

VICTORIA LOUISE PRITCHARD, CURRICULUM VITAE

Address: Department of Biology, University of Turku, 20014, Turku, FINLAND.
Email: victorialpritchard@gmail.com
Phone: + 358 44 240 0215
Citizenship: British

EDUCATION AND TRAINING

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

PROFESSIONAL APPOINTMENTS

2014-2018 **University Teacher**, 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).

PUBLICATIONS

PEER-REVIEWED 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. *Molecular Ecology*, doi: 10.1111/mec.14705.
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 Genes, Genomes, Genetics* **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. *Journal of Fish Biology* **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. *Evolutionary Applications* **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. *Journal of Evolutionary Biology* **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. *Systematic Biology* **65**, 508-524.
23. **Pritchard VL**, Garza JC, Peacock MM (2015) SNPs reveal previously undocumented non-native introgression within threatened trout populations. *Conservation Genetics* **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*). *Molecular Ecology* **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*). *Conservation Genetic Resources* **5**, 611-618.
29. **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*). *Molecular Ecology Resources* **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*. *Journal of Evolutionary Biology* **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. *Molecular Ecology Resources* **12**, 942-949.
15. **Pritchard VL**, Abadia-Cardoso A, Garza JC (2012) Discovery and characterization of a large number of diagnostic markers to discriminate *Oncorhynchus mykiss* and *O. clarkii*. *Molecular Ecology Resources* **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*). *Conservation Genetics* **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. *Molecular Ecology* **16**, 4445-4454.

11. **Pritchard VL**, Jones K, Cowley DE (2007) Estimation of introgression in cutthroat trout populations using microsatellites. *Conservation Genetics* **8**, 1311-1329.
10. **Pritchard VL**, Jones K, Cowley DE (2007) Genetic diversity in fragmented cutthroat trout populations. *Transactions of the American Fisheries Society* **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. *Molecular Ecology 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*. *Population Ecology* **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 Behaviour* **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*. *Journal of Chemical Ecology*, **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. *Biological Reviews* **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 Behaviour*, **57**, 771-775.

OTHER PEER-REVIEWED PUBLICATIONS

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

GRANTS AND CONTRACTS

2013-16	Turku University Foundation, Travel Grants, €2,000.
2015	Turku Center for Systems Biology, Travel Grant, €300.
2014	Finnish Cultural Foundation Personal Grant: <i>Causes and consequences of hybridization between aquaculture escapees and wild Atlantic salmon populations</i> : €26,000.
2014	Oskar Oflunds Foundation, Travel Grant, €800.
2007-09	University of Southern California WISE Travel Grants: \$1,200.
2003	New Mexico Department of Game and Fish Professional Services Contract (with D. E. Cowley): \$117,000.
1996	Leverhulme Trust Small Project Grant: <i>The potential of the zebrafish as a model for the genetics of ethological isolation</i> (with R. K. Butlin): £38,450.

CONFERENCES AND SEMINARS (THREE PREVIOUS YEARS)

INVITED TALKS

- 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

- 6/2017 Evolution, Portland, U.S.A. (talk) *Genomic signatures of local adaptation in Atlantic salmon.*
- 7/2016 FSBI Annual Symposium, Bangor, U.K. (talk). *Investigating hybridization dynamics between a wild Atlantic salmon population and aquaculture escapees.*
- 6/2016 Evolution, Austin, U.S.A. (poster) *Genetic architecture of gene expression regulation in the threespine stickleback.*
- 8/2015 European Society for Evolutionary Biology, Lausanne, Switzerland (poster) *Gene expression regulation in the threespine stickleback: are there eQTL hotspots?*

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.
- 5/2017 Inverness College, University of the Highlands and Islands, U.K.
- 4/2017 Department of Aquatic Resources, Swedish University of Agricultural Sciences, Sweden.
- 11/2016 Department of Fisheries and Wildlife, Oregon State University, U.S.A.

OTHER MEETINGS

- 4/2018 Academy of Finland Arktiko 2018 meeting, Lammi, Finland (poster).
- 10/2017 University of Helsinki Genome Biology Program retreat, Tvarminne, Finland (talk).
- 5/2017 Academy of Finland Arktiko 2017 meeting, Oulu, Finland (poster).
- 10/2016 Finnish Molecular Ecology and Evolution Symposium, Lammi, Finland (poster).
- 5/2016 Integrated Science for Adaptive Co-Management in the Arctic (ISAMA) Research Consortium, Utsjoki, Finland (talk).

TEACHING AND SUPERVISION

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'.

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

EXAMINER DUTIES

- 2015 M.Sc. Thesis of Janne Sulku, University of Turku, Finland.

SUPERVISION

- 2007-2009 **Co-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 **Co-supervisor** for undergraduate research in fish behaviour, resulting in co-authored publications with two students (N. Hartmann & J. Lawrence), University of Leeds, U.K.

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.

OTHER INFORMATION

PEER REVIEW (THREE PREVIOUS YEARS)

Canadian Journal of Fisheries and Aquatic Sciences (1 manuscript); Nature Communications Biology (1); Conservation Genetics (2); Ecography (1); Ecology and Evolution (1); Environmental Biology of Fishes (1); Evolutionary Applications (3); Fisheries (1); Genetica (2); Genome Biology and Evolution (1); Heredity (1); Hydrobiologia (1); Journal of Fish Biology (1); Molecular Ecology (1); Molecular Ecology Resources (1); Peer J (1); Plos One (1); Proceedings of the Royal Society B (1); Royal Society Open Science (1); book chapter (1).

SCIENTIFIC ADVISORY ROLES

- 2002-2007 **Scientific advisor** to Colorado Division of Wildlife, New Mexico Department of Game and Fish, the U.S. Forest Service and the U.S. Fish and Wildlife 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, writing and conversation); French (basic reading and writing).