

VICTORIA LOUISE PRITCHARD, CURRICULUM VITAE

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EDUCATION AND TRAINING

1995-2001 **Ph.D.** *Behaviour and Morphology of the Zebrafish*. University of Leeds, U.K. (with RK Butlin)
1990-1993 **B.Sc.** Biology with Oceanography (2:1 with Honours). University of Southampton, U.K.

PROFESSIONAL APPOINTMENTS

Current **Senior Researcher**, Inverness College, University of the Highlands and Islands, U.K.
2019-2019 **Senior Researcher**, University of Helsinki, Finland (with CR Primmer).
2014-2018 **University Lecturer**, University of Turku, Finland. (25% teaching, 75% research):
Conservation genomics of Atlantic salmon (with CR Primmer).
2012-2013 **Postdoctoral Researcher**, University of Turku, Finland. *Regulation of gene expression in the threespine stickleback* (with E Leder & CR Primmer).
2010-2012 **Assistant Specialist**, National Marine Fisheries Service & University of California, Santa Cruz, U.S.A. *Conservation genetics of North American trout* (with JC Garza).
2007-2009 **Postdoctoral Associate**, University of Southern California, U.S.A. *Genetic and fitness outcomes in long-term hybrid swarms* (with S Edmands).
2002-2006 **Postdoctoral Associate**, New Mexico State University, U.S.A. *Conservation genetics of cutthroat trout* (with DE Cowley).
1996-1999 **Research Assistant**, University of Leeds, U.K. *The zebrafish as a model for the genetics of ethological isolation* (with RK Butlin).
1994-1997 **Research Technician**, University of Leeds, U.K. *Causes of reproductive isolation in a grasshopper* (with RK Butlin & T Tregenza).

CONFERENCES AND SEMINARS (PREVIOUS THREE YEARS)

INVITED TALKS

11/2019 4th International Conference on Integrative Salmonid Biology, Edinburgh, U.K. *Repeated signatures of local selection across salmonid populations*.
6/2019 Department of Biosciences, University of Oslo, Norway. *Repeated signatures of local selection across salmonid populations*.
6/2018 5th European Congress of Conservation Biology, Jyväskylä, Finland. *Using genomic data to guide the conservation and management of migratory salmonids*.

4/2017 Institution for Environmental and Life Science, Karlstad University, Sweden. *Conservation genomics of Atlantic salmon.*

CONFERENCE PRESENTATIONS

8/2019 ESEB 2019, Turku, Finland (talk) *Repeated genomic signatures of local selection in Atlantic salmon.*

8/2018 II Joint Congress of Evolutionary Biology, Montpellier, France (poster) *Genomic signatures of local selection in Atlantic salmon.*

6/2017 Evolution, Portland, U.S.A. (talk) *Genomic signatures of local adaptation in Atlantic salmon.*

GUEST SEMINARS

3/2018 Department of Biological Sciences, University of Southern California, U.S.A.

10/2017 College of Fishery Science, Arctic University of Norway at Tromsø, Norway.

9/2017 Viikki Biocenter, University of Helsinki, Finland.

4/2017 Department of Aquatic Resources, Swedish University of Agricultural Sciences, Sweden.

PEER-REVIEWED PUBLICATIONS

JOURNAL ARTICLES

29. **Pritchard VL**, Mäkinen H, Vähä JP, Erkinaro J, Orell P, Primmer CR (2018) Genomic signatures of fine-scale local selection in Atlantic salmon suggest involvement of sexual maturation, energy homeostasis, and immune defence-related genes. *Mol. Ecol.* **27**, 2560-2575.
28. **Pritchard VL**, Viitaniemi HM, McCairns RJS, Merilä J, Nikinmaa M, Primmer CR, Leder EH (2017) Regulatory architecture of gene expression variation in the threespine stickleback, *Gasterosteus aculeatus*. *G3* **7**, 165-178.
27. Aykanat T, Lindqvist M, **Pritchard VL**, Primmer CR (2016) From population genomics to conservation and management: a workflow for targeted analysis of markers identified using genome-wide approaches in Atlantic salmon. *J. Fish Biol.* **89**, 2658-2679.
26. **Pritchard VL**, Orell P, Kent MP, Lien S, Niemelä E, Erkinaro J, Primmer CR (2016) SNPs to discriminate different classes of hybrid between wild salmon and aquaculture escapees. *Evol. Appl.* **9**, 1017-1031.
25. Hwang A, **Pritchard VL**, Edmands S (2016) Recovery from hybrid breakdown in a marine invertebrate is stronger and more repeatable under environmental stress. *J. Evol. Biol.* **29**, 1793-1803.
24. Papakostas S, Michaloudi E, Proios K, Brehm M, Verhage L, Rota J, Peña C, Stamou G, **Pritchard VL**, Fontaneto D, Declerck SAJ (2016) Integrative taxonomy recognizes evolutionary units despite widespread mitonuclear discordance: evidence from a rotifer cryptic species complex. *Syst. Biol.* **65**, 508-524.
23. **Pritchard VL**, Garza JC, Peacock MM (2015) SNPs reveal previously undocumented non-native introgression within threatened trout populations. *Conserv. Genet.* **16**, 1001-1006.
22. Johnston SE, Orell P, **Pritchard VL**, Kent MP, Lien S, Niemelä E, Erkinaro J, Primmer CR (2014) Genome-wide SNP analysis reveals a genetic basis for sea-age variation in a wild population of Atlantic salmon (*Salmo salar*). *Mol. Ecol.* **23**, 3452-3468.
21. Ostberg CO, Hauser L, **Pritchard VL**, Garza JC, Naish KA. (2013) Chromosome rearrangements, recombination suppression, and limited segregation distortion in hybrids between Yellowstone

- cutthroat trout (*Oncorhynchus clarkii bouvieri*) and rainbow trout (*O. mykiss*). *BMC Genomics* **14**, 570.
20. **Pritchard VL**, Garza JC (2013) Discovery and characterization of novel genetic markers for coastal cutthroat trout (*Oncorhynchus clarkii clarkii*). *Conserv. Genet. Resour.* **5**, 611-618.
 19. **Pritchard VL**, Campbell NR, Narum S, Peacock M, Garza JC (2013) Discovery and characterization of novel genetic markers for the management of Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*). *Mol. Ecol. Resour.* **13**, 276-288.
 18. **Pritchard VL**, Edmands S (2013) The genomic trajectory of hybrid swarms: outcomes of repeated crosses between populations of *Tigriopus californicus*. *Evolution* **67**, 774-791.
 17. **Pritchard VL**, Knutson VL, Lee M, Zieba J, Edmands S (2013) Fitness and morphological outcomes of many generations of hybridization in the copepod *Tigriopus californicus*. *J. Evol. Biol.* **26**, 416-433.
 16. Campbell NR, Amish SJ, **Pritchard VL**, McKelvey K, Young M, Schwartz M, Garza JC, Luikart G, Narum S (2012) Development and evaluation of 200 novel SNP assays for population genetic studies of westslope cutthroat trout and genetic identification of other taxa. *Mol. Ecol. Resour.* **12**, 942-949.
 15. **Pritchard VL**, Abadía-Cardoso A, Garza JC (2012) Discovery and characterization of a large number of diagnostic markers to discriminate *Oncorhynchus mykiss* and *O. clarkii*. *Mol. Ecol. Resour.* **12**, 918-931.
 14. **Pritchard VL**, Dimond L, Harrison JS, Velazquez CCS, Zieba JT, Burton RS, Edmands S (2011) Interpopulation hybridization results in widespread viability selection across the genome in *Tigriopus californicus*. *BMC Genetics* **12**, 54.
 13. **Pritchard VL**, Metcalf JL, Jones K, Martin AP, Cowley DE (2008) Population structure and genetic management of Rio Grande cutthroat trout (*Oncorhynchus clarkii virginalis*). *Conserv. Genet.* **10**, 1209-1221.
 12. Metcalf JL, **Pritchard VL**, Silvestri SM, Jenkins JB, Wood JS, Cowley DE, Evans RP, Shiozawa DK, Martin AP (2007) Across the great divide: genetic forensics reveals misidentification of endangered cutthroat trout populations. *Mol. Ecol.* **16**, 4445-4454.
 11. **Pritchard VL**, Jones K, Cowley DE (2007) Estimation of introgression in cutthroat trout populations using microsatellites. *Conserv. Genet.* **8**, 1311-1329.
 10. **Pritchard VL**, Jones K, Cowley DE (2007) Genetic diversity in fragmented cutthroat trout populations. *Trans. Am. Fish. Soc.* **136**, 606-623.
 9. **Pritchard VL**, Jones K, Metcalf JL, Martin AP, Wilkinson P, Cowley DE (2007) Characterization of tetranucleotide microsatellites for Rio Grande cutthroat trout and rainbow trout, and their cross-amplification in other cutthroat trout subspecies. *Mol. Ecol. Notes* **7**, 594-596.
 8. Wright D, Rimmer RB, **Pritchard VL**, Krause J, Butlin RK (2003) Inter and intrapopulation variation in shoaling and boldness in the zebrafish (*Danio rerio*). *Naturwissenschaften* **90**, 374-377.
 7. Tregenza T, **Pritchard VL**, Butlin R K (2002) The origins of postmating isolation: testing hypotheses in the grasshopper *Chorthippus parallelus*. *Popul. Ecol.* **44**, 137-144.
 6. **Pritchard VL**, Lawrence J, Butlin RK, Krause J (2001) Shoal choice in the zebrafish, *Danio rerio*: the influence of shoal size and activity. *Animal Behav.* **62**, 1085-1088.
 5. Tregenza T, **Pritchard VL**, Butlin RK (2000) The origin of premating isolation: testing hypotheses in the grasshopper *Chorthippus parallelus*. *Evolution* **54**, 1687-1698.
 4. Tregenza T, **Pritchard VL**, Butlin RK (2000) What drives speciation? Patterns of trait divergence between populations of the meadow grasshopper, *Chorthippus parallelus*. *Evolution* **54**, 574-585.

3. Tregenza T, Buckley SH, **Pritchard VL**, Butlin RK (2000) Inter- and intrapopulation effects of sex and age on epicuticular composition of meadow grasshopper, *Chorthippus parallelus*. *J. Chem. Ecol.* **26**, 257-278.
2. Krause J, Butlin RK, Peukhuri N, **Pritchard VL** (2000) The social organisation of fish shoals: a test of laboratory predictions for the field. *Biol. Rev. Camb. Philos. Soc.* **75**, 477-501.
1. Krause J, Hartmann N, **Pritchard VL** (1999) The influence of the nutritional state on shoal choice in zebrafish (*Danio rerio*). *Animal Behav.* **57**, 771-775.

OTHER PEER-REVIEWED PUBLICATIONS

Pritchard VL, Cowley DE (2006) Rio Grande cutthroat trout: a technical conservation assessment. USDA. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5206803.pdf.

TEACHING

I hold the title of *Dosentti in Evolutionary Genetics* (University of Turku, 2013), a qualification awarded in Finland on the basis of postdoctoral research and teaching skills, which is required for independent teaching and supervision of graduate students. My teaching demonstration was rated 'Good'.

PEDAGOGICAL TRAINING

2018 'Introduction to University Teaching' (3 ECTS), University of Turku, Finland.

TAUGHT COURSES

University of Helsinki, Finland: upper-level courses

2019 *Conservation Genetics*: contributed lecture.

2019 *Diagnosis of Environmental Problems in Aquatic Ecosystems*: contributed lecture

University of Turku, Finland: upper-level courses

2018 *Next Generation Sequencing and its Applications* (co-teacher): lecture, computer practical and examination on analysis of RAD sequencing data.

Advanced Conservation Biology (co-teacher): five lectures and two guided discussion sessions on conservation genetics.

2017 *Advanced Evolutionary Biology* (co-teacher): two lectures, computer practical and assignment on genome-wide association analysis and identification of loci under selection.

2015-17 *Biological Researcher Course* (co-teacher): three lectures and two assignments on general skills required for a career in science.

2015 *Genetics of Natural Populations* (teacher): eight lectures, computer practical, four assignments, four guided presentation/discussion sessions and examination on population genetics.

2014 -16 *Evolutionary Applications* (co-teacher): lecture and guided discussion on conservation genetics.

2014 *Ecological Genomics* (co-teacher): lecture on genome-wide association and QTL mapping.

SUPERVISION

Current Supervisor for Ph.D. student Antti Miettinen, University of Helsinki (2019-2023):
Conservation genomics of Atlantic salmon in the Baltic Sea.

Current Supervisor for M.Sc. student Reeta-Maria Partanen, University of Helsinki (2019-2020).
Historic changes in effective population size of wild Atlantic salmon.

- 2007-09 Supervisor for undergraduate research in population genetics, resulting in co-authored publications with four students (L Dimond, VL Knutson, CCS. Velazquez & JT Zieba) University of Southern California, U.S.A.
- 1998-2000 Supervisor for undergraduate research in fish behaviour, resulting in co-authored publications with two students (N. Hartmann & J. Lawrence), University of Leeds, U.K.

EXAMINER DUTIES

- 2019 Opponent, Ph.D. Thesis of Srinidhi Varadharajan, University of Oslo, Norway
- 2015 Assessor, M.Sc. Thesis of Janne Sulku, University of Turku, Finland.

OTHER TEACHING EXPERIENCE

- 1996-2000 Demonstrator (Teaching Assistant) for laboratory and computer practicals; over 300 contact hours in total. Department of Biology, University of Leeds, U.K.

EXTERNAL FUNDING (PREVIOUS TEN YEARS)

- 2019 Finnish Society of Sciences & Letters, Research Grant, €7 200
- 2014-19 Oskar Oflunds Foundation, Travel Grants, €1 700
- 2013-16 Turku University Foundation, Travel Grants, €2 000
- 2015 Turku Center for Systems Biology, Travel Grant, €300.
- 2014 Finnish Cultural Foundation Personal Grant: *Causes and consequences of hybridization between aquaculture escapees and wild Atlantic salmon populations*: €26 000.

OTHER INFORMATION

PEER REVIEW (PREVIOUS THREE YEARS)

Canadian Journal of Fisheries and Aquatic Sciences (1 manuscript); Nature Communications Biology (1); Environmental Biology of Fishes (1); Evolutionary Applications (2); Genetica (1); Genome Biology and Evolution (1); Heredity (1); Journal of Fish Biology (1); Molecular Ecology (2); Molecular Ecology Resources (1); PeerJ (1); Proceedings of the Royal Society B (1); Scientific Reports (1); Genome BC (grant applications, 2).

SCIENTIFIC ADVISORY ROLES

- 2002-2007 **Scientific advisor** to Colorado Division of Wildlife, New Mexico Department of Game and Fish & U.S. Forest Service on population genetic issues related to native fish management.

NON-PAID POSITIONS

- 2012 **Field Assistant**, University of Oslo, Norway. *Hybrid speciation in sparrows*.
- 2006 **Visiting Researcher**, University of Colorado, U.S.A. *Genetics of cutthroat trout*.
- 1994, 2001 **Field Assistant**, Southwestern Research Station of the American Museum of Natural History, Arizona, U.S.A. Various projects on bird and reptile behaviour.

LANGUAGES

English (native); Spanish (basic reading and writing); French (basic reading and writing).