

# Curriculum Vitae

## ANA FILIPA DA SILVA PEREIRA MACHADO FILIPE

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### Personal information

- Surnames: da Silva Pereira Machado Filipe
- Forenames: Ana Filipa
- Marital status: single
- Nationality: Portugal
- Birthday: 20<sup>th</sup> of February of 1975
- Identification number: 10505434-8 emitted in Lisbon
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### Work contacts

- Address: Faculdade de Ciências da Universidade de Lisboa  
Rua Ernesto Vasconcelos, Departamento Biologia Animal, C2, 2ºPiso, 1749-016 Lisboa (Portugal)
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### Academic degree

**Graduated** in Biology Applied to Animal Resources at Lisbon Faculty of Sciences with the final classification of 17 (max. 20) - 1993/1998.

**Thesis:** "Spatial modelling of the distribution of freshwater species, in two seasons of the hydrological regime of the lower part of the Guadiana River Basin (Portugal)", financed by the European Union (LIFE Program, contract n° B4-3200/97/280) and scholarship n°1/PRODEP/98 with the classification of 19 values (max. 20).

### Scientific activities

Period	Position	Institution
January 1999 to April 2002	Graduate student (grant awarded by the Foundation of FCUL)	Science Faculty of Lisbon University (FCUL)
May 2002 to June 2004	Biologist (as an expert on freshwater fish, biological databases and GIS)	Nature Conservancy Institute (ICN, Portugal)
Since April 2003	PhD student (grant awarded by Science and Technology Foundation (FCT, Portugal) (SFRH/BD/ 10330/2002)	Science Faculty of Lisbon University (FCUL, Portugal)

### Research area

Ecology, biogeography, conservation, biodiversity databases, geographic information systems, and modelling of freshwater biota

### Specialization

- Freshwater biodiversity and conservation: species richness, distribution and abundance, community structure, species introductions, natural reserves;
- Ecological databases and modeling: biological databases linked with geographical information systems (GIS), landscape and habitat characterization regarding freshwaters (disturbance, hydrology, geology, clima), species richness modeling, species modeling, selection and design of natural reserves, classical statistics, and sensitivity analysis;
- Iberian freshwater fish fauna: taxonomy, biogeography, ecology, life-history, and management.

### Research interests

*My current research addresses the landscape patterns and processes of freshwater fishes in the Iberian Peninsula. It is focused on understanding and predicting the role of landscape heterogeneity and structure on species distributions and richness, towards a linkage with the ecological processes involved, particularly those related with community structure, life-history, and evolution. I consider these questions challenging, and even more since freshwater biota are restricted to the patchiness and hierarchical natural structure of streams. Moreover, this biota is highly endangered.*

### Skills

#### SKILLS

Trained on Iberian fish taxonomy, freshwater field protocols (fish and macroinvertebrates sampling, habitat characteristics, fish blood sampling, fish handling), and IBI index. Expertise on working with softwares of Statistic Analyzes (as STATISTICA, SPSS, S-PLUS, R), Hydrological GIS (as ESRI), and on softwares of Biogeography, Biology, Ecology, and Conservation (as PRIMER, SAM, EcoSim, EstimateS, Brodgar).

## CLASSES

- Graduate courses of GIS Applications in Natural Resource Management, Stream Habitat Management, and Philosophy of Science, by Virginia Tech & State Univ. (2004, USA)
- Landscape Ecology Workshop by J A Bissonette of Utah State Univ. USA. (2003, FCUL, Portugal)
- Geographic Information Systems (GIS) Course (class. 18 max.20) by Technical Formation Institute (2001, Portugal)
- Drawing and painting Course by ArCo (1993–8, Portugal)

## ACTIVITIES

- Reviewer of journals as Journal of Biodiversity and Conservation, Journal of Biogeography, Aquatic Conservation, Transactions of the American Fisheries Society, Biodiversity and Conservation, ...
- Collaborator of national and international NGOs as Nature Protection Association (LPN, Portugal), Conservation International (CI)
- Author of scientific divulgation books, drawing works and scientific illustrations

## Supervising experience

Since 1998, advanced training on freshwater fish sampling procedures, and on freshwater habitat characterization to undergraduated students (at Science Faculty of Lisbon University). Also, technical support for graduation thesis (at Science Faculty of Lisbon University)

## Projects

### Since April 2003:

- PhD project entitled "Patterns and processes of freshwater fish distribution and diversity in the Iberian Peninsula", at Science Faculty of Lisbon (Portugal)and University and Virginia Tech (USA). PhD grant by the Science and Technology Foundation (FCT, Portugal)(SFRH/BD/10330/2002).

### Worked as a team member (Biologist) at Nature Conservation Institute (ICN, Portugal):

- May 2002–June 2004. "Development of a database with spatial components in a GIS and application of the IUCN criteria for the development of the Red Data Book about freshwater and migratory fish of Portugal". Financed by Environmental Program and FEDER (Portugal).

### Worked as a team member (Graduate student) at Science Faculty of Lisbon University (FCUL, Portugal):

- Summer 2005. "Management plan of the Tagus International Natural Park (Portugal): fish". Environmental Biology Centre of Lisbon Faculty.
- 1999–April 2002. "Monitoring program of the environmental impacts of the Alqueva and Pedrogão dams". Financed by Development and Infrastructure of Alqueva Company (EDIA, Portugal).
- 1999 – 2000. "Minimization and compensation program of the environmental impacts of the Alqueva and Pedrogão dams: Biology and ecology studies for freshwater fish". Financed by Development and Infrastructure of Alqueva Company (EDIA, Portugal).
- 1999. "Mira and Arade Drainage Plan: fish community characterization at reference and non–reference sites". Financed by National Water Institute (INAG, Portugal).
- 1998. "Water transfer project between Guadiana and Sado Drainages". Financed by Development and Infrastructure of Alqueva Company (EDIA, Portugal).
- 1998. "Guadiana Drainage Plan: fish community characterization at reference and non–reference sites". Financed by National Water Institute (INAG, Portugal).
- 1997–1998 and 2000. "Conservation strategy for saramugo (*Anaecypris hispanica*), a highly endangered fish endemism". Financed by LIFE–Nature program, B4–32000/97/280 contract (Portugal, European Union).

### Worked as a team member (Undergraduate student) at Science Faculty of Lisbon University (FCUL, Portugal):

- 1997. Fieldwork on "Basis for the conservation strategy of *Lacerta monticola* and their habitats". Coordinated by Dr. Octávio Paulo of Science Faculty of Lisbon University (FCUL; Portugal).
- 1997. Fieldwork on "Basis for the conservation strategy of *Lacerta schreiberi* and their habitats". Coordinated by Dr. Octávio Paulo of Science Faculty of Lisbon University (FCUL; Portugal).
- 1997. Fieldwork and data analyses on "Conservation Biology of *Chamaleo chamaleon* at Algarve". Coordinated by Dr. Octávio Paulo of Science Faculty of Lisbon University (FCUL; Portugal).
- 1994. Fieldwork on "Monitoring and control of lizard populations of *Lacerta lepida* at Berlengas Island". Coordinated by Octávio Paulo of Science Faculty of Lisbon University (FCUL; Portugal).

## Awards

- 1997 – Best scientific poster for young researchers. ECSA Local Meeting 1997

## Languages

Portuguese (native language), English (second language), French and Spanish (comprehension)

## Publications

### Thesis

- FILIPE A.F. 1998. Spatial modelling of the distribution of freshwater species, in two seasons of the hydrological regime of the lower part of the Guadiana River Basin (Portugal. Science Faculty of Lisbon University. Thesis for the graduation degree at Biology Applied to Animal Resources at the Faculty of Sciences, Lisbon University, and presented at the Animal Biology Department. 49pp.

### Books

- COLLARES-PEREIRA M.J., FILIPE A.F. & MOREIRA DA COSTA L. In press. Os peixes do Rio do Guadiana: Que futuro? Guia dos peixes do Guadiana Portugêses. Cosmos.

### Book chapters

- MOREIRA DA COSTA L., FILIPE A.F. & COLLARES-PEREIRA M.J. In press. As comunidades piscícolas e a definição de áreas prioritárias de conservação na bacia hidrográfica do Guadiana. In *Trabalhos de Biologia em Alqueva e Pedrógão*. EDIA.
- ROGADO L. (COORD.), ALEXANDRINO P.J., ALMEIDA P.R., ALVES M.J., BOCHECHAS J., CORTES R.V., DOMINGOS M.I., FILIPE A.F., MADEIRA, J.M. & MAGALHÃES M.F. 2006. Peixes dulciaquícolas e migradores. In *Livro Vermelho dos Vertebrados de Portugal*. Cabral MJ et al. (Eds). Instituto da Conservação da Natureza. Lisboa. Information available at [www.icn.pt](http://www.icn.pt) (20-6-2004).

### International papers with referees

- TIAGO P., RIBEIRO F., MOREIRA DA COSTA L., FILIPE A.F. & COLLARES-PEREIRA M.J. In preparation. Life history traits, distribution and habitat preferences of *Chondrostoma willkommii* (Osteichthys, Cyprinidae) in the South of Iberian Peninsula.
- FILIPE A.F., MARQUES T., SEABRA, S., TIAGO P., RIBEIRO F., MOREIRA DA COSTA L., COWX, I.G. & COLLARES-PEREIRA, M.J. 2004. Defining priority areas for fish conservation in riverine ecosystems. *Conservation Biology*, 18 (1): 189-200. IF=3.672
- RIBEIRO F., COWX I.G., TIAGO P., FILIPE A.F., MOREIRA DA COSTA L., & COLLARES-PEREIRA M.J. 2003. Growth and reproductive traits of diploid and triploid forms of the *Squalius alburnoides* cyprinid complex in a tributary of the Guadiana River, Portugal. *Archiv für Hydrobiologie*:156 (4):471-484. IF=1.261
- FILIPE A.F., COWX, I.G. & COLLARES-PEREIRA, M.J. 2002. Spatial Modelling of Freshwater Fishes in Semi-Arid River Systems: a Tool for Conservation. *River Research and Applications*, 18 (2):123-136. IF=1.306

### Other publications

- MAGALHÃES M.F., RIBEIRO F.V. & FILIPE A.F. 2005. Management Plan of the International River Tagus Natural Park: the fish fauna. Environmental Biology Centre of Lisbon Faculty.
- FILIPE AF. 2004. Revision of the Red Data Book of the Vertebrates of Portugal: freshwater and migratory fish. Final Report. Portuguese Conservation Institute (ICN). 85 pp.
- MOREIRA DA COSTA L., FILIPE,A.F. & COLLARES-PEREIRA M.J. 2003. Monitoring program for the natural patrimonium - monitoring plan of freshwater fish of the Alqueva and Pedrogao Region. Final Report. CBA-FCUL. 161 pp.
- TIAGO P., RIBEIRO F., FILIPE A.F., MIEIRO C.L., MOREIRA DA COSTA L., COLLARES-PEREIRA M.J.. 2001. Minimizing program of the Natural patrimony - Biology and ecology studies for freshwater fish- Alqueva and Pedrógão Region. 224 pp.
- COLLARES-PEREIRA M.J., COELHO M.M., RODRIGUES J.A., ALVES M.J., RIBEIRO F., MOREIRA DA COSTA L., FILIPE A.F., COELHO M.H., TIAGO P., MARQUES T.L., ROGADO L., COWX I.G.. 1998. Conservation strategy for Saramugo (*Anaocypris hispanica*), a highly endangered species. 1st Progress Report, Life-Natureza Program, contract number B4-32000/97/280, Lisboa. 34 pp.

## Communications

### By invitation

- FILIPE A.F. & SEGURADO P.. 2006. GBIF network potentialities for the user: ecological modelling of species occurrence data. Workshop of the GBIF network data: the DiGIR protocol. Global Biodiversity Information Facility. Nacional Museum of Natural History. Lisboa, Portugal.
- RIBEIRO F., MOREIRA DA COSTA L., TIAGO P., FILIPE A.F. & COLLARES-PEREIRA M.J.. 2003. On the biology and ecology studies of freshwater fish at Alqueva and Pedrógão region. *Biology works at Alqueva: Nature Conservation at Alqueva, three years after*. EDIA. Évora, Portugal.
- COLLARES-PEREIRA M.J., FILIPE A.F., RIBEIRO F., TIAGO P., SILVA R., SEABRA S., MARQUES, T. & COWX I. G.. 2000. Freshwater fish community in Guadiana Basin of Portugal: the conservation status. Reunion of scientific works in Alqueva region. EDIA. Beja, Portugal.

### Others

- FILIPE A.F., MAGALHÃES M.F., RIBEIRO F; PIRES D; COLLARES-PEREIRA M.J.. 2006. Regional influences on local richness of fish assemblages at the Western Iberian drainages: is there room for more species? Ecology of stream fish: state of the art and future prospects - Symposium II. School of Biological Sciences of University of Leon. Leon, Spain.
- FILIPE A.F., MAGALHÃES M.F., PIRES A.M., PIRES D., RODRIGUES P., SOUSA G., RIBEIRO F., MOREIRA DA COSTA L., MESQUITA N., CARVALHO C., MONTEIRO R., PENHA F., COELHO M.M. & COLLARES-PEREIRA M.J.. 2005. Connecting science to water management policies for riverine fish conservation: present and future challenges. Seminary of fluvial territories and Sustainable Management of water. School of Technology and Polytechnic Institute of Tomar. Tomar, Portugal.
- RIBEIRO F., SILVA R., SEABRA S., TIAGO P., MARQUES T., FILIPE A.F., MOREIRA DA COSTA L. & COLLARES-

PEREIRA M.J.. 2000. Bio-ecology aspects of diploid and triploid of *Leuciscus alburnoides* complex (pisces, Cyprinidae) in Guadiana Basin. X Congress of Spanish Association of Limnology and II Iberian Congress of Limnology. Valência, Spain.

- TIAGO P., MARQUES T., FILIPE A.F., RIBEIRO F., SILVA R., SEABRA S. & COLLARES-PEREIRA M.J.. 2000. The Exotic ichthyofauna of Guadiana Basin: actual situation. 1st symposium about alien species. Lisboa, Portugal.
- FILIPE A.F., COWX I.G. & COLLARES-PEREIRA M.J.. 1999. Spatial modelling of the distribution of some endemic Cyprinids of Guadiana Basin. Some aspects for conservation strategy. 4th National Meeting of Ecology Aveiro of the Portuguese Ecological Society. Aveiro, Portugal.
- FILIPE A.F., COWX I.G. & COLLARES-PEREIRA M.J.. 1999. Spatial modelling of endangered cyprinid species distribution in a semi-arid river system: a tool for conservation. Mediterranean Stream Fish Ecology and Conservation Workshop. Rhodes, Greece.
- RODRIGUES J.A., COSTA L., ROGADO L., RIBEIRO F., FILIPE F., TIAGO P., COWX I.G. & COLLARES-PEREIRA M.J.. 1998. Environmental constrains of threatened endemic fishes of Portuguese Guadiana Basin. 1st Iberian Congress of Limnology / IX Spanish Congress of Limnology: Conservation and Management of Hydric Resources of Iberian Peninsula. Évora, Portugal.

## Posters

- FILIPE A.F., ARAÚJO M.B, DOADRIO I. & COLLARES-PEREIRA, M.J.. 2007. Factors driving spatial variation in fish species composition within the Iberian Peninsula. 3rd Biennial Conference of International Biogeography Society. Tenerife, Spain.
- FILIPE A.F. & COLLARES-PEREIRA M.J.. 2005. What Environmental variables can be used in stream ecology applications in Mediterranean Landscapes? A review. European IALE Congress 2005: Landscape Ecology in the Mediterranean: inside and outside approaches. Faro, Portugal.
- RIBEIRO F, MOREIRA DA COSTA L., TIAGO P., FILIPE A.F. & COLLARES-PEREIRA M.J.. 2004. Proposed compensation and minimization for the conservation of freshwater fishes after Alqueva Project. Iberic Congress of Limnology. Porto, Portugal.
- TIAGO P., MOREIRA DA COSTA L., RIBEIRO F., FILIPE A.F., MIEIRO C.L., COWX, I.G. & COLLARES-PEREIRA M.J.. 2001. On the distribution and biology of the sympatric barbel species inhabiting the Guadiana river basin in Portugal. 10th European Congress of Ichthyology-ECI X. Prague, Check Republic.
- FILIPE A.F., SEABRA S., MARQUES T., SILVA R., TIAGO P., RIBEIRO F., COWX I. & COLLARES-PEREIRA M. J.. 2000. A methodology for the definition of priority areas for conservation. International symposium freshwater fish conservation: options for the future. Albufeira, Portugal.
- MARQUES T., SILVA R., TIAGO P., FILIPE A.F., RIBEIRO F., COWX, I. & COLLARES-PEREIRA M.J. 2000. Towards the conservation of endemic fish species in the region of the Alqueva Multipurpose Project. International symposium freshwater fish conservation: options for the future. Albufeira, Portugal.
- SEABRA S., TIAGO P., MARQUES T., FILIPE A.F., RIBEIRO F., SILVA R., MOREIRA DA COSTA L. & COLLARES-PEREIRA M.J. 2000. The exotics freshwater fishes of the Guadiana Basin in Portugal. X Congress of Spanish Association of Limnology and II Iberian Congress of Limnology. Valência, Spain.
- DA COSTA L.M., MARQUES T., FILIPE A.F., TIAGO P., SILVA R., RIBEIRO F., SEABRA S. & COLLARES-PEREIRA M.J. 2000. Distribution and ecology of freshwater blenny *Salaria fluviatilis* in Guadiana River Basin in Portugal. X Congress of Spanish Association of Limnology and II Iberian Congress of Limnology. Valência, Spain.
- BELDADE M., FILIPE A., LOPES M., NOBRE T. & REIS M. 1997. Fishing Activity on a Fragment of the Coast Line Neighbouring the Tagus Estuary. ECSA Local Meeting 1997: The Tagus Estuary and Adjoining Coastlines. Lisboa, Portugal.
- Exhibition in "Guild of Natural Science Illustrators: International Conference Portugal 2000" – Évora, Lisbon, Sagres (Portugal) – "*Barbus comizo*" e "*Barbus microcephalus*" illustrations in "the annual members exhibit"
- Exhibition for the exhibition and materials of the Landscape Centre of Amendoeira da Serra, 2003 (Portugal): participation in the design and illustrations
- Publication of scientific illustrations the divulging science poster "Resident and native fish of Guadiana Basin"
- Publication of scientific illustrations in Nature Tribune Journal, 5 (2000)
- Publication of scientific illustrations in Men Magazine (2001)
- Publication of illustrations in the WWF publication about landscape rehabilitation in the southern of Portugal – the Green Belt project (2004)
- Publication of scientific illustrations in Fish Cytogenetics book by Pisano, E. et al. (in press)
- Publication of scientific illustrations of fish head bones at a scientific journal (in preparation)
- Teaching at Atelier Watercolours 24 September 2006 (Inserted at VilaReal de Sto António activities (Portugal)

Artistic  
publications,  
exhibitions,  
teaching