

 **Françoise DAVERAT**

 Born 21/02/1975

 French
 Irstea Bordeaux

 EABX Research Unit

**Present adress**

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**Education**

**2012** Habilitation à diriger des recherches (formely doctorat d’état) University of Bordeaux I ( French diploma giving access to the grade of professor)

**2005** Ph.D. in Oceanography, University of Bordeaux I

**1998** Ingeneer of Ecole Nationale des Ingénieurs des Travaux Agricoles de Bordeaux equivalent to M.Sc. in agriculture and ecology

**Present position**

Since February 2001 : Researcher (Ingeneer of research) at Irstea estuarine ecosystems and diadromous fishes research unit

2014- Head of diadromous fish team (around 20 research fellows within EABX RU)

2017- Senior researcher EABX research team

**Financial Support of Academic Activities and Research**

**2019** coordination of MICMAQ project Labec Cote

**2018**- **2019** SUDOANG project as a participant DiadES Interreg project as a participant

**2018** BARFRAY FEAMP project supervision of a postdoc on Sea Bass migration

**2018-** MEDOCANG project project on eel restocking impacts on eel ecology and selection processes

**2017**- Alosa alosa Art&Science self contained kayak expedition 320 km along Garonne River

**2016-** supervision ofFAUNA, project on *Alosa alosa* and *Alosa fallax* (Regional & EU funds)

**2016-** supervision ofSHAD’EAU project on *Alosa alosa* conservation (Water agency funds)

**2013-2015** Fhotomod project (a Labex COTE project)

**2014-2015** ALOERRA Supervision of post doc project on anadromous fish dispersal

**2013-2014** Art and science projet Protolithe (funded by Labex COTE)

**2012-2014** Supervision PhD project “selection pressure of obstacles on eel population” HYNES joint laboratory EDF-Irstea

**2010-2011** Regional project supervision of a post-doctoral project on eel

**2009-2011-2019** Chair of the Working group on Age Reading of European and American Eel

**2008–2010** The Research Council of Aquitaine Region. “Sustainable management of diadromous fishes and their environment.” (Principal investigators: Eric Rochard, Patrick Lambert, Thomas Trancart, and Françoise Daverat)

**2008–2010** ANR (National Agency for Research fund). “EELSCOPE: Eco-toxicological and Economical Liability of eel exposed to Seasonal and global Change-induced O2-depletion and Pollution in Estuaries.” (Principal investigators: Joerg Shaefer, Françoise Daverat, Hélène Budzinski, Magali Baudrimont)

**2008–2010** European Union Seventh Framework Program. “EELIAD: European Eels in the Atlantic: Assessment of Their Decline, Task4: Population scale phenomena ” (Principal investigators: David Righton, Hakan Wickström, Françoise Daverat)

**2002-2005** PhD funded by ECOBAG program “Tactics and demography of eel in a large river catchment : insights from otoliths” Principal investigators : Françoise Daverat, Javier Tomas, Ronan Fablet, Hélène De Pontual.



**Art/science work**

**Protolithe Installation**

A collaboration with D Garnier (poet), C. Pecheyran (chemistry researcher) and G. Kurtag (music composer)

**Alosa alosa scientific and artistic light expedition**

A collaboration with D Garnier (poet), M Gribinski (photograph). A 350 km Kayak expedition in autonomy from the shads spawning grounds to the open sea.

**Papers Delivered at Conferences: 15** since 2001

**Postgraduate Training: 2** doctoral student; 1 post-doc student, 5 masters students

**Peer Review Activity For Funding Agencies:** Approximately 2 proposals per year.

**Peer Review Activity For Scholarly Journals:** Approximately 3 manuscripts per year

**Publications**

Journal articles (31)

Daverat, F., Beaulaton, L., Poole, R., Lambert, P., Wickstrom, H., Andersson, J., Aprahamian, M.W., Hizem, B., Elie, P., Yalçın-özdilek, S. & Gumus, A. 2012a. One century of eel growth: changes and implications. *Ecology Freshwater Fish* 21: 325-336.

Daverat, F., Elie, P. & Lahaye, M. 2004. Microchemistry contribution to a first approach to the diversity of life histories of eels from the lower part of the Gironde Garonne Dordogne watershed. *Cybium* 28: 83-90.

Daverat, F., Lanceleur, L., Pecheyran, C., Eon, M., Dublon, J., Schäfer, J., Baudrimont, M. & Renault, S. 2012 Accumulation of Mn, Co, Zn, Rb, Cd, Sn, Ba, Sr, Pb in the otoliths and tissues of eel (*Anguilla anguilla*) following long-term exposure in an estuarine environment. *Science of the Total Environment* 437: 323-330.

Daverat, F., Limburg, K.E., Thibaut, I., Shiao, J.C., Dodson, J.J., Caron, F., Tzeng, W.-N., Iizuka, Y. & Wickström, H. 2006. Phenotypic plasticity of habitat use by three temperate eel species *Anguilla anguilla*, *A. japonica* and *A. rostrata*. *Marine Ecology Progress Series* 308: 231-241.

Daverat, F. & Martin, J. 2016. Microchemical and Schlerochronological Analyses Used to Infer Fish Migration. *An Introduction to Fish Migration. CRC Press, Boca Raton, FL, USA (this book)*: 149-168.

Daverat, F., Martin, J., Fablet, R. & Pecheyran, C. 2011a. Colonisation tactics of three temperate catadromous species, eel Anguilla anguilla, mullet Liza ramada and flounder Plathychtys flesus, revealed by Bayesian multielemental otolith microchemistry approach. *Ecology of Freshwater Fish* 20: 42-51.

Daverat, F., Morais, P., Dias, E., Martin, J., Babaluk, J., Fablet, R., Pecheyran, C. & Antunes, C. 2012b. Plasticity of European flounder life history patterns discloses alternatives to catadromy. *Marine Ecology Progress Series* 465: 269-282.

Daverat, F., Tapie, N., Quiniou, L., Maury Brachet, R., Riso, R., Eon, M., Laroche, J. & Budzinski, H. 2011b. Otolith microchemistry interrogation of comparative contamination by Cd, Cu and PCBs of eel and flounder, in a large SW France catchment. *Estuarine, Coastal and Shelf Science* 92: 332-338.

Daverat, F. & Tomas, J. 2006. Tactics and demographic attributes of the European eel (*Anguilla anguilla*): the case study of the Gironde watershed (Southwest France). *Marine Ecology Progress Series* 307: 247-257.

Daverat, F., Tomas, J., Lahaye, M., Palmer, M. & Elie, P. 2005. Tracking continental habitat shifts of eels using otolith Sr/Ca ratios: validation and application to the coastal, estuarine and riverine eels of the Gironde-Garonne-Dordogne watershed. *Marine and Freshwater Research* 56: 619–627.

Drouineau, H., Rigaud, C., Daverat, F. & Lambert, P. 2014. EvEel (evolutionary ecology-based model for eel): a model to explore the role of phenotypic plasticity as an adaptive response of three temperate eels to spatially structured environments. *Canadian Journal of Fisheries and Aquatic Sciences* 71: 1561-1571.

Fablet, R., Daverat, F. & Pontual, H.D. 2007. Unsupervised Bayesian reconstruction of individual life histories from otolith signatures: case study of Sr:Ca transects of European eel (Anguilla anguilla) otoliths. *Canadian Journal of Fisheries and Aquatic Sciences* 64: 152-165.

Le Pichon, C., Trancart, T., Lambert, P., Daverat, F. & Rochard, E. 2014. Summer habitat use and movements of late juvenile European flounder (< i> Platichthys flesus</i>) in tidal freshwaters: Results from an acoustic telemetry study. *Journal of Experimental Marine Biology and Ecology* 461: 441-448.

Martin, J., Bareille, G., Berail, S., Pecheyran, C., Daverat, F., Bru, N., Tabouret, H. & Donard, O. 2013a. Spatial and temporal variations in otolith chemistry and relationships with water chemistry: a useful tool to distinguish Atlantic salmon Salmo salar parr from different natal streams. *Journal of Fish Biology* 82: 1556-1581.

Martin, J., Bareille, G., Berail, S., Pecheyran, C., Gueraud, F., Lange, F., Daverat, F., Bru, N., Beall, E., Barracou, D. & Donard, O. 2013b. Persistence of a southern Atlantic salmon population: diversity of natal origins from otolith elemental and Sr isotopic signatures. *Canadian Journal of Fisheries and Aquatic Sciences* 70: 182-197.

Martin, J., Daverat, F., Pécheyran, C., Als, T.D., Feunteun, E. & Réveillac, E. 2010. An otolith microchemistry study of possible relationships between the origins of leptocephali of European eels in the Sargasso Sea and the continental destinations and relative migration success of glass eels. *Ecology of Freshwater Fish* 19: 627-637.

Martin, J., Rougemont, Q., Drouineau, H., Launey, S., Jatteau, P., Bareille, G., Bérail, S., Pécheyran, C., Feunteun, E., Roques, S., Clavé, D., Nachón, D.J., Antunes, C., Mota, M., Réveillac, E. & Daverat, F. 2015. Dispersal capacities of anadromous Allis shad population inferred from a coupled genetic and otolith approach. *Canadian Journal of Fisheries and Aquatic Sciences*.

Perrier, C., Daverat, F., Evanno, G., Pécheyran, C., Bagliniere, J.-L., Roussel, J.-M. & Campana, S. 2011. Coupling genetic and otolith trace element analyses to identify river-born fish with hatchery pedigrees in stocked Atlantic salmon (Salmo salar) populations. *Canadian Journal of Fisheries and Aquatic Sciences* 68: 977-987.

Podgorniak, T., Angelini, A., Blanchet, S., de Oliveira, E., Pierron, F. & Daverat, F. 2015a. Climbing experience in glass eels: a cognitive task or a matter of physical capacities? *Physiology & Behavior* 151: 448-455.

Podgorniak, T., Angelini, M., Oliveira, E.D., Daverat, F. & Pierron, F. 2016a. Selective pressure of fishways upon morphological and muscle enzymatic traits of migrating glass eels. *Canadian Journal of Fisheries and Aquatic Sciences*.

Podgorniak, T., Blanchet, S., De Oliveira, E., Daverat, F. & Pierron, F. 2016b. To boldly climb: behavioural and cognitive differences in migrating European glass eels. *Royal Society open science* 3: 150665.

Podgorniak, T., Milan, M., Pujolar, J.M., Maes, G.E., Bargelloni, L., De Oliveira, E., Pierron, F. & Daverat, F. 2015b. Differences in brain gene transcription profiles advocate for an important role of cognitive function in upstream migration and water obstacles crossing in European eel. *BMC Genomics* 16: 1.

Randon, M., Daverat, F., Bareille, G., Jatteau, P., Martin, J., Pecheyran, C., & Drouineau, H. (2017). Quantifying exchanges of Allis shads between river catchments by combining otolith microchemistry and abundance indices in a Bayesian model. ICES Journal of Marine Science.

Renault, S., Daverat, F., Pierron, F., Gonzalez, P., Dufour, S., Lanceleur, L., Schäfer, J. & Baudrimont, M. 2011. The use of Eugenol and electro-narcosis as anaesthetics: Transcriptional impacts on the European eel (Anguilla anguilla L.). *Ecotoxicology and Environmental Safety* 74: 1573-1577.

Selleslagh, J., Echard, A., Pécheyran, C., Baudrimont, M., Lobry, J. & Daverat, F. 2016. Can analysis of Platichthys flesus otoliths provide relevant data on historical metal pollution in estuaries? Experimental and in situ approaches. *Science of the Total Environment* 557: 20-30.

Trancart, T., Lambert, P., Daverat, F. & Rochard, E. 2014. From selective tidal transport to counter-current swimming during watershed colonisation: an impossible step for young-of-the-year catadromous fish? *Knowledge and Management of Aquatic Ecosystems*.

Trancart, T., Lambert, P., Rochard, E., Daverat, F., Coustillas, J. & Roqueplo, C. 2012. Alternative flood tide transport tactics in catadromous species: Anguilla anguilla, Liza ramada and Platichthys flesus. *Estuarine, Coastal and Shelf Science* 99: 191-198.

Trancart, T., Lambert, P., Rochard, E., Daverat, F., Roqueplo, C. & Coustillas, J. 2011. Swimming activity responses to water current reversal support selective tidal-stream transport hypothesis in juvenile thinlip mullet Liza ramada. *Journal of Experimental Marine Biology and Ecology* 399: 120-129.

Yokouchi, K. & Daverat, F. 2013. Modeling individual growth trajectories of the female European eel in relation to temperature and habitat-use history in the Gironde River, France. *Aquatic biology* 19: 185-193.

Yokouchi, K. & Daverat, F. in prep. Length at silvering of female eel: a reaction norm ?

Yokouchi, K., Fukuda, N., Miller, M.J., Aoyama, J., Daverat, F. & Tsukamoto, K. 2012. Influences of early habitat use on the migratory plasticity and demography of Japanese eels in central Japan. *Estuarine, Coastal and Shelf Science* 107: 132e140.

Yokouchi, K., Fukuda, N., Shirai, K., Aoyama, J., Daverat, F. & Tsukamoto, K. 2011. Time lag of the response on the otolith strontium/calcium ratios of the Japanese eel, *Anguilla japonica* to changes in strontium/calcium ratios of ambient water. *Environmental Biology of Fishes* 92: 469-478.

Books

(Daverat and Martin 2016; Morais and Daverat 2016a, b; Morais and Daverat 2016c; Morais and Daverat 2016d)

Daverat, F. & Martin, J. 2016. Microchemical and Schlerochronological Analyses Used to Infer Fish Migration. *An Introduction to Fish Migration. CRC Press, Boca Raton, FL, USA (this book)*. pp. 149-168.

Morais, P. & Daverat, F. 2016a. Definitions and Concepts Related to Fish Migration. *An Introduction to Fish Migration*. p. 14.

Morais, P. & Daverat, F. 2016b. History of Fish Migration Research. *An Introduction to Fish Migration*. p. 1.

Morais, P. & Daverat, F. 2016c. *An Introduction to Fish Migration*: CRC Press.

Morais, P. & Daverat, F. 2016d. Trends and Challenges in Fish Migration Research. *An Introduction to Fish Migration*. p. 20.