



## 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 Zoology**

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

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**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

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**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

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Wildlife Disease Association  
Genetics Otago

## OTHER QUALIFICATIONS AND TRAINING

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- 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

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**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 (2023) The role of family and environment in determining the skin microbiome of captive aquatic frogs, *Xenopus laevis*. bioRxiv 2023.10.05.561135

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). Spirochidiiasis 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: Spirochidiidae) 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). Spirochidiid 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: Spirochidiidae): 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: Spirochidiidae) 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 spirochidiid ova in tissues from the green sea turtle, *Chelonia mydas*. *PLoS One* 11(8): e0162114

Gillet, 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: Spirochidiidae) 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 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** - 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 PRESENTATIONS

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**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.*