



PROFILE

I'm a molecular ecologist and research scientist with wide-ranging interests in animals, pathogens, and the use of DNA to detect and monitor them in relation to ecosystem health. I have diverse experience in research and consulting, and excel at data analysis and preparation of concise and clear reports and research manuscripts.

CONTACT

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HOBBIES

Wildlife photography
Tramping
Skiing
Bouldering/Rock climbing
SCUBA diving

PHOEBE CHAPMAN

Research Fellow and Molecular Ecologist

EDUCATION

Curtin University 2017

Graduate Certificate with Distinction - Geographic Information Science

The University of Queensland 2017

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

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 various kelp, microbiome, and parasitology/diagnostics projects

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 assessment of flora and fauna, threatened species surveys, monitoring, management, ecosystem rehabilitation, reporting and impact assessment spanning a range of projects and development types in Queensland and New South Wales, 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 veterinary 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, contracted by Brisbane City Council. Concurrent teaching assistant in undergraduate animal biology, marine ecology, and fisheries science.

AWARDS, GRANTS, 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 – Uni of Queensland Science Faculty

SERVICE AND ADMINISTRATIVE ROLES

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 - 2023 **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: Inaugural School of Vet Science Research Conference and Postgraduate Writing Retreat; Funding applications; Liaison and point of contact for school admin, staff and students

RELEVANT MEMBERSHIPS

Wildlife Disease Association
Genetics Otago

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)
- First Aid and CPR certificates
- 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 (Jetski)
- Queensland Marine Radio VHF/MF/HF Operators Certificate of Proficiency
- Queensland Driver License - C Class manual (car) and New Zealand full driver licence (car)

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

Chapman PA, Hudson DT, Morgan XC, Beck CW (2024). The role of family and environment in determining the skin microbiome of captive aquatic frogs, *Xenopus laevis*. *FEMS Microbiology Ecology* 100(11) fiae131

Panthe, 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*, 00, 1–11

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). Protocephaloid 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). Spirochiidiasis 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: Spirochiidae) 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). Spirochiid 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: Spirochiidae): 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: Spirochiidae) 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 spirochiid 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 *Heterosporis*-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: Spirochiidae) 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

2024 Chapman, P.A. and Fraser, C.I. Scientific Committee for Antarctic Research XIth 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. 19th 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** - 19th 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. 1st 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. 64th 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. 64th 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. 45th 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. 24th 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

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.