STAGES

Newsletter of the
Early Life History Section
of the American Fisheries Society

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Audrey J. Geffen & Cindy J.G. van Damme, Editors

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ELHS Back Then

5 years ago: ELHS Early Career Committee established
10 years ago: Dr. William J. Richards (Bill Richards) was the second recipient of the Early Life History Section Elbert H. Ahlstrom Career Achievement Award at the 2009 LFC
15 years ago: Celebrating STAGES 25th anniversary! STAGES gets a facelift under the editor Lee Fuiman
25 years ago: Annual dues for newsletter subscribers increases to 10 US dollars!
35 years ago: Term of Section President extended from 1 year to 2 years. Bob Hoyt is first 2-year President

Deadline for material to be included in the next issue of STAGES:

June 30, 2020

Headline News

Successful 43rd Annual Larval fish conference

The 43rd Annual Larval fish Conference, held in Mallorca from 21 to 24 of May is now over! We enjoyed the great science and social activities; seeing that the conference was successful makes the effort very worthwhile. The attendance was great, with 137 contributions (68% orals) from 25 countries. Students were well represented, with 43 contributions, and the gender balance was 51% to women! We enjoyed the "Larval Identification" and the "Ethics in Scientific Writing" workshops, and the lightning session worked really well. Thanks to all attendees, the conveners, the cool keynote speaker,the Early Career Committee, the sponsors and the ELHS for the help!

The program and the website will be permanently stored at IMEDEA at the address below, and will be shortly transferred to the LFC website.

See you **soon**!

– Ignacio Catalán (IMEDEA), Patricia Reglero (IEO) and Itziar Álvarez (IEO)

People

Akinori Takasuka takes up Professorship at The University of Tokyo

Many of you will have noticed the change-of-address for one of our most active regional representatives Akinori Takasuka. As of April 2019 he became Professor of Fisheries Biology Laboratory, moving from the Japan Fisheries Research and Education Agency (FRA) to The University of Tokyo. After 15 years at the FRA, he is back in the laboratory where he studied for BSc., MSc., and PhD. He says he enjoyed working at FRA but is ready to focus now in the education of junior fellows of the Fisheries Biology Laboratory. Professor Takasuka's research topics and interests will continue in the fields of fisheries biology, fisheries oceanography, and marine ecology. For the present he is living in Yokohama until his son finishes at his elementary school. After that, they will all be moving to Tokyo, where he welcomes us for meetings or private trips!

Congratulations and Best of Luck in the new position! Contact details:

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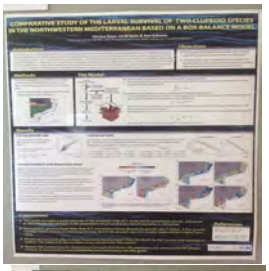

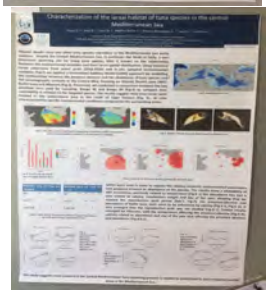

John H.S. Blaxter

J. H. S. Blaxter Student Poster Award - 2019 Winners

The winner of the best student poster at the 43rd LFC was Vanesa Raya for her "Comparative study of the larval survival of two clupeoid species in the northwestern Mediterranean Sea based on a box-balance model". The research addressed a very challenging topic, combining field sampling with box modelling to understand how hydrodynamic features may influence local mortality rates of larvae of small pelagics fishes.
Stefania Russo received an honorable mention for her "Characterization of the larval habitat of tuna species in the central Mediterranean Sea". The judges considered this to be one of the best layouts and designs. The poster was extremely well (and enthusiastically) presented.

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News from the Regions

Pacific Region

Akinori Takasuka

Johan Hjort Symposium 2019

The Johan Hjort Symposium 2019 "Challenging the scientific legacy of Johan Hjort: Time for a new paradigm in marine research?" was held in Bergen, Norway, during June 12-14, 2019. In the symposium, the participants celebrated the 150-year anniversary of Johan Hjort (1869-1948) and discussed insights in the past and present with many interesting session topics. This commemorable event was organized and convened by Drs. Olav Sigurd Kjesbu (IMR, Norway), Iain Suthers (UNSW, Australia), Jennifer Hubbard (Ryerson University, Canada), and Vera Schwach (NIFU, Norway). The opening keynote was given by Dr. Ray Hilborn (University of Washington, USA). I am very honored to have one of the four keynote talks for the session "Scientific legacy, theories and study species." This event was also a venue for some members of the ELHS to see each other (Fig. 1). Indeed, there were interesting talks related to early life biology (Fig. 2). Iain will report the symposium in a future issue of STAGES.

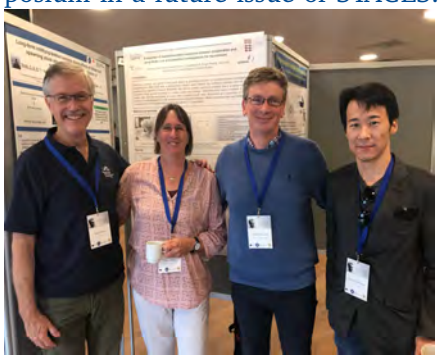

Fig. 1. Some members of the ELHS got together during the Johan Hjort symposium in Bergen (June 12-14, 2019). From left to right: Iain Suthers (Australia; co-convenor), Catriona Clemmesen (Germany), Arild Folkvord (Norway), and Akinori Takasuka (Japan).

Fig. 2. Dr. Iain Suthers (Australia; co-convenor) presenting his talk entitled "Fine-scaling Hjort and Dannevig in time or space, for a seascape of low larval mortality, with the potential for stock enhancement."

The 1st Brazilian Ichthyoplankton Symposium

The 1st Brazilian Ichthyoplankton Symposium was held in Belém, Pará State, Brazil, on January 31, 2019. The symposium was organized in conjunction with the 23rd Brazilian Ichthyology Meeting (January 27-31). I was very happy to receive the invitation to this memorable event for the early life biology in Brazil. Please see the report of the symposium by the organizers, Drs. Claudia Namiki and Jana del Favero, for details:

Inspired by the Larval Fish Conferences, in January 2019 occurred the 1st Brazilian Ichthyoplankton Symposium. It was held in conjunction with the 23rd Brazilian Ichthyology Meeting in Belém, Pará State, Brazil. The Brazilian Ichthyology Meeting occurs every two years, and for the first time there was a symposium focusing on fish larvae and eggs studies. More than 1,200 researches attended the meeting, and around 60 were at the ichthyoplankton main talks (Fig. 3). A total of 40 posters and 12 oral communications about ichthyoplankton was presented.

The best presentation awards were given to Ruineris Almada Cajado, which poster presentation was about the composition and distribution of fish eggs and larvae in the Amazonas River, and to Nathallia Leite Alves Salvador, who presented about the environmental variability and body condition of larval Argentine Menhaden (*Brevoortia pectinata*) in the Patos Lagoon estuary and Adjacent coastal zone (Fig. 4). The awards were given by the Early Life History Section - American Fisheries Society.

Fig. 3. Main speakers of the 1st Brazilian Ichthyoplankton Symposium. Please note that there are two known researchers for the Stages readers, Dr. Akinori Takasuka and Dr. Anthony Miskiewicz.

Fig. 4. Dr Claudia Namiki and Dr Jana del Favero given the student awards to Ruineris Almada Cajado (best poster presentation) and Nathallia Leite Alves Salvador (best oral communication).

In the end, we honored Dr. Mario Katsuragawa, a pioneer in ichthyoplankton studies in Brazil, who toasted us with an inspiring speech. Hopefully, this was the first symposium of many others that will come in the future.

— Claudia Namiki and Jana del Favero (organizers)

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North Central Region

Ed Roseman

Large-Scale Early Life History Survey Planned for Lake Erie

Since 2002, environmental organizations from the United States and Canada have teamed up each year to assess conditions in one of the five Great Lakes. This program is called the Cooperative Science and Monitoring Initiative (see CSMI). As part of the 2019 CSMI year for Lake Erie, a large-scale collaborative larval fish survey is planned. Objectives of the one-year intensive effort include the identification of productivity from various habitats and stocks to the fisheries in Lake Erie (including the St. Clair-Detroit River System and the Upper Niagara River) and what habitat components limit productivity. These objectives were identified as priority questions that agencies should attempt to address in the 2019 CSMI intensive sampling year by the Lake Erie Partnership Management Committee. The research team consists of Dr. Stephen Marklevitz from the Lake Erie Management Unit, Ontario Ministry of Natural Resources and Forestry; Dr. Yingming Zhao, Research Scientist from the Aquatic Research and Monitoring Section, Ontario Ministry of Natural Resources and Forestry; Dr. Ed Roseman from the Great Lakes Science Center, United States Geological Survey; Drs. Christine Mayer and Robin DeBruyne from Lake Erie Center, University of Toledo; Travis Hartman from the Division of Wildlife, Ohio Department of Natural Resources; and Dr. Dimitry Gorsky from the Lower Great Lakes Fish and Wildlife Conservation Office, U.S. Fish and Wildlife Service. Efforts will be made to standardize sampling and sample processing across field and laboratory teams. Data and information obtained from the systematic broad scale community-level larval fish survey across the Lake Erie will be used to produce distribution maps of larval fish to aid in the identification of critical spawning and nursery habitats of the Lake Erie fish community. Measured spatio-temporal abundances of larval fish w ill contribute to a three-dimensional Estuary and Lake and Coastal Ocean Model - Computation Aquatic Ecosystem Dynamics Model (ELCOM-CAEDYM) developed by Dr. Zhao to predict larval dispersal and, examine the relationships between productivity and abundance estimates currently derived from the Lake Erie Management Unit's young-of-the-year (YOY) index programs. Due to their eco-nomic and ecological importance, key species of concern for Lake Erie's fisheries managers include walleye (*Sander vitreum*), yellow perch (*Perca flavescens*), lake whitefish (*Coregonus clupeaformis*), and rainbow smelt (*Osmerus mordax*). This lake-wide effort will expand and contribute complementary data to previous and ongoing larval fish a nd h abitat surveys completed in the St. Clair and Detroit Rivers, Lake St. Clair, and Lake Erie.

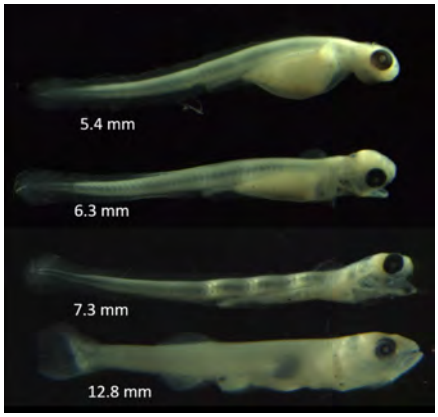

Fig. 1. Larval yellow perch captured during sampling in the St. Clair-Detroit River System in 2018.

Part of the 2019 CSMI work will include a second intensive survey of larval fish o n L ake S t. C lair t o examine dynamics of yellow perch larvae. In 2018, Ed Roseman's team from the U.S. Geological Survey's Great Lakes Science Center, partnered with staff from Michigan Department of Natural Resources Lake St. Clair Fisheries Research Station, Ontario Ministry of Natural Resources and Forestry, and Department of Fisheries and Oceans Canada to establish a lake-wide sample strategy using paired bongo samplers to measure larval densities and distribution. Data from the survey will be used to model larval movements using the ELCOM-CAEDYM hydrodynamic model for Lake St. Clair, identify spawning areas, estimate larval production, estimate export to the Detroit River and Lake Erie, and model yellow perch growth and survival. Catches of larval yellow perch were high in 2018, often in the thousands of larvae per 5-minute sample, and often highest near river mouths and along the Canadian shoreline. Clara Lloyd, an undergraduate student technician from Paul Smith's College in upstate New York, under the advisement of Dr. Celia Evans, is using some of the results of this study for her senior thesis.

— Andrew Ransom and Lydia Doerr, M.S. Candidates (PI Dr. Patrick S. Forsythe and Dr. Chris Houghton) University of Wisconsin-Green Bay, Aquatic Ecology and Fisheries Laboratory

Tracking Great Lakes changes

From GLERL - We are comparing nutrients, larval diets, densities, condition, species composition, zooplankton prey density and light conditions in Lake Michigan between 1983, before the invasive predaceous cladoceran *Bythotrephes* and quagga and zebra mussels invaded the lake, and after those invasive species invaded (2010-2015) to see how the larval fish community has changed over time. Offshore densities of larvae and zooplankton are lower now than in 1983 (reported by Nash and Geffen 1991), and are most abundant in the metalimnion and upper hypolimmnion. In 1983, larvae were most abundant in the upper meter of the water column. Water clarity has increased dramatically owing to invasive mussel filtration and reduced nutrient loads, and when combined with high densities of the *Bythotrephes*, may be limiting larvae and their prey to deeper, darker waters. *...continued next page*

North Central cont...

We are using MOCNESS to more efficiently sample larval fish and *Mysis* at depth. It also appears that catches of larval fish and *Mysis* are higher in MOCNESS than in traditional nets used to sample these gears.

We are estimating densities, growth and survival of native whitefish larvae in Lake Huron in areas of high and low nutrient loads. Given recruitment of whitefish has declined in many areas with low productivity that are associated with high densities of invasive quagga mussels, we hypothesized that the recruitment bottleneck occurred in the larval stage and was caused by low growth rate leading to poor survival. Contrary to expectations, we found that larval whitefish densities and growth rates were lower in high nutrient loading areas, but their apparent survival was higher, perhaps owing to higher turbidity that may reduce predator search volumes.

— Ed Rutherford, NOAA Great Lakes Environmental Research Laboratory
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European Region

Catriona Clemmesen

Research in the slow lane: multi-generation experiments on herring project GENSINC

After three years of rearing from eggs we finally managed to close the life cycle of Atlantic herring from fertilization to maturation and subsequent production of F2 offspring in 2016. The parents were spring spawners of local Norwegian Atlantic herring and Baltic spring spawning herring provided by Prof. Leif Andersson from Uppsala University. Purebred Atlantic herring were co-reared with hybrids of Atlantic and Baltic herring over three years at two nominal salinities, before the new crossings took place and viable larvae could be reared at 6, 16 and 35 psu salinity. The work is part of a Norwegian Research Council project GENSINC, which aims at elucidating the genetic basis of adaptations of herring populations to given environmental conditions. We have long realized that the generation time in these experiments are not optimized for high publication output, but papers from the experiment are finally coming out (Berg et al. 2018 a,b). Still working on the data from the first experiment we have initiated another (hopefully) three-year rearing experiment this year with purebred local Norwegian spring spawners and hybrids of spring and autumn spawners. The latter crosses were made possible by using cryopreserved sperm of autumn spawners together with newly caught spring spawning females. If all goes well, we should have more to report, after couple of more years....

Juvenile reared herring. Which ones are purebred Atlantic herring and which ones a hybrid Atlantic x Baltic herring? (photo. A. Folkvord).

References

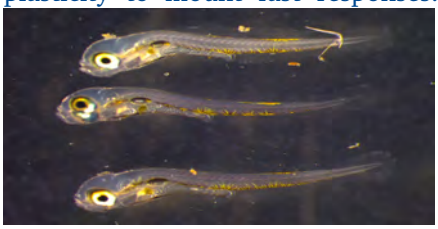
Berg F, Almeland OW, Skadal J, Slotte A, Andersson L, Folkvord A (2018a) Biological and otolith shape data for a parental generation and their subsequent F1-generation of Atlantic/Baltic herring. PLoS ONE 13: e0190995 doi 10.1371/journal.pone.0190995

Berg F, Slotte A, Andersson L, Folkvord A (2018b) Genetic origin and salinity history influence reproductive success of Atlantic herring. Mar Ecol Prog Ser doi 10.3354/meps12680

— prof. Arild Folkvord, University of Bergen & Dr Florian Berg, Institute for Marine Research

NextGen - Potential for multiGENerational acclimation of fishes to global changes

The rate and scale of climate changes have already resulted in consequences for marine ecosystems. Yet, evolutionary responses may help marine species counter stressful conditions. The question is can they respond fast enough? Empirical evidence is accumulating that marine species might be able to adapt to rapid environmental change if they have sufficient standing genetic variation and/or phenotypic plasticity to mount fast responses.



Phenotypic plasticity, whether within a generation (developmental) or across generations (transgenerational), may be a particularly effective mechanism that can buffer populations against immediate impacts of global change and provide time for genetic adaptation to catch up. Here we aim at investigating whether developmental and transgenerational exposure can improve fish species' resilience to future global changes. The focus will be on the phenotypic variation in reproduction, growth, condition, behaviour and aerobic metabolism. We will be using the two-spotted goby, *Gobiusculus flavescens*, as a model species. Learn more about what we do at our lab page: amfaria.comand our facebook page: www.facebook.com/Amfarialab/ For any further questions, please contact me at afaria@ispa.pt!

— Ana Lopez, ISPA

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Section Business

Don't forget to pay your dues, or you will miss out on the next issue of STAGES!

Early Career Committee

Alison Deary and Marta Moyano

Perspectives from the 43rd Annual LFC post-conference survey

The ECC would like to thank everyone for participating in the 2019 online survey! We had 110 participants complete the survey and provide valuable feedback. Like last year, we offered a prize as an incentive to fill out the survey. This year's prize was a painting of Peggy's Cove, Nova Scotia signed by the artist. The winner is Janelle Alleman. Just over half of the survey respondents were Senior Researchers (52%), and of the 18% survey respondents who were graduate students, 60% were in a PhD program. For 34

The ECC organized two events this year: a lightning session (3-min talks) on Science Communication, and a Professional Development Workshop on Ethics in Scientific Writing. We want to extend our thanks to Nadine Strydom for organizing and leading the workshop on ethics. We received constructive feedback on both of these ECC-run events. Feedback included making sure that the Poster Session and the Lightning talks do not overlap in the future and to encourage Senior Scientists to attend the workshop in order to contribute their experiences to the topic.

It's time to be thinking about the 44th Annual LFC in Mystic, Connecticut! The dates for this conference are June 21 - 26 2020. The website is now live, so please check it out for updates lfc44.uconn.edu. The ECC is looking forward to organizing another session of the Lightning Talks as well as a Professional Development Workshop. The topic for the Lightning session, based on the survey results, will be "Lessons learned in research". We are in discussion with two mentors for the Professional Development Workshop and we will be announcing the topic for this event soon.

Thank you for your dedication and interest in the ELH section! Check out our Facebook page (Early Life History) and Twitter account (@AFS_ELHS) for updates on colleagues and ELH research. The ECC section encourages Senior Scientists to participate as either presenters/contributors or attendees at ECC-run events.

— The Early Career Committee: Lysel Garavelli, Carolin MÃijller, Hannah Murphy, Michael Sswat, Kelsey Swieca, and Jessica Randall

Larval Fish Conference

44th Annual Larval Fish Conference - Mystic, CT

The 2020 Larval Fish Conference is happening soon!! Check the websites and submit your abstract next week!

The 44th Annual Larval Fish Conference (LFC) will be held from June 21-26, 2020 in Mystic, CT (USA). This year's conference is jointly organized by local members from the University of Connecticut, University of Rhode Island, Mystic Aquarium and the National Marine Fisheries Service. Scientific steering committee

Hannes Baumann, Chair University of Connecticut

Eric Schultz University of Connecticut

Jackie Webb University of Rhode Island

Paul Anderson Mystic Aquarium

Jon Hare NEFSC-NOAA

The deadline for abstract submission is March 15!

Do not miss the opportunity attending a great conference!

Theme session 1: Long-term ichthyoplankton data: insights and challenges

A number of long-term ichthyoplankton programs have routinely sampled over broad timespans, in some cases extending over multiple decades. In total, these programs have sampled a diversity of habitats including freshwater, estuarine and marine ecosystems, and they vary in their purpose and design. The data and sample archives that these programs generate can be used in fresh directions of inquiry, such as elucidating the effects of changing climate on freshwater, estuarine, and marine ecosystems. What have we learned about temporal change in physical forcing, fish populations, assemblages and ecosystems from long-term ichthyoplankton sampling? What challenges arise in analysis and interpretation when the sampling was designed for a specific purpose, or for no particular purpose, or analyzed using a new approach or technique?

...continued next page

LFC44 (Theme session 1) cont...

What are best practices in sample preservation and data archiving, and how widespread are they? This theme session is envisioned to inspire future uses of existing sampling programs and to direct attention to design of long-term programs so that their potential for applicability and discovery is maximized.
Session chairs: Eric Schultz, Jon Hare
Keynote speaker: Su Sponaugle

Theme session 2: Sensitivity of fish early life stages to combined climate change stressors

Anthropogenic climate change increasingly perturbs both freshwater and marine environments, but how exactly predicted changes in temperature, acidity, oxygen content and other conditions will affect the fitness of fish early life stages remains an active, vibrant field of investigation. This session invites a broad range of contributions that use experimental, field and modeling approaches to elucidate the potential effects of climate change on fish early life stages. We welcome mechanistic studies on the organismal, molecular or population levels and encourage contributions from both marine and freshwater habitats. Field studies, concept and synthesis approaches are particularly welcome, as are studies that try to shed light on the potential for acclimation and adaptation of fish early life stages to their changing environments. While no single experiment or study allows predicting the fate of future populations, sustaining the accumulation and interpretation of empirical evidence is of utmost importance to improving predictions of future changes in species productivity and ecosystems.
Session chairs: Hannes Baumann, Claire Paris
Keynote speaker: Philip Munday

Theme session 3: Marine ornamental aquaculture enables discovery in larval fish biology

Scientists conducting laboratory studies of live larval fishes may be stymied by the technical challenges involved in their aquaculture. The successful aquaculture operation usually requires successful long-term operations in not only larval fish aquaculture, but also in broodstock conditioning, and phyto- and zoo-plankton aquaculture. The field of marine ornamental aquaculture, aiming to provide a sustainable alternative source for some of the 2,000 species of marine fish traded in the U.S. marine aquarium trade, is still in its infancy but has recently made significant technical advancements that has fueled a fledgling industry in commercial marine ornamental aquaculture as a celebrated facet of the trade. Larval fish biologists can gain from the insights learned in this field to foster a successful laboratory research program studying live larval fishes. Conversely, the field (and industry!) of marine ornamental aquaculture is poised to grow and diversify from the contributions that larval fish biologists can contribute on topics of larval fish biology (e.g., feeding behavior; development of digestive, immune, and sensory systems; nutrition).
Session chairs: Paul Anderson
Keynote speaker: Andrew Rhyne

Theme session 4: Sensory biology and behavior of fish larvae

The survival of fish larvae is dependent up on their ability to detect prey, avoid predators, navigate the open ocean and find settlement sites. Papers in this session will discuss larval fish behaviors, the sensory basis for such behaviors (e.g., vision, smell, taste, hearing, flow sensing), and their ecological consequences for fish populations and fish communities.
Session chairs: Jacqueline Webb
Keynote speaker: Peter Buston

Theme session 5: Form, function, and ecology of fish larvae

This theme session invites novel contributions to our basic understanding of larval fish morphology, feeding, metabolism, growth, and predator-prey interactions. It also welcomes studies addressing the connectivity of fish populations via larval dispersal, drift, and settlement mechanisms.
Session chairs: Alison Deary, Peter Konstantinidis

Theme session 6: Fish early life growth, mortality and characteristics of survivors: do they tell us why fish populations vary?

Since Johann Hjort hypothesized more than a century ago that fish early life stages hold the key to understanding the fluctuations of fish populations, the quest to find environmental predictors to larval fish survival and subsequent recruitment has continued unabated. This theme session invites novel contributions to the link between growth and mortality in larval fish, environmental predictors of recruitment success in commercial and model fish populations, and improved understanding of predation dynamics controlling larval fish populations. Experimental, field, and modeling approaches are welcome, because progress will likely come from integrating all these investigative angles.
Session chairs: Dominique Robert, Akinori Takasuka

If your contribution does not fit any of the theme sessions, contributed papers are also welcome! Submit your contributed abstracts to the "form and function" theme session, and organizers will schedule your presentation at the right place within the conference agenda.

For programmatic questions, please contact: Hannes Baumann hannes.baumann@uconn.edu +1 (860) 405-9297

For registration questions, please contact: University Events and Conference Services +1 (860) 486-1038

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Upcoming Events

International Larval Fish Course 2020 at the marine station of the Museum national d'Histoire naturelle (MNHN) in Concarneau, France

After our first successful European based Larval Fish Course in 2018 we will offer this course again at the marine station of the Museum national d'Histoire naturelle in Concarneau, France, from the 28th September to 9th October 2020. The course will cover lectures and labs on pre-identified larval material from the Eastern North Atlantic and labs on our unsorted and unidentified museums larval fish collection from the Indo-Pacific. We aim to sort and catalog the latter collection and therewith provide a unique training for participants in how to sort, identify and curate such an unsorted sample. Further, the course will include lectures on the following topics "What do larvae feed on, and how do they feed, match-mismatch theory", "Physical processes, environmental factors", "Age and growth", "Cohorts, recruitment", "Climate change", "Sampling and preservation methods", "Fish egg identification, key identification features, relevant literature and available resources", "Computer identification keys", and, of course, lectures and labs on larval fish identification (about 50 fish families! for further details visit https://sites.google.com/view/larval-fish-course/syllabus).

The course is spearheaded by the collection curator of the MNHN Nalani Schnell and Cyril Gallut and featured by three experts in larval fish taxonomy and ecology from across the globe: Catriona Clemmesen (GEOMAR, Germany), Cindy Van Damme (Wageningen Marine Re-search, Netherlands), Peter Konstantinidis (Oregon State University, USA). For further information and registration please visit https://sites.google.com/view/larval-fish-cours or contact Nalani Schnell nalani.schnell@mnhn.fr.

Places are limited to 15 participants, course registration fee is 850€ per person, registration closes 30th June 2020

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Stages is published in February, June, and October each year. It is assembled by the Newsletter Editors with contributions from several Regional Representatives and other individuals. Please send any articles, announcements, or information of interest to Early Life History Section members or affiliates to your local Regional Representative or to the Editors

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Editors' Ramblings

Time flies, and its hard to believe that six months have flown by since we first sat down to put this issue together. Unfortunately we've both been overcome by different distractions (health, work, family, students, etc.) and haven't kept up with our editorial responsibilities. Volume 40 closed with only one issue. Sincere apologies to all the ELHS members, and especially to those of you who have sent reports in to share with the section. Here they are at last - and still timely. So, for this start of volume 41, you will find a few things missing. We have not been able to wrap up the 2019 LFC with the usual report of prize winners, flag champions, and business reports - for various reasons. Hopefully these can be access through the section website at some point in the future. We DO have exciting reports from various regions, and hopefully the list of theme sessions and keynote speakers will entice you all to the upcoming LFC at the end of June. The program has so much to offer, and it will certainly be a great meeting.

Don't forget the early bird registration deadline for the LFC in Mystic (end of April)!

— Cindy & Audrey

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