***CURRICULUM VITAE SIMPLIFICADO***

***DATOS PERSONALES***

***Nombre y Apellidos: Peter Bretton PEARMAN***

***Nº NIE: Y3444315-X***

***Fecha nacimiento: 03.04.1959***

***Domicilio profesional:***

***Departamento Biología Vegetal y Ecología***

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***FORMACIÓN ACADÉMICA***

1991 Duke University. Doctor of Philosophy, Zoology. Dissertation: Ecology of

Patchy Habitat: Effects of Pond Size on Experimental Tadpole Populations.

1988 Duke University. Master of Arts, Zoology. Minor: Mathematics (Statistics).

Thesis: Dynamics of Populations Exploiting a Subdivided, Uniform Resource: A

Simulation Model.

***EXPERIENCIA PROFESIONAL EN EL ÁMBITO DEL TÍTULO PROPIO***

2014-present Ikerbasque Research Professor, Departimento de Biología Vegetal y Ecología, Universidad del País Vasco/Euskal Herriko Unibertsitatea, Bilbao, The Basque Country, Spain; *in joint appointment with*:

Ikerbasque, The Basque Foundation for Science, Bilbao, The Basque Country, Spain.

2008- 2014 Research Scientist, Land Use Dynamics, Federal Research Institute WSL. Responsible for research in species distribution modeling, niche evolution, and community phylogenetic analysis. The research has both applied and pure components. Project lead on two Swiss National Fund projects, ‘SPEED’ and ‘ENNIS’. These projects use molecular and ecological data to understand aspects of ecological diversification in several plant families, including the Polygonaceae, Restionaceae, and Proteaceae.

2006-2007 Research Scientist. Department of Ecology and Evolution, University of Lausanne. Responsible for research on stability of the ecological niche and the transferability of predictive species distribution models over time. Continuing research on species distribution modeling, biodiversity distributions and indicators.

2003-2005 Program leader-Zoology. Michigan Natural Features Inventory, School of Agriculture and Natural Resources, Michigan State University, Lansing, Michigan. Responsible for research on rare and declining species. Responsible for directing the zoological program, developing program direction and vision, supervising program growth over two years from four to seven full-time staff zoologists, 15 seasonal employees, interacting with Michigan Department of Natural Resources staff, and overseeing an annual budget that increased from $270,000 to over $450,000 USD in two years.

1998-2003 Research Associate (Oberassistent), Zoological Institute, University of Zürich, Zürich, Switzerland. Initiated interdisciplinary research on IUCN red-listed frog with international team. Discovered genetic depletion in part of species' range, and that reproductive interference from a congener leads to reproductive failure. Initiated research on susceptibility of anuran tadpoles to viral infection. Teaching: Led field exercises, gave lectures, held discussions and mentored students during independent projects during a 15-week, team-taught course in ecology and conservation biology for graduate students, repeated yearly. Position equivalent to Research Assistant Professor in the USA.

1996-1998 Assistant Professor, The Evergreen State College, Olympia, WA, USA Responsible for teaching ecology and conservation biology within team-taught, interdisciplinary programs for undergraduate students. During 1996-97, I taught in an interdisciplinary program on the American West, treating the region’s society, ecology and literature. This program was primarily for students in 1st and 2nd years (18-19 year olds) in a university program. During 1997-98, I taught an ecology and conservation component in an interdisciplinary program entitled 'Introduction to Environmental Studies’. This program was for students in the 2nd and 3rd years of a North American university program.

1994-1995 Postdoctoral Research Scientist, Center for Conservation Biology, Stanford University Coordinated research (50%) and in-country training (50%) activities in Ecuador. One year in-residence at Stanford to work on academic component and publish data resulting from project (below).

1993-1995 Scientific Adviser for Conservation, the Jatun Sacha Foundation, an Ecuadorian conservation, research, and educational organization (1993, 100%; 1994-5, ad hoc). Organized and implemented multi-taxonomic biodiversity monitoring program in Upper Amazon Basin, trained Ecuadorian scientists, worked in association with Amazonian indigenous communities (Quichua) and indigenous para-biologists. Directed team of 15 field workers. Responsible for budget, reports, hiring, logistics, worker supervision and data quality control.

1993 Laboratory post-doc and statistical adviser (6 month position) Laboratory of A. Power, Section of Ecology and Systematics, Cornell University. Responsible for ELISA analysis of aphid-transmitted virus of wheat; conducting experiments on effect of genotypic identity on host/parasite interactions, and vector competence; analysis of factorial designed experiments.

1991-1992 Co-coordinator and instructor, Population Ecology and Conservation Biology: An intensive postgraduate field course for Latin American scientists, funded by the Biodiversity Support Program (WWF) and the United States Agency for International Development (4-month position/year). Twice developed curriculum and organized logistics for 18 students, five instructors and 10 resource persons. Published two course books containing student research results.

1991-1992 Research associate, Department of Zoology, Duke University (6 month position). Conducted fund raising for research in Ecuador, with M. Stern, then of U. C. Davis.

***PUBLICACIONES***

Wüest, R. O., G. Litsios, F. Forest, C. Lexer, N. E. Zimmermann, P. L. Linder, N. Salamin, and **P. B. Pearman**. **In-review**. Reseeder-resprouter ratio in Restionaceae assemblages varies with climate and soil type. **Functional Ecology**

Call, A., Y.-X. Sun, D. T. Thomas, **P. B. Pearman**, R. Trigiano, I. Carbone, and Q.-Y.(J.) Xiang **In-Review**. Population structure and post-glacial expansion of *Cornus florida* L. (Cornaceae) – integrative evidence from phylogeography, population demographic history, and ecological niche modeling. **Journal of Systematics and Evolution**.

Schiffers, K., F. Schurr, J. Travis, A. Duputie, V. Eckhart, S. Lavergne, G.Mcinerny, K. Moore, **P. B. Pearman**, W. Thuiller, R. Wüest, and R. Holt. **In-Press**. Landscape structure and genetic architecture jointly impact rates of niche evolution. **Ecography**.

Silvestro, D., A. Kostikova, G. Litsios, **P. B. Pearman**, and N. Salamin. **In-Press**. Measurements errors should always be incorporated in phylogenetic comparative analysis. **Methods in Ecology and** **Evolution**.

Litsios, G., **P. B. Pearman**, D. Lanterbecq, and N. Salamin. **2014**. The radiation of clownfishes has two geographical replicates. **Journal of Biogeography** 41:2140-2149.

Hettyey, A., B. Vági, T. Kovács, J. Ujszegi, P. Katona, M. Szederkényi, **P. B. Pearman**, M. Griggio and H. Hoy. **2014**. Reproductive interference between *Rana dalmatina* and *R. temporaria* affects reproductive success in natural populations. **Oecologia** 176:457-464.

Lexer, C., R. Wüest, S. Mangili, M. Heuertz, K. N. Stölting, **P. B. Pearman**, F. Forest, N. Salamin, N. Zimmermann, and E. Bossolini. 2014. Genomics of the speciation continuum in an African plant biodiversity hotspot, I: Drivers of population divergence in *Restio capensis* (Restionaceae). **Molecular Ecology** 23:4373-4386.

Kostikova, A., N. Salamin and **P. B. Pearman**. 2014. The role of climatic tolerances and seed traits in reduced extinction rates of temperate Polygonaceae. **Evolution** 68:1856-1870.

Kostikova, A., G. Litsios, S. Burgy, L. Milani, **P. B. Pearman**, and N. Salamin. 2014. Scale-dependent adaptive evolution and morphological convergence to climate niche in the Californian eriogonoids (Polygonaceae). **Journal of Biogeography** 41:1326-1337**.** (Note: *last two authors are co-senior authors*)

Hanspach, J., O. Schweiger, I. Kühn, M. Plattner, **P. B. Pearman**, N. E. Zimmerman, and J. Settele. 2014. Host plant availability potentially limits butterfly distribution under cold environmental conditions. **Ecography** 37:301-308.

**Pearman, P. B.**, S. Lavergne, C. Roquet, R. Wüest, N. E. Zimmermann, and W. Thuiller. 2014. Phylogenetic patterns of climatic, habitat, and trophic niches in a European avian assemblage. **Global Ecology and Biogeography** 23:414-424.

Litsios, G., R. O. Wüest, A. Kostikova, F. Forest, C. Lexer, H. P. Linder, **P. B. Pearman**, N. E. Zimmermann and N. Salamin. 2014. Differential effect of fire-survival strategy on diversification among a replicated radiation on two continents. **Evolution** 68:453-465.

Willerslev, E., and 51 co-authors. 2014. Fifty thousand years of arctic vegetation and megafauna diet. **Nature** 506:47-51.

Bryson, R. W. Jr., L. Prendini, W. E. Savary and **P. B. Pearman**. 2014. Caves as microrefugia: Pleistocene phylogeography of the troglophilic North American scorpion *Pseudouroctonus reddelli*. **BMC Evolutionary Biology** 14:9.

Thuiller, W., S. Pironon, A. Psomas, M. Barbet-Massin, F. Jiguet, S. Lavergne, **P. B. Pearman**, J. Renaud, L. Zupan, and N. E. Zimmermann. 2014. The functional tree of life of European avifauna in face of global change. **Nature Communications** 5:3118, doi: 10.1038/ncomms4118.

Kostikova, A., G. Litsios, N. Salamin, and **P. B. Pearman**. 2013. Linking life history traits, ecology and niche breadth evolution in the North American eriogonoids (Polygonaceae). **American Naturalist** 182:760-774.

Schorr, G., **P. B. Pearman**, A. Guisan, and J. W. Kadereit. 2013. Combining palaeodistribution modelling and phylogeographical approaches for identifying glacial refugia: Implication for the geography of Quaternary speciation in alpine *Primula*. **Journal of Biogeography** 40:1947-1960.

Normand, S., and 14 co-authors. 2013. A greener Greenland? Climatic potential and long-term constraints on the future expansion of trees and shrubs across a large Arctic region. **Philosophical Transactions of the Royal Society B**. 368:UNSP 20120479.

Lexer, C., K. Stoelting, S. Mangili, F. Forest, E. Bossolini, **P. B. Pearman**, N. E. Zimmermann and N. Salamin. 2013. ‘Next generation’ biogeography: towards understanding the drivers of species diversification and persistence. **Journal of Biogeography 40:**1013-1022.

Maiorano, L. and 16 co-authors. 2013. Building the niche through time: Using 13,000 years of data to predict the effects of climate change on three tree species in Europe. **Global Ecology and Biogeography** 22:302-317.

D’Amen, M., N. E. Zimmermann, and **P. B. Pearman**. 2013. Conservation of phylogeographic lineages under climate change. **Global Ecology and Biogeography** 22:93-104.

Litsios, G., C. Sims, **P. B. Pearman**, R. O. Wüest, N. E. Zimmermann, and N. Salamin. 2012. Mutualism with sea anemones triggered the adaptive radiation of clownfish. **BMC Evolutionary Biology** 12:212.

Litsios, G., L. Pellissier, F. Forest, **P. B. Pearman**, N. E. Zimmermann, and N. Salamin. 2012. Trophic specialization influences the rate of environmental niche evolution in damselfishes (Pomacentridae). **Proc. Royal Soc. B.** 279:3662-3669**.**

Schorr, G., A. Guisan, N. Holstein, **P. B. Pearman** and J. W. Kadereit. 2012. Integrating species distribution models (SDMs) and phylogeography for two species of alpine *Primula*: widespread nunatak survival and discordance of phylogeographic and modeled refugia. **Ecology and Evolution** 2:1260-1277.

Broennimann, O., M. Fitzpatrick, **P. B. Pearman** B. Petitpierre, L. Pellissier and A. Guisan. 2012. Measuring ecological niche overlap from occurrence and spatial environmental data. **Global Ecology and Biogeography** 21: 481-497. (Note: *first 3 authors contributed equally to this paper*).

Engler, R. and 19 additional authors. 2011. 21st century climate change threatens mountain flora unequally across Europe. **Global Change Biology** 17:2330-2341.

D’Amen, M, P. Bombi, **P. B. Pearman**, D. R. Schmatz, N. E. Zimmermann, and M. A. Bologna. 2011. Will climate change reduce the efficacy of protected areas for amphibian conservation in Italy? **Biological Conservation** 144:989-997.

**Pearman, P. B**., A. Guisan, and N. E. Zimmermann. 2011. Impacts of climate change on Swiss biodiversity: an indicator species approach. **Biological Conservation** 144:866-875.

Zimmermann, N. E., T. C. Edwards Jr., C. H. Graham, **P. B. Pearman** and J.-C. Svenning. 2010. New trends in species distribution modelling. **Ecography** 33:985-989.

Svenning, J.-C., M. C. Fitzpatrick, S. Normand, C. H. Graham, **P. B. Pearman**, L. R. Iverson, and F. Skov. 2010. Geography, topography, and history affect realized-to-potential tree species richness patterns in Europe. **Ecography** 33:1070-1080.

Meier, E. S., F. Kienast, **P. B. Pearman**, J.-C. Svenning, W. Thuiller, M. B. Araujo, A. Guisan, and N. E. Zimmermann. 2010. Biotic and abiotic variables show little redundancy in explaining tree species distributions. **Ecography** 33:1038-1048.

**Pearman, P. B**., M. D’Amen, C. Graham, W. Thuiller, and N. E. Zimmermann. 2010. Within-taxon niche structure: Niche conservatism, divergence and predicted effects of climate change. **Ecography** 33:990-1003. (Note: *first two authors contributed equally to this paper*.)

Salamin, N., R. O. Wüest, S. Lavergne, W. Thuiller and **P. B. Pearman**. 2010. Assessing rapid evolution in a changing environment. **Trends in Ecology and Evolution** 25:692-698.

Zimmermann, N. E., N. G. Yoccoz, T. C. Edwards Jr., E. S. Meier, W. Thuiller, A. Guisan, D. R. Schmatz and **P. B. Pearman**. 2009. Climatic extremes improve predictions of spatial patterns of tree species. **Proceedings of the National Academy of Sciences USA** 106:19723-19728.

Randin, C. F., R. Engler, S. Normand, M. Zappa, N. E. Zimmermann, **P. B. Pearman**, P. Vittoz, W. Thuiller, and A. Guisan. 2009. Climate change and plant distribution: local models predict high-elevation persistence. **Global Change Biology** 15:1557-1569.

**Pearman, P. B.**, C. F. Randin, O. Broennimann, P. Vittoz, W. O. van der Knaap, R. Engler, G. Le Lay, N. Zimmerman and A. Guisan. 2008a. Prediction of plant species distribution across six millennia. **Ecology Letters** 11:357-369**.**

**Pearman, P. B.**, A. Guisan, O. Broennimann and C. F. Randin. 2008b. Niche dynamics in space and time. **Trends in Ecology and Evolution 23**:149-158.

**Pearman, P. B.** and D. Weber. 2007a. Common species determine richness patterns in biodiversity indicator taxa: errata. **Biological Conservation** 141:5.

**Pearman, P. B.** and D. Weber. 2007b. Common species determine richness patterns in biodiversity indicator taxa. **Biological Conservation** 138:109-119.

Hettyey, A. and **P. B. Pearman**. 2006. Testing experimental results in the field: comment on Ficetola and DiBernardi (2005). **Ethology** 112:930-931.

**Pearman, P. B.**, E. Schools, M. Penskar, and H. Enander. 2006. Identifying potential indicators of conservation value using Natural Heritage occurrence data. **Ecological Applications** 16:186-201

**Pearman, P. B.** and T. W. J. Garner. 2005. Susceptibility of Italian Agile Frog populations to an emerging strain of *Ranavirus* parallels population genetic diversity. **Ecology Letters** 8:401-408

**Pearman, P. B.**, T. W. J. Garner, M. Straub, and U. F. Greber. 2004. Response of the Italian agile frog (*Rana* *latastei*) to a *Ranavirus,* frog virus 3: a model for viral emergence in naive populations. **Journal of Wildlife Diseases** 40:600-609.

Garner, T. W.J., **P. B Pearman**, P. T. Gregory, G. Tomio, S. G. Wischniowski and D. J. Hosken. 2004. Microsatellite markers developed from *Thamnophis* *elegans* and *Thamnophis* *sirtalis* and their utility in three species of garter snakes. **Molecular Ecology Notes** 4:369-371.

Garner, T. W. J., **P. B. Pearman** and S. Angelone. 2004. Genetic diversity across a vertebrate species' range: A test of the central-peripheral hypothesis. **Molecular Ecology** 13:1047-1053.

Garner, T. W. J., S. Angelone, and **P. B. Pearman**. 2003. Genetic depletion in Swiss populations of *Rana latastei*, conservation implications. **Biological Conservation** 114:371-376.

Hettyey, A., and **P. B. Pearman**. 2003. Social environment and reproductive interference affect reproductive success in the frog *Rana latastei*. **Behavioral Ecology** 14:294-300**.**

Sommer, S. and **P. B. Pearman**. 2003. Quantitative genetic analysis of larval life history traits in two alpine populations of *Rana temporaria*. **Genetica** 118:1-10**.**

**Pearman, P. B.** 2002. Developing regional conservation priorities using red lists: A hypothetical example from the Swiss lowlands. **Biodiversity and Conservation** 11:469-485.

**Pearman, P. B.** 2002. The scale of community structure: Habitat variation and avian guilds in tropical forest understory. **Ecological Monographs** 72:19-39

**Pearman, P. B.** 2002. Interactions between *Ambystoma* salamanders: Evidence for competitive inequality. **Herpetologica** 58:156-165.

**Pearman, P. B.** 2001. The conservation value of independently evolving units: Sacred cow or testable hypothesis? **Conservation Biology** 15:780-783.

Wilson C. R. and **P. B. Pearman**. 2000. Sampling characteristics of aquatic funnel traps for monitoring populations of adult rough-skinned newts (*Taricha granulosa*) in lentic habitats. **Northwestern Naturalist** 81:31-34.

**Pearman, P. B.** 1997. Correlates of amphibian diversity in an altered landscape of Amazonian Ecuador. **Conservation Biology** 11:1211-1225.

Marsh, D. M. and **P. B. Pearman**. 1997. Effects of habitat fragmentation on the abundance of two species of Leptodactylid frog in an andean montane forest. **Conservation Biology** 11:1323-1328.

**Pearman, P. B.** 1995a. An agenda for conservation research and its application, with a case-study from Amazonian Ecuador. **Environmental Conservation** 22:39-43.

**Pearman, P. B.** 1995b. Effects of pond size and consequent predator density on two species of tadpoles. **Oecologia** 102:1-8.

**Pearman, P. B.**, A. M. Velasco and A. López. 1995. Herpetofauna monitoring: a comparison of methods for detecting inter-site variation in species composition. **Herpetologica** 51:325-337.

Pearman, P. B. 1993. Effects of habitat size on tadpole populations. **Ecology** 74(7):1982-1991.

**Pearman, P. B.** and H. M. Wilbur. 1990. Changes in population dynamics resulting from oviposition in a subdivided habitat. **American Naturalist** 135:708-723.

***PROYECTOS RELEVANTES***

‘Spatially Explicit Evolution of Diversity (SPEED)’

Inicio: 2009

Duración: 44 meses

Financiamiento: Swiss National Science Foundation, Programa SINERGIA

Oficio: co-IP y Coordinador

Monto: 964,637 Sfr.

Status: Cerrado

‘Evolutionary Niche Dynamics of Invasive Species (ENNIS)’

Inicio: 2009

Duración: 41 meses

Financiamiento: Swiss National Science Foundation

Oficio: co-IP y coordinador

Monto: 240,833 Sfr.

Status: Cerrado

‘Landscape-scale functional diversity of plant, butterfly and bird communities along the Swiss elevation gradient’

Inicio: 2014

Duración: 36 meses

Oficio: co-IP

Monto: 281,105 Sfr.

Status: Abierto