Pedroso, S., Phalen, D.N., Terkildsen, M., Blyde, D., March, D.T., Gordon, A.N., **Chapman, P.A.**, Mills, P.C. et al. (2020). Coccidiosis in green turtles (*Chelonia mydas*) in Australia: pathogenesis, spatial and temporal distribution and climate-related determinants of disease outbreaks. Journal of Wildlife Disease 56(2): 359-371

Stacy, B.A., **Chapman, P.A.**, Stockdale-Walden, H., Work, T.M., Dagenais J., Foley, A.M., Wideroff, M., Wellehan Jr, J.F.X. et al. (2019). Caryospora-like coccidia infecting green turtles (*Chelonia mydas*): an emerging disease with evidence of interoceanic dissemination. Frontiers in Veterinary Science 6: 372

**Chapman, P.A.**, Cribb, T.H., Flint, M., Traub, R., Blair, D., Kyaw-Tanner, M., Mills, P.C. (2019). Spirorchiidiasis in marine turtles: the current state of knowledge. Diseases of Aquatic Organisms 133(3): 217-245

Cribb, T.H., Cutmore, S.C., Stacy, B.A., Crespo-Picazo, J.L., **Chapman, P.A.**, García-Párraga, D. (2017). Elucidation of the first definitively identified life cycle for a marine turtle blood fluke (Trematoda: Spirorchidae) enables informed control. International Journal for Parasitology 47(1): 61-67

**Chapman, P.A.**, Owen, H., Traub, R., Flint, M., Soares Magalhaes, R.J., Kyaw-Tanner, M.T., Cribb, T.H., Mills P.C. (2017). Spirorchiid infection in green sea turtles (*Chelonia mydas*) in Queensland, Australia: a molecular investigation of epidemiology and pathology. International Journal for Parasitology: Parasites and Wildlife 6: 39-47.

Stacy, B.A., **Chapman, P.A.**, Foley, A.M., Greiner, E.C., Herbst, L.H., Bolten, A.B., Klein, P.A., Manire, C.A., Jacobson, E.R. (2017). Evidence of diversity, site and host specificity of sea turtle blood flukes (Digenea: Schistosomatidae: Spirorchidae): a molecular prospecting study. Journal of Parasitology 103(6): 756-767

Barton, D.P., **Chapman, P.A.**, Groom, R.A. (2016). Report of the presence of *Hapalotrema synorchis* and *H. postorchis* (Digenea: Spirorchidae) in marine turtles (Reptilia: Cheloniidae) in Northern Territory waters. Northern Territory Naturalist 27: 78-83

**Chapman, P.A.**, Traub, R., Kyaw-Tanner, M.T., Flint, M., Owen, H., Cribb, T.H., Mills P.C. (2016). Terminal restriction fragment length polymorphism for the identification of spirorchiid ova in tissues from the green sea turtle, *Chelonia mydas*. PLoS One 11(8): e0162114

Gillett, A., Ploeg, R., O'Donoghue, P., **Chapman, P.A.**, Webb, R., Flint, M., Mills P.C. (2016). Ultrastructural and molecular characterisation of an *Heterosporid*-like microsporidian in Australian sea snakes (Hydrophiinae). PLoS One 11(3): e0150724

**Chapman, P.A.**, Owen, H., Flint, M., Traub, R.J., Cribb, T.H., Mills P.C. (2016). Molecular characterization of coccidia associated with an epizootic in green sea turtles (*Chelonia mydas*) in south east Queensland, Australia. PLoS One 11(2): e0149962

**Chapman, P.A.**, Cribb, T., Blair, D., Traub, R., Kyaw-Tanner, M., Flint, M., Mills, P.C. (2015). Molecular analysis of the genera *Hapalotrema* and *Learedius* (Digenea: Spirorchidae) reveals potential cryptic species, with comments on the validity of the genus *Learedius*. Systematic Parasitology 90: 67-79

**Chapman, P.** and Warburton, K. (2006). Post-flood movements and population connectivity in gambusia (*Gambusia holbrooki*). Ecology of Freshwater Fish 15 (4): 357 – 365



## NON-REFEREED ARTICLES AND REPORTS

Warburton, K. and **Chapman, P.** (2005). Fish and habitat surveys of Brisbane waterways 2000 – 2005. A report to Brisbane City Council.

**Chapman, P.** and Brooks, R. (2004). Rainbow rehabilitation: recreating waterways for native fishes. Wildlife Australia 41(2): 10-11

## CONFERENCE PARTICIPATION

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**2024** Chapman, P.A. and Fraser, C.I. Scientific Committee for Antarctic Research XI<sup>th</sup> Open Science Conference – Pucon, Chile. *Investigating the dynamics of kelp-associated bacterial microbiomes in Antarctic and sub-Antarctic environments.* **Oral presentation**

**2019** Cribb, T.H., **Chapman, P.A.**, Corner, R.D., Cutmore, S.C. Turtle Health and Rehabilitation Symposium – Gold Coast, AU. *Spirorchiid flukes in marine turtles – how are they transmitted?* **Oral presentation**

**2016** Cribb, T.H., Cutmore, S.C., Stacy, B.A., Crespo-Picazo, J.L., **Chapman, P.A.**, García-Párraga, D. 19th International Congress for Tropical Medicine and Malaria (inc. the Australian Society for Parasitology Annual Conference) – Brisbane, AU. *A lifecycle for a pathogenic marine turtle spirorchiid trematode.* **Oral presentation**

**2016** **Chapman, P.A.**, Owen, H., Traub, R., Flint, M., Soares Magalhaes, R.J., Kyaw-Tanner, M.T., Cribb, T.H., Mills P.C. 19th International Congress for Tropical Medicine and Malaria (incorporating the Australian Society for Parasitology Annual Conference) – Brisbane, AU. *Terminal restriction fragment length polymorphism for identification of spirorchiid flukes in green sea turtle tissues: Application for investigations in disease epidemiology and pathology.* **Poster presentation**

**2016** **Chapman, P.A.**, Owen, H., Flint, M., Traub, R.J., Cribb, T.H., Mills P.C. 19<sup>th</sup> International Congress for Tropical Medicine and Malaria (incorporating the Australian Society for Parasitology Annual Conference) – Brisbane, AU. *Coccidiosis causing mass mortality of wild green sea turtles in south east Queensland, Australia: Molecular investigations of an emerging disease.* **Oral presentation**

**2016** **Session chair – Aquatic parasitology stream** - 19<sup>th</sup> International Congress for Tropical Medicine and Malaria (incorporating the Australian Society for Parasitology Annual Conference) – Brisbane, AU.

**2015** **Chapman, P.A.**, Owen, H., Flint, M., Traub, R.J., Cribb, T.H., Mills P.C. 1<sup>st</sup> Annual School of Veterinary Science Research Conference – Gatton, AU. *Molecular investigation of an epizootic event in green sea turtles associated with coccidiosis* **Oral presentation \*\*Awarded Best Oral Presentation – Wildlife Theme**

**2015** Ban de Gouvea Pedroso, S., Phalen, D.N., March, D., Blyde, D., Gordon, A., **Chapman, P.A.**, Mills, P.C., Gillett, A., Lloyd, H., Roos, G., Hall, J., Scott., J., Ariel, E., Rose., K. 64<sup>th</sup> Annual International Conference of the Wildlife Disease Association – Sunshine Coast, AU. *Systemic coccidiosis in green turtles (Chelonia mydas) in Australia: An emerging infectious disease.* **Oral presentation**

**2015** **Chapman, P.A.**, Traub, R., Cribb, T., Flint, M., Kyaw-Tanner, M., Blair, D., Mills, P.C. 64<sup>th</sup> Annual International Conference of the Wildlife Disease Association – Sunshine Coast, AU. *Molecular investigation and antemortem diagnosis of cardiovascular flukes (Digenea: Spirorchiidae) in marine turtles.* **Oral presentation**

**2014** **Chapman, P.A.**, Traub, R., Cribb, T., Flint, M., Kyaw-Tanner, M., Blair, D., Mills, P.C. 45<sup>th</sup> Conference of the International Association for Aquatic Animal Medicine – Gold Coast, AU. *Characterisation and non-invasive molecular diagnosis of cardiovascular flukes from marine turtles in Queensland, Australia.* **Oral presentation**

**2013** **Chapman, P.A.**, Cribb, T., Blair, D., Traub, R., Kyaw-Tanner, M., Flint, M., Mills, P.C. 24<sup>th</sup> International Conference of the World Association for the Advancement of Veterinary Parasitology – Perth, AU. *Morphological and molecular characterisation of cardiovascular flukes (Digenea: Spirorchiidae) from marine turtles in Moreton Bay, Queensland.* **Oral presentation**

## OTHER SPEAKING AND LECTURES

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**2025** **MARI301 (Marine Ecology), University of Otago.** Lectures – Introduction to eDNA, Diseases in Marine Ecosystems, and the Role of Microbes in Marine Ecosystems

**2024** **Otago Bioinformatics Spring School, Genomics Aotearoa.** Invited seminar – *From little things big things grow: how microbes influence tail regeneration in Xenopus laevis tadpoles*

**2024** **3rd Applied Microbial Ecology Laboratory Webinars: Exploring the ecology of the microbial world. Universidad de La Frontera, Temuco – Chile.** Invited seminar – *Frogs, Fronds and Firmicutes - Investigating the relationships between aquatic organisms and their microbiomes in the lab and in the sea*

**2024** **MARI301 (Marine Ecology), University of Otago.** Lecture – Introduction to eDNA

**2022** **GENE360 (Extension topics and Research Skills), University of Otago.** Lecture – postgraduate career pathways series

**2016** **Centre For Marine Science Seminar Series – University of Queensland.** *Pathogenic parasites from sea turtles of the Queensland coast.*

## RELEVANT MEMBERSHIPS

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Wildlife Disease Association  
Genetics Otago