

# **Curriculum vitae**

## **PERSONAL INFORMATION**

\*Family name, First name: Durif, Caroline

\*Date of birth: 02.07.1973

\*Sex: F

\*Nationality: French, permanent residency in Norway

\*Languages: French (fluent), English (fluent), Norwegian (fluent, norskprøve 3), German (academic level).

Researcher unique identifiers (ORCID, ResearcherID, etc.): RID: A-6406-2011

URL for personal web site: <http://fishlarvae.org/people/caroline-durif/>

## **EDUCATION**

1998-2003 PhD : Aquatic Ecology, Université Paul Sabatier, Toulouse, France. Disputation date: 09.01.2003.

1997-1998 M.S. : Oceanography, Université Pierre et Marie Curie, Paris, France

1996-1997 B.A. : Population and Ecosystem Biology, Université Pierre et Marie Curie, Paris, France

## **CURRENT AND PREVIOUS POSITIONS**

2012-present Senior research scientist (forsker 1110) at the Institute of Marine Research (IMR), Austevoll research station, Storebø, Norway

2008-2011 Postdoctoral scientist at IMR-Austevoll, Norway

2004-2008 Postdoctoral scientist at CEES-University of Oslo/IMR-Austevoll, Norway

2002-2004 Postdoctoral scientist at IRSTEA, Bordeaux, France.

1998-2003 Doctorate at IRSTEA (National Research Institute in Science and Technologies for the Environment and Agriculture) formerly Cemagref, Bordeaux, France (Dr. P. Elie).

1997-1998 Internship, Université du Littoral, Wimereux, France (Dr. B. Sautour)

1996-1998 Internship, AMEX (Adaptation to extreme environments), CNRS, Paris, France (Dr. F. Gaill).

1995 Internship, Ontogeny and Fish Recruitment Laboratory, Wimereux Marine Station, France (Dr. P. Koubby)

## **CAREER BREAKS**

1 August 2006- 1 May 2007: maternity leave

1 October 2008 – 1 August 2009: maternity leave

1 November 2010- 1 September 2011: medical leave

## SCIENTIFIC QUALIFICATIONS

### 1. Peer reviewed publications

Total citations: 1339

H-index: 20

I-10 index: 28

1. Kennedy, J., **Durif**, C.M.F., Florin, A.B., Fréchet, A., Gauthier, J., Hüssy, K., Jónsson, S., Ólafsson, H.G., Post, S., and Hedeholm, R. (In press). A brief history of lumpfishing, assessment and management across the north Atlantic. ICES J. Mar. Sci.
2. Cresci, A., Samuelsen, O. B., **Durif**, C. M. F., Bjelland, R. M., Skiftesvik, A. B., Browman, H. I., and Agnalt, A.-L. (2018). Exposure to teflubenzuron negatively impacts exploratory behavior, learning and activity of juvenile European lobster (*Homarus gammarus*). Ecotoxicology and Environmental Safety 160, 216-221.
3. Drouineau, H., **Durif**, C., Castonguay, M., Mateo, M., Rochard, E., Verreault, G., Yokouchi, K., and Lambert, P. (2018). Freshwater eels: A symbol of the effects of global change. Fish and Fisheries 19, 903-930.
4. Poole, W.R., Diserud, O.H., Thorstad, E.B., **Durif**, C.M., Dolan, C., Sandlund, O.T., Bergesen, K., Rogan, G., Kelly, S., Vøllestad, L.A., et al. (2018). Long-term variation in numbers and biomass of silver eels being produced in two European river systems. ICES J. Mar. Sci., fsy053-fsy053.
5. Nederlof, M.A.J., Durif, CM.F., Verdegem, M.C.J., Booms, R.G.H, de Vries, E., van Ginneken, V.J.T. 2017. Giant Mealworm (*Zophobas Morio*) as a “Vehicle” to Transport Healthy Nutritional Ingredients from Seaweed (*Ascophyllum Nodosum*) towards Fish Cultured: Amino Acids. International Journal of Advances in Agricultural Science and Technology. 4(5): 1-13.
6. Sandlund, O.T., Diserud, O.H., Poole, R., Bergesen, K., Dillane, M., Rogan, G., **Durif**, C., Thorstad, E.B., and Vøllestad, L.A. (2017). Timing and pattern of annual silver eel migration in two European watersheds are determined by similar cues. Ecol. Evol. 7(15): 5956-5966.
7. **Durif**, C.M., Bonhommeau, S., Briand, C., Browman, H.I., Castonguay, M., Daverat, F., Dekker, W., Diaz, E., Hanel, R., and Miller, M.J. (2017). Whether European eel leptocephali use the Earth's magnetic field to guide their migration remains an open question. Current Biology 27, R998-R1000.
8. Cresci, A., Paris, C.B., **Durif**, C.M.F., Shema, S.D., Bjelland, R.M., Skiftesvik, A.B., and Browman, H.I. (2017). Glass eels (*Anguilla anguilla*) have a magnetic compass linked to the tidal cycle. Science Advances 3: e1602007, DOI: 10.1126/sciadv.1602007.
9. Bailey, A., Thor, P., Browman, H.I., Fields, D.M., Runge, J., Vermont, A., Bjelland, R., Thompson, C., Shema, S., **Durif**, C.M.F., et al. (2016). The early life stages of the Arctic copepod *Calanus glacialis* are unaffected by increased seawater pCO<sub>2</sub>. ICES Journal of Marine Science : Journal du Conseil, fsw066.
10. Halvorsen, K.T., Sørdsalen, T.K., **Durif**, C., Knutsen, H., Olsen, E.M., Skiftesvik, A.B., Rustand, T.E., Bjelland, R.M., and Vøllestad, L.A. (2016). Male-biased sexual size dimorphism in the nest building corkwing wrasse (*Syphodus melops*): implications for a size regulated fishery. ICES Journal of Marine Science: Journal du Conseil, fsw135.
11. Runge, J., Fields, D.M., Thompson, C.R.S., Shema, S.D., Bjelland, H.V., **Durif**, C.M.F., Skiftesvik, A.B., and Browman, H.I. (2016). End of the century CO<sub>2</sub> concentrations do not have a negative effect on vital rates of *Calanus finmarchicus*, an ecologically critical planktonic species in North Atlantic ecosystems. ICES J. Mar. Sci. 73, 937-950.

12. Durif, C.M.F., Fields, D.M., Browman, H.I., Shema, S.D., Enoae, J.R., Skiftesvik, A.B., Bjelland, R., Sommaruga, R., and Arts, M.T. (2015). UV radiation changes algal stoichiometry but does not have cascading effects on a marine food chain. *J. Plankton Res.* 37, 1120-1136. **Featured article for this issue.**
13. Fields, D.M., Runge, J.A., Thompson, C., Shema, S.D., Bjelland, R.M., Durif, C.M.F., Skiftesvik, A.B., and Browman, H.I. (2015). Infection of the planktonic copepod *Calanus finmarchicus* by the parasitic dinoflagellate, *Blastodinium* spp: effects on grazing, respiration, fecundity and fecal pellet production. *J. Plankton Res.* 37, 211-220.
14. Maneja, R.H., Frommel, A.Y., Browman, H., Clemmesen, C., Geffen, A.J., Folkvord, A., Piatkowski, U., Durif, C.M.F., Bjelland, R.M., and Skiftesvik, A.B. (2015). The swimming kinematics and foraging behavior of larval Atlantic herring, *Clupea harengus* L., are resilient to elevated pCO<sub>2</sub>. *J. Exp. Mar. Biol. Ecol.* 466, 42-48.
15. Skiftesvik, A.B., Durif, C.M.F., Bjelland, R.M., and Browman, H.I. (2015). Distribution and habitat preference of five species of wrasse (family Labridae) in a Norwegian fjord. *ICES J. Mar. Sci.* 72, 890-899.
16. Eriksen, E., Durif, C.M.F., and Prozorkevich, D. (2014). Lumpfish (*Cyclopterus lumpus*) in the Barents Sea: development of biomass and abundance indices, and spatial distribution. *ICES Journal of Marine Science: Journal du Conseil* 71, 2398-2402.
17. Melià, P., Crivelli, A.J., Durif, C., Poole, R., and Bevacqua, D. (2014). A simplified method to estimate body growth parameters of the European eel *Anguilla anguilla*. *J. Fish Biol.* 85, 978984.
18. Pampoulie, C., Skirnisdottir, S., Olafsdottir, G., Helyar, S.J., Thorsteinsson, V., Jónsson, S.P., Fréchet, A., Durif, C.M.F., Sherman, S., Lampart-Kałužniacka, M., et al. (2014). Genetic structure of the lumpfish *Cyclopterus lumpus* across the North Atlantic. *ICES J. Mar. Sci.* 71, 2390-2397.
19. Skiftesvik, A.B., Blom, G., Agnalt, A.L., Durif, C.M.F., Browman, H.I., Bjelland, R.M., Harkestad, L.S., Farestveit, E., Paulsen, O.I., Fauske, M., et al. (2014). Wrasse (Labridae) as cleaner fish in salmonid aquaculture - The Hardangerfjord as a case study. *Mar. Biol. Res.* 10, 289-300.
20. Fukunishi, Y., Browman, H.I., Durif, C.M.F., Bjelland, R.M., Shema, S.D., Fields, D.M., and Skiftesvik, A.B. (2013). Sub-lethal exposure to ultraviolet radiation reduces prey consumption by Atlantic cod larvae (*Gadus morhua*). *Mar. Biol.* 160, 2591-2596.
21. Skiftesvik, A.B., Bjelland, R.M., Durif, C.M.F., Johansen, I.S., and Browman, H.I. (2013). Delousing of Atlantic salmon (*Salmo salar*) by cultured vs. wild ballan wrasse (*Labrus bergylta*). *Aquaculture* 402, 113-118.
22. Durif, C.M.F., Browman, H.I., Phillips, J.B., Skiftesvik, A.B., Vøllestad, L.A., and Stockhausen, H.H. (2013). Magnetic Compass Orientation in the European Eel. *PLoS One* 8, e59212.
23. Fukunishi, Y., Browman, H.I., Durif, C.M.F., Bjelland, R.M., and Skiftesvik, A.B. (2012). The effect of UV radiation on the susceptibility of Atlantic cod larvae to predation. *PLoS One* 7, e35554.
24. Fukunishi, Y., Browman, H.I., Durif, C.M.F., Bjelland, R.M., and Skiftesvik, A.B. (2012). Effect of Sub-Lethal Exposure to Ultraviolet Radiation on the Escape Performance of Atlantic Cod Larvae (*Gadus morhua*). *PLoS One* 7, e35554.
25. Maneja, R.H., Frommel, A.Y., Browman, H.I., Clemmesen, C., Geffen, A.J., Folkvord, A., Piatkowski, U., Durif, C.M.F., Bjelland, R.M., and Skiftesvik, A.B. (2012). Effect of ocean acidification on the swimming kinematics of larval Atlantic cod, *Gadus morhua*. *Mar. Biol.*

26. **Durif**, C.M.F., Gjøsæter, J., and Vøllestad, L.A. (2011). Influence of oceanic factors on *Anguilla anguilla* (L.) over the twentieth century in coastal habitats of the Skagerrak, southern Norway. Proc. R. Soc. B 278, 464-473.
27. Fields, D.M., **Durif**, C.M.F., Bjelland, R.M., Shema, S.D., Skiftesvik, A.B., and Browman, H.I. (2011). Grazing Rates of *Calanus finmarchicus* on *Thalassiosira weissflogii* Cultured under Different Levels of Ultraviolet Radiation. PLOS ONE 6, e26333.
28. **Durif**, C.M.F., Elie, P., 2008. Predicting downstream migration of silver eels in a large river catchment based on commercial fishery data. Fisheries Manag. Ecol. 15, 127-137.
29. **Durif**, C.M.F., Travade, F., Rives, J., Elie, P., Gosset, C., 2008. Relationship between locomotor activity, environmental factors, and timing of the spawning migration in the European eel, *Anguilla anguilla*. Aquatic Living Resources 21, 163-170.
30. van Ginneken, V., **Durif**, C., Balm, S.P., Boot, R., Verstegen, M.W.A., Antonissen, E., van den Thillart, G., 2007. Silvering of European eel (*Anguilla anguilla* L.): seasonal changes of morphological and metabolic parameters. Animal Biology 57, 63-77.
31. van Ginneken, V., **Durif**, C., Dufour, S., Sbaihi, M., Boot, R., Noorlander, K., Doornbos, J., Murk, A.J., van den Thillart, G., 2007. Endocrine profiles during silvering of the European eel (*Anguilla anguilla*) living in saltwater. Animal Biology 57, 453-465.
32. **Durif**, C.M.F., Dufour, S., Elie, P., 2006. Impact of silvering stage, age, body size and condition on the reproductive potential of the European eel. Mar. Ecol. Prog. Ser. 327, 171-181.
33. **Durif**, C., Dufour, S., Elie, P., 2005. The silvering process of *Anguilla anguilla*: a new classification from the yellow resident to the silver migrating stage. J. Fish Biol. 66, 1025-1043. **242 citations.**
34. Gosset, C., Travade, F., **Durif**, C., Rives, J., Elie, P., 2005. Tests of two types of bypass for downstream migration of eels at a small hydroelectric power plant. River Res. Appl. 21, 1095-1105.
35. **Durif**, C., Elie, P., Dufour, S., Marchelidon, J., Vidal, B., 2000. Analysis of morphological and physiological parameters during the silvering process of the European eel (*Anguilla anguilla*) in the lake of Grand-Lieu (France). Cybium 24, 63-74.

## 2. Book chapters and essays

1. Castonguay, M., and **Durif**, C.M.F. (2016). Understanding the decline in anguillid eels. ICES J. Mar. Sci. 73, 1-4.
2. **Durif**, C.M.F. (2012). Review of "Eels: An Exploration, from New Zealand to the Sargasso, of the World's most amazing and mysterious fish" by James Prosek. Q. Rev. Biol. 87, 169.
3. **Durif**, C.M.F., van Ginneken, V., Dufour, S., Müller, T., and Elie, P. (2009). Seasonal evolution and individual differences in silvering eels from different locations. In Spawning migration of the European eel: Reproduction index, a useful tool for conservation management, Volume 30, G. Van den Thillart, S. Dufour and J.C. Rankin, eds. (Springer Netherlands), pp. 13-38.
4. Bruijs, M.C.M., and **Durif**, C.M.F. (2009). Silver eel migration and behaviour. In Spawning migration of the European eel: Reproduction index, a useful tool for conservation management, G. Van den Thillart, S. Dufour and J.C. Rankin, eds. (Fish & Fisheries Series 30, Springer), pp. 65-95.
5. **Durif**, C., Guibert, A., and Elie, P. (2009). Morphological discrimination of the silvering stages of the European eel. In Eels at the edge: science, status, and conservation concerns, J.M. Casselman and D.K. Cairns, eds. (Bethesda, Maryland: American Fisheries Society Symposium 58), pp. 103-111. Peer-reviewed

6. **Durif**, C., Gosset, C., Rives, J., Travade, F., and Elie, P. (2003). Behavioral study of downstream migrating eels by radio-telemetry at a small hydroelectric power plant. In *Biology, Management, and Protection of Catadromous Eels*, D.A. Dixon, ed. (Bethesda, Maryland: American Fisheries Society Symposium 33), pp. 343-356.

### 3. Reports

1. **Durif**, C. & Skiftesvik, A.B. 2018. Forskningsfangst etter ål (2017), sluttrapport. Rapport fra havforskningen. 27 p.
2. **Durif**, C. & Skiftesvik, A.B. 2017. Forskningsfangst av ål - Sluttrapport HI-prosjekt 81333. Rapport fra havforskningen. 50 p.
3. Bjelland, R.M., Halvorsen, K.A., **Durif**, C., Shema, S., Skiftesvik, A.B. 2017. Program rensefisk: Kunstig lys og rensefisk - Sluttrapport FHF prosjekt 901146. Rapport fra havforskningen, 43 p.
4. Jørgensen, T., Bjelland, R.M., Halvorsen, K.A., **Durif**, C., Shema, S., Skiftesvik, A.B. 2017. Seleksjon i leppefiskredskap: Rapport fra forsøk utført i 2016. Rapport fra havforskningen, 12 p.
5. Mortensen, S., Skiftesvik, A.B. Bjelland, R., Karlsbakk, E., **Durif**, C. og Sandlund, N. (2017). Bruk av rensefisk i lakseoppdrett. s. 161 - 173. I: Svåsand, T., Grefsrød, E.S., Karlsen, Ø., Kvamme, B.O., Glover, K., Husa, V., Kristiansen, T., (red.). Risikorapport norsk fiskeoppdrett 2017. Fisken og havet, særnr. 2 – 2017.
6. Loew, E.R., A.B. Skiftesvik, R. Bjelland, H.I. Browman & C. **Durif**. 2016. Spectral sensitivity and contrast potentials for four species of cleaner fish. Institute of Marine Research Report No. 39-2016. 12 pp.
7. **Durif**, C.M.F., Skiftesvik, A.B., 2011. Ressurs overvåking av ål i saltvann i «Forvaltningstiltak for ål i Norge (iverksatte og foreslalte tiltak)». DN-Notat 5-2011. Rapport til DN (Trondheim).
8. Espeland S.H., Nedreaas K.H., Mortensen S., Skiftesvik A.B., Agnalt A.L., **Durif** C. mfl. 2010. Kunnskapsstatus leppefisk Utfordringer i et økende fiskeri. Havforskningsinstituttet: Fisken og havet. 35 p.
9. Anonymous, 2008. Forvaltning av ål i Norge: Rapport med forslag til revidert forvaltning av ål i saltvann fra arbeidsgruppe nedsatt av Fiskeridirektøren, Fiskeridirektoratet og Havforskningsinstituttet, p. 63.
10. **Durif**, C.M.F., Knutsen, J.A., Johannessen, T., Vøllestad, L.A., 2008. Analysis of European eel (*Anguilla anguilla*) time series from Norway, Fisken og Havet, Institute of Marine Research, p. 22.
11. **Durif**, C., Elie, P., 2005. Silvering index of European silver eel at selected location, In: Estimation of the reproduction capacity of European eel. EELREP final report. 61 p.
12. **Durif**, C.M.F., Skiftesvik, A.B., 2005. Europeisk ål, in: Boxapen, K., Agnalt, A.-L., Gjøsæter, J., Jørgensen, L.L., Skiftesvik, A.B. (Eds.), Kyst og havbruk 2005, Fisken og havet, p. 55.
13. **Durif**, C., Ortusi, I., Elie, P., 2004. Caractérisation des stades dévalants chez l'anguille européenne (*Anguilla anguilla*), Grisam-Cemagref, p. 31.
14. **Durif**, C., Elie, P., 2002. Caractérisation des stades dévalants chez l'anguille européenne (*Anguilla anguilla*), GRISAM, p. 11.
15. **Durif**, C., Elie, P., 2002. Etude de la migration de dévalaison de l'anguille européenne (*Anguilla anguilla* L.), EDF/CSP, p. 60.
16. **Durif**, C., Elie, P., 2002. Silvering, maturation performance. In: Estimation of the reproduction capacity of European eel. Eelrep 2nd annual progress report. 127 p + annex.

17. Gosset, C., Travade, F., **Durif**, C., Rives, J., Garaicoechea, C., Elie, P., 2002. Etude des dispositifs de dévalaison pour l'anguille argentée-Tests de deux exutoires de dévalaison à la centrale hydroélectrique de Halsou (Nive-64). INRA/EDF, p. 46 p. + annexes.
18. Gosset, C., Travade, F., **Durif**, C., Rives, J., Garaicoechea, C., Elie, P., 2001. Etude des dispositifs de dévalaison pour l'anguille argentée-Tests de deux exutoires de dévalaison à la centrale hydroélectrique de Halsou (Nive-64). INRA/EDF, p. 46 p. + annexes.
19. **Durif**, C., Adam, G., Elie, P., 2000. Caractéristiques écobiologiques de la population d'anguilles en eau continentale lors de ses écophases successives : Application au cas du lac de Grand-Lieu., Cemagref, p. 36.
20. Gosset, C., Travade, F., **Durif**, C., Rives, J., Garaicoechea, C., 2000. Etude des dispositifs de dévalaison pour l'anguille argentée-Tests de deux exutoires de dévalaison à la centrale hydroélectrique de Halsou (Nive-64). INRA/EDF, p. 35 p. + annexes.
21. Koubbi, P., Sautour, B., Harlay, X., Cotonnec, G., **Durif**, C., 1999. Activity report of the BIOMAR (biodiversity and mapping of the English Channel) project - INTERREG, 30 p.
22. Adam, G., Elie, P., **Durif**, C., 1998. Etude écobiologique et ecophysioligique des anguilles du lac de Grand-Lieu. Cemagref, AGEDRA, CSP. 19 p, p. 19.

#### **4. Popular science magazines**

- Jónsdóttir, Ó. D. B., Imsland, A. K. D., Schregel, J., Hagen, S. B., Tobiassen, C., Aarnes, S. G., and **Durif**, C. M. F. (2018). Populasjonsstruktur av rognkjeks langs kysten av Norge: bedre føre var enn etter snar. In "Norsk Fiskeoppdrett", Vol. 43, pp. 46-49.
- Agnalt, A.L., Andersen, S., Asplin, L., Buhl-Mortensen, L., Buhl-Mortensen, P., **Durif**, C., mfl. 2017. Hav er mer enn vatn. Utstillingskatalog Havforskningsinstituttet. 114 p.
- Skiftesvik, A.B., Mortensen S., Nedreaas, K.H., Stockhause, H., Jørgensen, T., Utne-Palm, A.C., **Durif**, C., mfl. 2015 Fremdeles stort behov for kunnskap om leppefisk. In «Fisken og Havet», 75-78.
- Skiftesvik, A.B., **Durif**, C.M.F., Bjelland, R.M., Browman, H.I. 2013. Leppefisk og leveområde. In «Norsk Fiskeoppdrett», Issue 8, pp 95-98.
- Skiftesvik, A.B., **Durif**, C.M.F., Bjelland, R.M., Browman, H.I. 2013. Er oppdrettede berggylt så gode luseplukkere som villfanget leppefisk? In "Norsk Fiskeoppdrett", Vol. 43, pp. 86-90.
- Skiftesvik, A.B., **Durif**, C.M.F., Bjelland, R.M., Browman, H.I. 2013. Alder og vekst hos vill leppefisk. In "Norsk Fiskeoppdrett", Vol. 43, pp. 91-94.
- Andersen, J. Durif, C. 2006. Artsdatabankens faktaark. IDDN1504-9140 nr. 86. 3 p.  
<http://www2.artsdatabanken.no/faktaark/Faktaark86.pdf>

#### **5. Oral presentations at international conferences**

1. Halvorsen K.T., Skiftesvik, A.B., Sørdsalen, T.K., **Durif**, C., Bjelland, R., Browman, H. 2018. «Sustaining productive wrasse populations by applying fishery closures during the spawning season and slot-size limits and other capture gear modifications». ICES Annual Science Conference Symposium, 24-27 September 2018. Hamburg, Germany.
2. **Durif**, C. (invited speaker) "Understanding the decline of eels". Sustaining iconic diadromous fishes: The potential and pitfalls of cultivation. 17-19 June 2018, Arendal Norway.
3. **Durif**, C., Olsen, E., Simpfendorfer, C., Heupel, M. and Moland, E. "Depth, home range and migratory behavior of European eels tracked in coastal marine waters". ICES Annual Science Conference Symposium, 18-21 September 2017; Fort Lauderdale, Florida.

4. Williams, C. F., Lewin N.C., Richards R, Reading A. J, **Durif** C. & Way K.; "Status of Anguillid herpesvirus 1 (AngHV-1) in wild European eels in England – widespread opportunist or a cause for concern?" European Association of Fish Pathologists, Belfast, September 2017
5. **Durif**, C., Olsen, E., Simpfendorfer, C., Heupel, M. and Moland, E. "Depth, home range and migratory behavior of European eels tracked in coastal marine waters". 1<sup>st</sup> UK International Eel Science Symposium, 13-15 June 2017; Zoological Society of London.
6. **Durif**, C.M.F., Bjelland, R., Browman, H., Skiftesvik. 2016 "Atferd og samspill i laksemerd". Aqkva konferanse. Stord, Norway.
7. **Durif**, C.M.F. 2016 (**invited speaker**). "Orientation and navigation of the European eel using the Earth's magnetic field", FITFISH meeting, COST action, Belgrade, Serbia.
8. Cresci, A., C.B. Paris, C.M.F. **Durif**, S. Shema, R. Bjelland, A.B. Skiftesvik and H.I. Browman. Orientation of European glass eel (*Anguilla anguilla*) arriving at the Norwegian coast. Annual Larval Fish Conference, Vienna, Austria. July 2015.
9. Paris, C.B., H.I. Browman, A.B. Skiftesvik, S. Shema, M. Foretich, C.J. O'Brien, A. Cresci, R.M. Bjelland and C.M.F. **Durif**. Ontogeny of orientation in Atlantic haddock larvae measured in situ. Annual Larval Fish Conference, Vienna, Austria. July 2015.
10. **Durif**, C.M.F., Stockhausen, H.H., Browman, H.I., Skiftesvik A.B., Phillips, J., Vøllestad L.A 2014. "Orientation and navigation of the European eel using the Earth's magnetic field and its possible implications for management". 144<sup>th</sup> American Fisheries Society meeting, Quebec, Canada.
11. **Durif**, C. M. F., Browman, H. I., Fields, D., Shema, S., Fuschino, J., Bjelland, R. M., A.B., S., Arts, M. and Sommaruga, R. 2012. "Cascading effects of UV radiation on the nutritional quality of the food base in marine ecosystems". 36<sup>th</sup> Larval Fish Conference. Os, Norway.
12. **Durif**, C.M.F., O'Leary, C., Bevacqua, D., de Eyto, E., Poole, R., Walker, A., Aprahamian, A., 2012. "A comparison of available tools and indices for determining migratory status of European eel", 6th World Fisheries Conference, Edinburgh, UK.
13. Dietert, T., Kruschel, C., Schultz, S. and **Durif**, C. 2011. Simultaneous monitoring of the European eel (*Anguilla anguilla*) and its benthic environment by DGPS/video supported visual census in the Croatian Adriatic In 46th European Marine Biology Symposium. Rovinj, Croatia.
14. **Durif**, C., Elie, P., 2010. *Predicting downstream migration of silver eels in a large river catchment based on commercial fishery data*, 9th International Congress on the Biology of Fish, Barcelona, Spain.
15. **Durif**, C. 2007 Prediction of downstream migration of silver eels in a large river catchment. Workshop on "Eel behavior and dams – how can we facilitate the downstream migration of silver eels?" Institute of Freshwater Research, Drottningholm, Sweden. **Presenter and session chair**.
16. Travade, F., Gosset, C., Larinier, M., Subra, S., **Durif**, C., Rives, J. and Elie, P. 2006. Evaluation of surface and bottom bypasses to protect eel migrating downstream at small hydroelectric facilities in France. In Symposium on hydropower, Flood control and water abstraction : implications for fish and fisheries, . Mondsee, Austria.
17. **Durif**, C. 2005 Individual variability in the characteristics of silver eels and impact on the reproductive output DTU Aqua, Charlottenlund, Denmark. **Invited speaker**.
18. Dufour, S., Elie, P., Fouchereau-Peron, M., **Durif**, C., 2005. *Supressing maturation as a requirement for eel long distance migration: neuroendocrine mechanisms and implication for induced maturation*, Fish and Diadromy in Europe, 29 March- 1st April, Bordeaux, France.

19. Durif, C., Dufour, S., Elie, P., 2005. *Impact of individual morphological and physiological characteristics on the sexual maturation of the European eel (Anguilla anguilla)*. ICES Annual Conference - Advances in Reproductive Biology- 20- 24 September, Aberdeen, UK.
20. Durif, C., Elie, P., 2005. Silvering of European eels; seasonal changes of morphological and physiological parameters, Fish and Diadromy in Europe, 29 march- 1st April, Bordeaux, France.
21. Durif, C., Elie, P., 2003. *The silvering process of the European eel: characterization of intermediate stages for identification of downstream migrants*, International eel symposium, AFS meeting, Quebec, Canada.
22. Durif, C., Séchet, C., Elie, P., 2003. *Morphological and anatomical changes of the European eel during sexual maturation and under experimental conditions*, International eel symposium, AFS meeting, Quebec, Canada.
23. Begout-Anras, M.L., Durif, C., Gosset, C., Rives, J., Travade, F., 2001. *First results of a behavioural study on seaward migrating European eel near the intake of a hydroelectric power station: comparison of radio and acoustic telemetry methods*, IV Conference on Fish Telemetry in Europe, 26-30 June, Trondheim, Norway,
24. Durif, C., Elie, P., Dufour, S., Marchelidon, J., Vidal, B., 2000. *Morphological and physiological characterization of the eel population of lake of Grand-Lieu*, 1eres rencontres de l'Ictyologie en France, Paris, France. **Award for best oral presentation**
25. Durif, C., Elie, P., Gosset, C., Rives, J., Travade, F., 2000. *Preliminary results on the behavior of downstream migrating eels (Anguilla anguilla) using radio tracking devices during a study on the impact of a small hydroelectric power plant on the river Nive (Southwest of France)*. International Symposium on Catadromous Eels, American Fisheries Society, 20-24 August, Saint-Louis, MO, USA.

## 6. Poster presentations at international conferences

1. Fields, D.M., J.A. Runge, C. Thompson, S.D. Shema, R.M. Bjelland, C.M.F. Durif, A.B. Skiftesvik & H.I. Browman. Infection of the planktonic copepod Calanus finmarchicus by the parasitic dinoflagellate, Blastodinium spp: effects on grazing, respiration, fecundity and fecal pellet production. 6th International Zooplankton Symposium Bergen. May 2016.
2. Browman, H.I., J.A. Runge, D.M. Fields, C.R.S. Thompson, S.D. Shema, R.M. Bjelland, C.M.F. Durif & A.B. Skiftesvik. End of the century CO<sub>2</sub> concentrations do not have a negative effect on vital rates of Calanus finmarchicus, an ecologically critical planktonic species in North Atlantic ecosystems. 6th International Zooplankton Symposium Bergen. May 2016.
3. Durif, C., Fields, D.M., Browman, H.I., Shema, S., Enoae, J. Skiftesvik A.B., Bjelland, R., Sommaruga, R., Arts, Cascading effects of UV radiation on a simple marine food chain. 6th International Zooplankton Symposium Bergen. May 2016.
4. Belpaire, C., Brinker, A., Duinker, A., Durif, C., Ferrante, M., Geeraerts, C., Hoogenboom, R., Kotterman, M., Leblanc, J. C., Leroy, D. et al. 2012. Is the EU dioxin regulation contributing to the restoration of the eel stock? In 6th World Fisheries Conference, pp. Poster. Edinburgh, UK.
5. Bevacqua, D., Capoccioni, F., Dekker, W., Domingos, I., Durif, C., Esteve, M.-C., Evans, D., Godfrey, J., Nagel, F., Nermer, T., O'Leary, C., Poole, R., Walker, A., Wickström, H., Aprahamian, M., 2012. Spatial and temporal variation in the size and age at maturity for the European eel (Anguilla anguilla). 6th World Fisheries Conference, Edinburgh, UK.
6. Durif, C.M.F., Browman, H.I., Skiftesvik, A.B., Vøllestad, L.A., Stockhausen, H.H., Phillips, J., 2012. The Earth's magnetic field as an orientation cue for the short and long distance migration of the European eel: from behavioral experiments to management issues, 6th World Fisheries Conference, Edinburgh, UK

7. Durif, C., Travade, F., Elie, P., Gosset, C., 2005. Multiscale comparison of eel downstream migration and river discharge, American Eel Downstream Passage Technical Workshop, Cornwall, Canada.
8. Ortusi, I., Séchet, C., Durif, C., Elie, P., 2003. Variabilité des réponses morphologiques et anatomiques lors de la maturation sexuelle de l'anguille européenne femelle en station expérimentale: importance de la provenance, de la taille et de l'âge des individus, Journées anguilles du GRISAM, 9-10 septembre, Saint-Pée-sur-Nivelle, France.
9. Baisez, A., Durif, C., Rigaud, C., 2000. Characterization of the spatial distribution of European eel (*Anguilla anguilla*) in a reclaimed marsh on the French Atlantic coast, International Symposium on Catadromous Eels, American Fisheries Society, 20-24 August, Saint-Louis, MO, USA.
10. Durif, C., Adam, G., Dufour, S., Elie, P., Marchelidon, J., Sbaihi, M., Vidal, B., 1999. Preliminary results on the morphological and physiological characterization of the different stages of eel silverying, ICES/EIFAC WGeel meeting, Silkeborg, Denmark.
11. Durif, C., Luczak, C., Sautour, B., 1999. Spatial structure of planktonic ecosystems and its dynamics in an epicontinental and tidally influenced sea (Eastern English Channel), 4eme Congrès International Limnologie - Oceanographie: Variabilités temporelles au sein des hydrosystemes, 7-10 September, Bordeaux, France.
12. Durif, C., Grioche, A., Luczak, C., Sautour, B., 1998. Multivariate analysis and spatial distribution of zooplanktonic communities in the eastern English Channel, Symposium on Epicontinental and Regional Seas, Boulogne-sur-Mer, France.

## ADVISING

### 1. Institutional responsibilities

- 2012-now National delegate for wild lumpfish in Norway. Tasks involve:
- reporting to the Fisheries Directorate to establish fishing regulations
  - from 2016: providing scientific basis for the MSC certification (Marine Stewardship Council) assessment.
- 2005-now National delegate ICES WGEEL (working group on eel)
- 2015-2016 Chair of ICES WKEELDATA
- 2015-2016 co-Chair of ICES WKBECEEL
- 2014 Reviewer for IUCN (red listing of eel)
- 2012-2017 Member of WGLUMP: working group on lumpfish
- 2008, 2016 Delegate ADGEEL: ICES advice drafting group on eel
- 1999-2004: member of GRISAM (French eel scientific advisory group)

### 2. Organization of scientific meetings and chair responsibilities

- 2019 ICES WGEEL (**host**): working group on eel meeting, Bergen, Norway.
- 2017 ICES WKEELDATA (**Chair**): Workshop on Designing an Eel Data Call, held in Rennes, France
- 2017 WGLUMP (**host**): Stock assessment methods for lumpfish, held in Bekkjarvik, Norway.
- 2016 ICES WKBECEEL (**Chair/host**): Joint workshop of the ICES Working Group on Eel and the Working Group on Biological Effects of Contaminants, held in Os Norway
- 2015 39<sup>th</sup> annual Larval Fish Conference. Eel session **co-chair and organiser**. Vienna, Austria
- 2014 Eel Genome Symposium – **chair** of the ecology session – 16-17 January, Leiden, The Netherlands
- 2012 36<sup>th</sup> annual Larval Fish Conference (**organizing committee**). 150 participants; held in Os Norway.
- 2007 Prediction of downstream migration of silver eels in a large river catchment. Workshop on “Eel behavior and dams – how can we facilitate the downstream migration of silver eels?” **chair** - Institute of Freshwater Research, Drottningholm, Sweden
- 2005 Individual variability in the characteristics of silver eels and impact on the reproductive output DTU Aqua, Charlottenlund, Denmark. **Invited speaker**.

## RESEARCH PROJECTS (ongoing projects are in bold)

**2018- 2021: MAREEL: The importance of the marine habitat for the critically endangered European eel**  
Funding: Norwegian Research Council and IMR. 6 400 000 NOK  
Role: Project leader

### **2018: Effect of underwater power cables on benthic organisms**

Funding: IMR 170 000 NOK

Role: Project leader

**2018-2020: Marine Cladocerans as a model system to decompose genetic vs epigenetic mechanisms of adaptation to ocean acidification and warming.**

Funding: IMR, 2 898 000 NOK, Fram Centre, 2 428 000 NOK

Role: Principal investigator

**2018-2020: Effects of anti-salmon lice chemicals on non-target organisms.**

Funding: IMR, 3 000 000 NOK

Role: Principal investigator

**2017- 2019: CLEANERFISH - Establishing a common, Nordic basis for the management of cleanerfish**

Funding: NORDEN 2 200 000 NOK

Role: Project participant

**2016- 2018: Scientific fishery for eel:**

Funding: Fisheries Directorate, 1 416 000 NOK

Role: Co-project leader (with Anne Berit Skiftesvik).

**2016-2019: EGGTOX: Unraveling the mechanistic effects of crude oil toxicity during early life stages of cold-water marine teleosts.**

Funding: Norwegian Research Council, IMR 1 261 000 NOK

Role: Supervised the UV exposure treatments.

**2011 – 2018: Eel stock monitoring**

Funding: IMR. (~600 000 NOK per year)

Role: Project leader

**2012- 2018: Lumpfish stock monitoring:**

Funding: IMR (~100 000 NOK per year)

Role: Project leader

**2015-2018: Fine-scale interactions in the plankton – empirical observations to parameterize trophodynamic models**

Funding: IMR 4 300 00 NOK

Role: Principal investigator

2017: Age and growth of European eel.

Funding: NINA, Norwegian Environment Agency. 215 000 NOK

Role: Principal investigator

2015-2017: Effects of increased CO<sub>2</sub>/lower pH – and temperature - on vital rates of the planktonic copepod, *Calanus finmarchicus*.

Funding: IMR, 2 700 000NOK, Fram Centre, 3 000 000 NOK

Role: principal Investigators

2016-2017: Program cleanerfish: Species and size selection in wrasse fishing gear

Funding source: FHF, IMR, Fisheries Directorate

Role: Participated in the experiments, analyzed date, contributed to the report

2015-2016: Lumpfish Working Group

Funding: NORDEN, 400 000 DKK

Role: Project participant

2014-2017: Cleanerfish program: behavior and species interaction

Funding: FHF

Role: Participated in the experiments, analyzed data, contributed to the report

2015-2017: Artificial light and cleanerfish

Funding: FHF

Role: Participated in the experiments, analyzed data, contributed to the report

2012-2014: Effects of increased CO<sub>2</sub>/lower pH – and temperature - on vital rates of the planktonic copepod, *Calanus finmarchicus*, with an emphasis on the overwintering life stages.

Funding: IMR, 2 700 000 NOK, Fram Center, 2 700 000 NOK

Role: Principal investigator

2010-2011: Effect of ocean acidification on *Calanus finmarchicus*, krill, and the early life stages of fish

Funding: IMR, 1 300 000 NOK

Role: Principal investigator

2008-2012: Cascading effects of climate change and UV enviro-toxins on the nutritional quality of the food base in marine ecosystems.

Funding: Norwegian Research Council, 4 736 000 NOK

Role: Post-doc on the project

2004-2007: Magnetoreception and magnetic compass orientation in the long-distance migration of the European eel.

Funding: Norwegian Research Council. 4 423 000 NOK

Role: Post-doc on the project

2001-2004: Estimation of the reproduction capacity of European eel. (EelRep).

Funding: European Research project (FP5): Q5RS-2001-01836.

Role: Post-doc on the project

1998-2003: Impact of hydropower stations on downstream migrating eels.

Funding: IRSTEA and Electricité de France

Role: PhD student on the project

## SUPERVISION AND MENTORING

### 1. Supervision of graduate students and post-docs

2017-2020 Rosa Helena Escobar (PhD): Université Pierre et Marie Curie, Paris, France.  
Committee member

2016-2019 Alessandro Cressi (PhD) : University of Miami, USA. Committee member *Magnetic orientation of European eel*

2018 Bastien Taormina (PhD student) : supervisor during an internship. *Effect of underwater power cables on benthic organisms.*

- 2018 Jules Danto (engineering school). Internship supervisor. *Growth of lumpfish*
- 2015-2016 Rosa Helena Escobar (Master 1, 2): Université Pierre et Marie Curie, Paris, France. Supervisor. *Growth of eels from different salinity environment.*
- 2016 Podgorniak Tomasz, PhD opponent
- 2015 Raquel Moreno Valcarcel (Postdoc): Universidad de Córdoba , Spain. Post doc advisor. *Growth of European eel.*

## 2. Courses taught

### **Institut Nationale des Sciences et Techniques de la Mer/Institut National Agronomique de Tunis, Tunisia.**

Introduction to multivariate analysis- application to the characterization of the migrating stage of the European eel. 6 hours. I developed the course.

### **UIT (University Institute of Technology) La Rochelle, France**

Lecturer in biostatistics (undergraduate level). 50 hours. I developed the classes

### **Marine Station of Arcachon, Bordeaux University, France**

Teaching assistant in marine ecology (zooplankton and ichtyofauna). 21 hours. I developed the classes.

## DISSEMINATION AND NETWORKING

### 1. Editorial experience

- 2014- now Academic editor: PLoS One  
*I have handled 27 manuscripts so far (average of 6.7 per year)*
- 2013-now Academic editor: ICES Journal of Marine Science  
*I have handled 141 manuscripts so far (average of 28 manuscripts per year)*  
 Current initiative: co-organising a theme set : “Ecology and genetics – What’s the link?”
- 2007 Academic editor: Aquatic Biology

### 2. Selected media coverage.

“Reise med ål: en omvei hjem». Published by Cappelen Damm and written by Torolf Kroglund describing my research.

“20 ton ål kan fiskes i 2017” Fiskeribladet, 31 July 2017. Newspaper article on eel scientific fishery.

«Mangler kunnskap om rømt rognkjeks» Kyst.no. <https://www.kyst.no/article/mangler-kunnskap-om-roemt-rognkjeks/>

“Drama Over How Eels Navigate Highlights Problems in Science Publishing”. 13 April 2017. Gizmodo. <https://gizmodo.com/drama-over-how-eels-navigate-highlights-problems-in-sci-1794291332>

“Vil at nordmenn skal spise denne igjen. NRK. 12 September 2016.

<https://www.nrk.no/sorlandet/vil-at-nordmenn-skal-spise-denne-igjen-1.13126762>

“Glass Eels: See-Through, Slippery and Guided by Magnetism and Tides”. New York Times. 9 June 2017. <https://www.nytimes.com/2017/06/09/science/glass-eels-magnetism-navigation.html>

«Vil videreutvikle lakselus-feller». Kyst.no. 30 September 2016. <https://www.kyst.no/article/vil-videreutvikle-lakselus-feller/>

«Meir enn slim». Marsteinen. 29 January 2015.

Innsikt «Ålen finner veien med egen GPS». Bergens Tidende. 7 September 2014.

«Her redder de den utrydningstruede ålen». Bergensavisen. 9 May 2013.

<https://www.ba.no/nyheter/her-redder-de-den-utrydningstruede-alen/s/1-41-6646685>

«Slik finner ålen hjem». Aftenposten. 8 March 2010.

«Ålen med innebygd GPS». Fiskeribladetfiskaren. 24 March 2010.

På sporet av ålens navigasjonssystem. Sunnmørsposten. 8 March 2010.

Det ål-timate navigasjonssystemet. Forsknings.no. 6 March 2010.

<https://forskning.no/fisk/2010/03/det-al-timate-navigasjonssystemet>

«Kritisk for ålen». Agderposten. 6 June 2008.

«Les anguilles procedent par étape». Le Figaro. 17 August 2001.