

Dr. Cécile PATRELLE

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Birthday: april 23th 1981



GENERAL FIELD

Evolutionary Ecology, Molecular Biology, Hybridization Complex, Life-History Traits, Amphibians.

EDUCATION

- 2007-2010** **PhD** in Biology, PhD thesis: "Hybridization complexes in European water frogs: genetic identification, ecological constraints, and adaptation abilities", [2C2A-CERFE](#) and [Angers University, \(France\)](#).
- 2006** **Master** "Alteration of Biological Systems", [Angers University](#).
- 2004** **Bachelor's degree** in "Organism biology", [Angers University](#).
- 1999** **A Level** in scientific section, [Robert Garner College](#).

TEACHING AND SUPERVISION

- 2009-2011** **Research and teaching assistant (teaching fellow)**, 384 hours in the Unit Research "Environmental Studies on anthropic systems", [Angers University](#).
- 2008-2009** **Teaching assistant (instructor)**, 64 hours in a year, [Angers University](#).

Practical works 1st-3rd year of Biology: Animal biology, Deuterostomiens and Vertebrates anatomy and osteology, Animal adaptation, Systematic and evolutionary biology, Statistical tools, Reproductive strategies.

Practical works 4-5th year of Biology: field investigations and environmental management.

Supervision of 4 students (in Master's degree).

RESEARCH EXPERIENCES

2007-2010 **Study of hybridization complex of water frogs (*Pelophylax* genus) in the Northern part of France.**

Taxonomic identification using new molecular tools (Allozymes, PCR-RFLP method on ITS2, microsatellites).

Observation of habitat effect on life-history traits and larval performances of hybrids tadpoles.

Analysis of environmental effects on taxonomic distribution (aquatic and terrestrial parameters) and ecological constraints.

Evaluate intra-hybrid variations in life history traits of *P. kl. esculentus* tadpoles originating from different habitats in order to test their acclimatation abilities and understand their evolutionary success.

PhD thesis in "2C2A-CERFE" and in the Unit Research "Environmental Studies on anthropic systems".

Director: Dr. Alain Pagano, Angers University, Supervisors: Dr. Rémi Helder, 2C2A-CERFE.

Members of the PhD comity: Dr. Dirk Schmeller (CNRS, SEEM) and Dr. Sandrine Plénet (Lyon University).

Members of the comity of the PhD defence: Dr. David Lesbarrères (Laurentian University), Dr. Gaston-Denis Guex (Zurich University), Pr. Claude Miaud (Savoie University) , Pr. Jean Clobert (CNRS, SEEM)

2005-2006 **Molecular markers and temporality adaptation of *Pelophylax grafi* complex.**

Master thesis in Animal Ecology Laboratory, Angers University, Director: Alain Pagano.

2004 **Hybridogenesis in female water frogs: experimental protocol to analyse oocyte genotypes and ploidy level.**

Master thesis in Animal Ecology Laboratory, Angers University, Director: Alain Pagano.

PUBLICATIONS

Cécile Patrelle, Torsten Ohst, Damien Picard, Alain Pagano, Stéphane Sourice, Marie-Gaëlle Dallay, and Jörg Plötner. A new PCR-RFLP-based method for an easier systematic affiliation of European water frogs. *Mol Ecol Res* (doi: 10.1111/j.1755-0998.2010.02905.x).

Alain Pagano, Olivier Pays, Stéphane Sourice, **Cécile Patrelle**, Damien Picard & Ould Sehla Daf. Can we neglect environmental features when regarding morphological water frog traits? (Accepted with modifications in *Amphibia Reptilia*).

Cécile Patrelle, Stéphane Sourice, et Alain Pagano. Heterosis and clonal genome effects: Preliminary results of larval performances of *Pelophylax perezi*, *P. kl. grafi* and *P. ridibundus* (Ranidae, Pelophylax). (submitted in *Herpetologica*).

Cécile Patrelle, Stéphane Sourice, Olivier Pays, Audrey Chaput-Bardy, Alain Pagano. Evolutionary success of hybrids: Larval performance variations of water frogs *Pelophylax klepton esculentus* tadpoles regarding different habitats. (submitted in *Canadian Journal of Zoology*).

Alain Pagano, Christophe Henry, **Cécile Patrelle**, Gaston-Denis Guex. Breeding habitat partitioning in the *Pelophylax esculentus* complex: General predicted pattern. (in prep)

OTHER CONTRIBUTIONS

Oral contributions :

- 2009 **Congres of the Societas Europea Herpetologica (Kusadasi, Turkey)**
Patrelle C., Pagano A., Sourice S., Thiebaut M. ¹ Picard D. A RFLP- method for an easier taxonomic affiliation of european water frogs.
- 2008 **Congrès annuel de la Société Herpétologique de France (La Rochelle, France)**
Patrelle C., Pagano A., Sourice S., Thiebaut M. ¹ Picard D. Nouvelles méthodes d'identification génétique des grenouilles vertes Européennes.
- 2008 **6th European Conference on Ecological Restoration (Gand, Belgium)**
Patrelle C., Sourice S., Pays-Volard O., and Pagano A. Larval development of *Pelophylax esculentus* tadpoles (Amphibia, Ranidae) from two different habitats: preliminary results about impact of climatic warming and acclimatation ability.
- 2008 **9ème rencontre bathracologiques de la Région Centre (Sully-sur-Loire, France)**
Patrelle C. Structure du peuplement en grenouilles : forêt vs prairie.

Posters

- 2009 “ **Forum of PhD**” of PhD School, [Angers University](#)
Cécile Patrelle, Stéphane Sourice, et Alain Pagano. Une grenouille verte peut en cacher une autre.
- 2008 **Congrès annuel de la Société Herpétologique de France (La Rochelle, France)**
Patrelle C., Sourice S., Pays-Volard O., Pagano A. Développement larvaire et capacité d'acclimatation de têtards *Pelophylax esculentus* (Amphibia, Ranidae) venants de deux habitats différents.

TECHNICAL SKILLS

- **Field biology** : Amphibian captures, habitat characterization, water analysis (spectrophotometry, titrations), survey of fauna and flora (IPA, CMR).
- **Molecular technics** : microsatellites, RFLP, clonage, SNPs, allozymes.
- **Experimental** : experimental design, artificial fertilization, amphibian anaesthesia, breeding tadpoles.
- **Data management and statistics**: population genetics software (BIOEDIT, CLC Combined Workbench, GeneMapper, GENETIX, GENEPOP, STRUCTURE, MICRO-CHECKER), linear models (STATISTICA, ADE4, R), and Geographical Information System (basis in ARCVIEW-ARCGIS).
- **Language** : French (native language), English (nearly fluent), Spanish (basics).

PUBLIC AND NATURALIST ANIMATIONS

- Delegate of **“the International Year of Biodiversity”** in marsh 2010 in Angers University.
- Conferences **“Vous avez dit grenouilles vertes”** and **“Le bonheur est dans la mare”** during **RAMSAR DAYS** (2008 /2009)
- Scientific animations **“l'écosystème mare”** with kids in Stenay and Buzancy **schools** (2007-2009).
- Conferences in **Nocturnia Museum** (2007 et 2008)
- Scientific animations for naturalist associations **“ANUA”** (2005 à 2008)

ACTIVITIES AND INTEREST

- 2008/2009** **Scientific expertising** for **“la Fédération des Chasseurs du Morbihan”** and for **“l'ONCFS, Délégation de Loire-Atlantique”** (Formation of technical staff to amphibian captures and swabing, genetic analysis to taxonomic identifications)
- 2006/2009** **Scientific expertising** for **“le Bureau d'étude AEPE-GINGKO”** (Wetland inventories and management propositions)
- 2009** LEVEL 1 in Scuba-diving
- 1996/2000** Horse riding

REFERENCES

Dr Alain Pagano

PhD supervisor

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