

STAGES



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

Volume 37, Number 1

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

March 2016

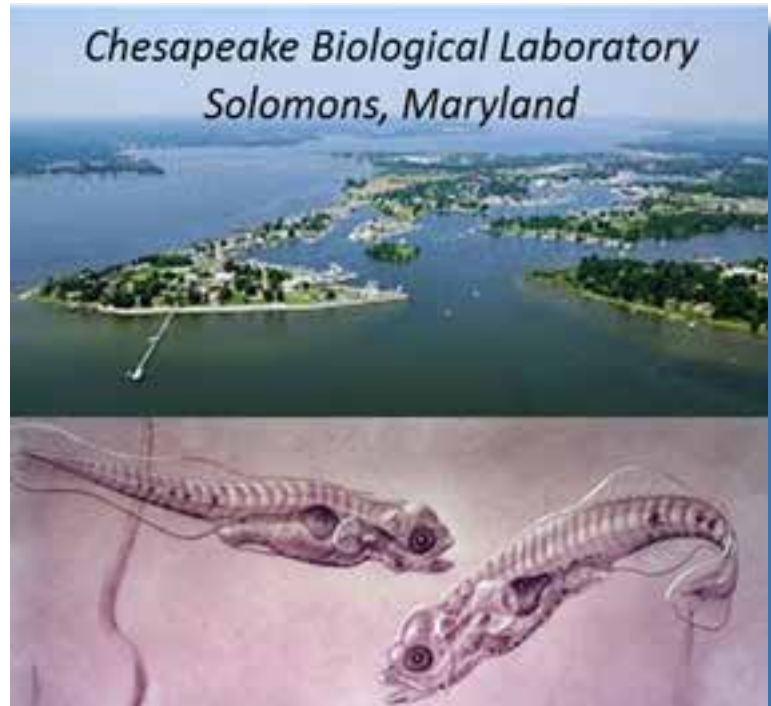
Inside this issue

President's Message	1
News from the Regions	2
Section Officers	2
Upcoming Events	5
Publications	8
Section Business	9
Editor's Ramblings	11

40th Annual Larval Fish Conference to be held in Solomons, Maryland, USA

*Call for Abstracts and
Registration is Now Open*

Welcome to the 40th Annual Larval Fish Conference! This year we celebrate Professor Ed Houde's career achievements in ELH research.



...continued on p. 5

ELHS Back Then

5 years ago: The first all-electronic version of STAGES appeared in October.

15 years ago: Art Kendell retires from National Marine Fisheries Service but becomes President of ELHS.

25 years ago: 15th LFC held at University of Southern California.

30 years ago: Anonymous donor contributed \$150 as prize for best paper, awarded to John Olney for a paper co-authored by Doug Markle.

President's Message



I'm making my way through a long day of travel, hopping across four airports on my way from Hamburg, Germany (53.5°N) to the east coast of Florida, USA (26.5°N). The decrease in latitude in mid-February is, well... needed(!) This trip has proven to be a good opportunity to reflect on the status of our section (not to mention, find the time to write my president's message to you). Since my last message in late October, there have been a number of notable developments that merit your attention.

First, the editorship of our newsletter Stages has changed hands. Lee Fuiman edited three issues of Stages each year since the February Issue (Vol 25, No. 1) in 2004. This service to the section represents a Herculean effort by anyone's measure. Lee, I thank you on behalf of membership (past and present) for being one of the driving forces responsible for maintaining our section's identity and cohesion. You have left big shoes to fill. Audrey Geffen and Cindy van Damme have graciously volunteered to co-edit Stages. I am sure that this (their first) issue will continue the long tradition of offering a plethora of information on our section's activities. Remember to support Audrey and Cindy by sending them material for the next issue newsletter (before the deadline...).

...continued on p. 10

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

May 1, 2016

News from the Regions



Pacific Rim Region

Akinori Takasuka

Symposium/workshop on “Growth–survival paradigm in early life stages of fish: controversy, synthesis, and multidisciplinary approach” (Yokohama, Japan, November 2015)

A symposium/workshop on “Growth–survival paradigm in early life stages of fish: controversy, synthesis, and multidisciplinary approach” was held at National Research Institute of Fisheries Science, Fisheries Research Agency, Yokohama, Japan, during November 9–13, 2015. This symposium/workshop was designed to challenge fundamental issues on the “growth–survival” paradigm in early life stages of fish, which postulates that larger and/or faster-growing individuals are more likely to survive than smaller and/or slower-growing conspecifics (Anderson 1988). The “growth–survival” paradigm has been given much attention in studies on recruitment dynamics of fish. Indeed, numerous studies have tested the paradigm during the last quarter-century. However, that growing body of literature has revealed contradictory evidence from field, laboratory, and



Group photo of the symposium in Yokohama on November 11, 2015 (the last day of the symposium). Full size is available on the symposium website.

modeling studies across systems and taxa. The objectives of the symposium were (1) extracting controversial issues on the paradigm (controversy), (2) proposing ideas for synthesizing and reconciling contradictory results based on different perspectives from different study groups (synthesis), and (3) promoting a collaborative framework for field, laboratory, and modeling studies (multidisciplinary approach). Overall, we aimed to improve our understanding of growth–survival relationships in order to facilitate the prediction of recruitment dynamics through numerical modeling.

A 3-day open symposium comprised “Introduction”, “Field studies”, “Laboratory experiments”, “Modelling studies”, “Seeds of early life biology”, and “Poster” sessions. The “Introduction” session was intended to introduce the results of the Japan–Canada collaboration workshops, which led to the idea of the present symposium (5 presentations by the organizers). In the “Field studies” session, the presenters introduced field studies which tested the paradigm (14 presentations). This session highlighted a variability

...continued on p. 4

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**HELP KEEP
STAGES INTERESTING...**

*Send us a report of your
research activities.*



Western region

Dan

Margulies

A new book 'Advances in Tuna Aquaculture. From hatchery to market.' has been published by Daniel Benetti, Gavin Partridge and Alejandro Buentello. It incorporates and reviews the most recent information on tuna fisheries and aquaculture. Innovative tuna production technologies are presented, from hatchery to market, including important information derived from industry experience and academic research on larval rearing technology and grow out operations. The book encompasses and discusses key topics such as genetics, diseases, nutrition, endocrinology, and

reproduction, as well as developments, challenges, and future opportunities in tuna aquaculture. The chapters provide the latest scientific methods and technologies to maximize efficiency

and production. The authors, internationally recognized as authorities, present independent and collective assessments, viewpoints, and vision of the field. §

Advances in Tuna Aquaculture

From Hatchery to Market

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Edited by
Daniel Benetti,
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Alejandro Buentello

COMING SOON!

ISBN: 9780124114593

Price: \$199.95 / €143.00 / £125.00

Pub Date: December 2015

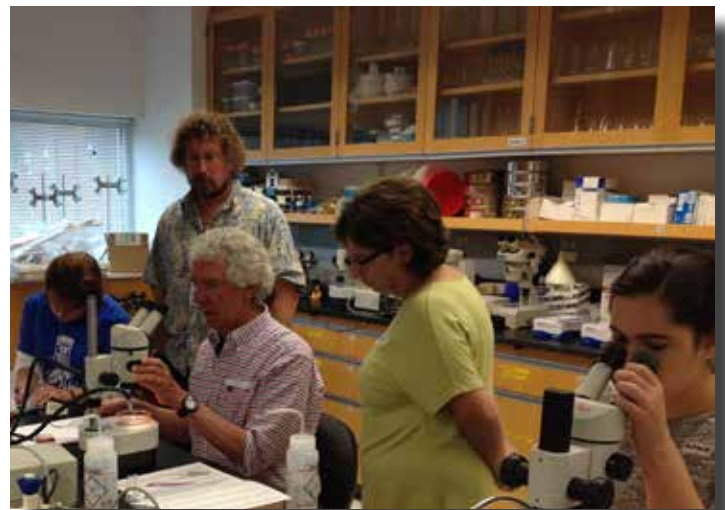
Hardcover / 392 pages

Northeast region

Larval Fish Workshop at the Virginia Institute of Marine Science's Nunnally Ichthyology Collection.

In 2014, the Nunnally Ichthyology Collection at the Virginia Institute of Marine Science (VIMS), College of William & Mary, began a three-year project funded by the National Science Foundation to safeguard its collection of larval fishes. Many of these samples were collected as part of interdisciplinary long-term time-series and other plankton studies from the Atlantic, Pacific, and Southern Oceans, and many are complemented by extensive environmental data, including depth, temperature, salinity, and dissolved oxygen, and by phyto- and zooplankton assemblage information. In addition, valuable larval fish collections from the Chesapeake Bay developmental series of basal actinopterygian fishes have

been made by VIMS faculty and researchers. This new NSF-funded project has three main goals: 1) improve storage of specimens to ensure long-term preservation; 2) identify specimens and increase their utility for research and teaching; and 3) catalog specimens and link associated environmental data and images in a publicly accessed digital database. The proper storage, identification, and digitization of these samples will secure them and increase their value. Thus, the collection of larval fishes lends itself to studying, for example, the effect of the physical environment or anthropogenic-induced



Jeff Leis and Ann Matarese helping participants with the identification of larval fishes.

environmental changes on larval fish communities over time and across a range of habitats.

As part of this project, VIMS hosted a two-week Larval Fish Workshop in October 2015 aimed at introducing students, collection managers, research scientists, and volunteers to the study,

...continued on p. 4

Pacific Rim Region...cont'd from p. 2

of the results of the paradigm test in various ecosystems and taxa. In the "Laboratory experiments" session, the presenters introduced laboratory experiments which tested the paradigm or are potentially relevant to the paradigm test (3 presentations). This session highlighted any difference from field studies and considered study designs of laboratory experiments for the paradigm test. In the "Modelling studies" session, the presenters introduced progress in modeling studies (5 presentations). This session highlighted strategy for linking field and laboratory results to predictive models of fish growth and survival. The "Seeds of early life biology" session aimed to support launching and developing early life biology studies in some ecosystems (2 presentations). The "Poster" session dealt with a variety of topics in early life biology (16 posters). The symposium had a total of 82 participants, including 3 Keynote Speakers and 18 Invited Speakers, from Canada, Norway, Germany, Spain, USA, Chile, Peru, Poland, Republic of Korea, and Japan.

The symposium was full of high-quality presentations which provided new perspectives and controversial issues relevant to the paradigm. We were excited about the fact that each presentation received many questions and promoted enthusiastic discussion.

Following the symposium, a 2-day workshop was held in a practical style (discussion and writing only) among 30 invited participants. The objectives of the workshop were (1) providing a networking environment for future collaborations among the participants to resolve some important issues identified during the workshop and (2) publishing a perspective paper co-authored by all workshop participants to identify what is needed for breakthroughs in the study of recruitment dynamics. The workshop progressed at a dramatic speed, producing a new concept which can synthesize different types of selection on larval size and growth rate. The workshop discussion also led to a list of issues for future breakthroughs. We are now trying to prepare two manuscripts based on the discussion during the workshop.

We, organizers, are privileged to have had the opportunity to share ideas with all the symposium participants about the paradigm in early life biology. We extend our special thanks to Drs. Louis Fortier, Yoshiaki Oozeki (Advisers), Pierre Pepin, Arild Folkvord, Myron A. Peck (Keynote Speakers), Ignacio A. Catalán, Alberto G. García, Marc Hufnagl, Klaus B. Huebert, John F. Dower, Su Sponaugle, Evan K. D'Alessandro, Richard D. Brodeur, Stuart A. Ludsin, Guido Plaza, Patricia M. Ayón, Naoki Tojo, Shin-ichi Ito, Mikimasa Joh, Yosuke Tanaka, Motomitsu Takahashi (Invited Speakers), and other Contributing Speakers and Poster Presenters for their essential contributions.

A booklet of program and abstracts is available online: <http://cse.fra.affrc.go.jp/takasuka/gsp/>

Reference

Anderson, J. T. (1988) A review of size dependent survival during pre-recruit stages of fishes in relation to recruitment. *Journal of Northwest Atlantic Fishery Science*, 8: 55–66. §

...continued on p. 5

Northeast Region...cont'd from p. 3

identification, and care of larval fish specimens. Thirteen participants from all over the world attended the workshop, which was led by several internationally recognized experts in larval fish taxonomy: Drs. Jeff Leis (University of Tasmania, Australia), Ann Matarese (NOAA Alaska Fisheries Science Center), Dave Johnson (National Museum of Natural History, Smithsonian Institution), Nalani Schnell (Institut de Systématique, Évolution, Biodiversité, Paris, France), and Peter Konstantinidis (VIMS).

During the workshop, participants identified samples of larval fishes that had been collected by Dr. Deborah Steinberg and colleagues off the Western Antarctica Peninsula, the North Pacific Ocean, tropical Pacific Ocean, and the tropical Atlantic Ocean. In addition, several samples of leptocephalus larvae that had been collected by Dr. Tracey Sutton from the Bear Sea Mount in the North Atlantic Ocean were sorted and identified. During the workshop, participants

identified 4,694 individual fishes in 811 lots, comprising 100 families! Nine of these families were new additions to the VIMS Nunnally Ichthyology Collection. A repeated theme in many of the participant comments on post-workshop evaluations echoed the importance of the hands-on nature of this workshop, with immediate practice in identification of a broad diversity of larval fishes under the watchful eyes of internationally recognized larval fish taxonomists.

Although taxonomic identification was a key goal of the workshop, participants also learned about curation, digitization (data basing and



Anglerfish

imaging), and collection/preparation of larval fishes. Participants toured the Nunnally Ichthyology Collection, learned how to image larval fishes with a Zeiss Discovery v20 microscope for image capture and to use Adobe Photoshop for post-processing digital images. Various database methods and software platforms were discussed. Participants also cleared

...continued on p. 6

40th LFC...cont'd from p. 1

Six theme sessions at the 40th LFC:

Ontogeny and Systematics: Using Early Life History to Identify Homology for Phylogenetic Studies,

Larval Dispersal

Early Life History Studies of Large Pelagics

Maternal Effects and Beyond: Non-genetic Influences of Mothers on the Fitness of their Progeny

The Position of Fish Early Life Stages in Marine Food Webs

Carry Over of Early Life Phenotypes to Population Dynamics

Of course, presentations on all aspects of the early life history of fishes are welcome.

The conference is being held in Solomons Maryland. Meetings will be held at the venerable Chesapeake Biological Laboratory (founded 1925), with social events scheduled at the Calvert Marine Museum and elsewhere in Solomons, a Chesapeake Bay resort town well populated with watering holes. Registration, room reservation and abstract submission can all be accessed through the conference web site <http://hjort.cbl.umces.edu/LFC2016.html>. Early registration closes 19 April. Abstract submission is open now and closes on 19 May.

We hope to see you in Solomons this summer!

--Thomas Miller and David Secor,
Local Hosts §

Pacific Rim Region...cont'd from p. 4

Do anchovy actually grow faster than previously recognized? Establishing reading criteria for otoliths of juvenile and adult anchovy in Valparaíso, Chile

A workshop on "Otolith microstructure analysis of juveniles and adult of the Peruvian anchovy *Engraulis ringens*" was held in Valparaíso, Chile, during December 7–11. Drs. Guido Plaza

Larval Fish Workshop at the Virginia Institute of Marine Science, June 6 - 17, 2016

The Virginia Institute of Marine Science Nunnally Ichthyology Collection in Gloucester Point, VA, is home to a large ichthyoplankton collection. This collection contains samples from the tropical and northern Pacific Ocean, the Southern Ocean, the Amazon Plume, Sargasso Sea, the Caribbean, the Mid- and South Atlantic Bights, and the Chesapeake Bay. As part of our current NSF CSBR grant, we are hosting a larval fish workshop from June 6 - 17, 2016. Goals of the workshop include: 1) how to sort and identify larval fishes; 2) preparation, storage, and curation of larval fish collections; and 3) imaging techniques for larval fishes. The workshop is open to students, collection managers, curators, and other museum and research professionals. The workshop is free; however, participants will be responsible for covering the cost of transportation, lodging, and meals.

The focus of the first week of the workshop will be on samples from the Southern Ocean and western tropical Atlantic (in and adjacent to the Amazon River plume and the Caribbean Sea). The second week will emphasize

(Pontificia Universidad Católica de Valparaíso) and Francisco Cerna (Instituto de Fomento Pesquero) organized this practical workshop at the Instituto de Fomento Pesquero, supported by their research projects "FIP 2009-17" and "SUBPESCA 4728-31 LP 11". Dr. Steven Campana (University of Iceland) and I were invited to the workshop as international contributors. The objective of the workshop was to provide a laboratory-

samples from the Sargasso Sea, Chesapeake Bay, and the Gulf of Maine. Participants will sort and identify ichthyoplankton samples to the family level under the guidance of five expert larval fish taxonomists: Drs. Jeff Leis (University of Tasmania), William Watson (Southwest Fisheries Science Center, NOAA), Nalani Schnell (Muséum National d'Histoire Naturelle), G. David Johnson (Smithsonian Institution), and Peter Konstantinidis (VIMS).

If interested please contact Dr. Peter Konstantinidis (peterk@vims.edu) for an application form or you can download one from the VIMS Nunnally Ichthyology Collection website: http://www.vims.edu/research/facilities/fishcollection/larval_workshop/index.php. The workshop is limited to 12 participants. Applicants can attend both weeks of the workshop or either the first or second week. However, preference will be given to individuals that are able to attend both weeks. Applications are due on April 1st, 2016 and a notification of acceptance will be made by April 15th, 2016.

--Eric Hilton, Sarah Huber, & Peter Konstantinidis §



based platform to revise, analyze, and discuss the criteria of identification of primary-micro increments in otoliths of juveniles and adults of Peruvian anchovy *Engraulis ringens* obtained from field and laboratory conditions.

There has been controversy on age and growth of *Engraulis* spp. and some other small pelagic fish species: recent studies hypothesized that they grow

...continued on p. 6

Northeast Region...cont'd from p. 4

and stained larvae that they identified. Finally, participants were able to join VIMS scientists in the field during weekly ichthyoplankton surveys. In addition to presentations on curation

of this issue), was made possible by a grant from the National Science Foundation's Collections in

*Snailfish from Antarctica*

Support of Biological Research (NSF DBI-1349327, to Hilton, Huber, and Steinberg) is gratefully acknowledged.

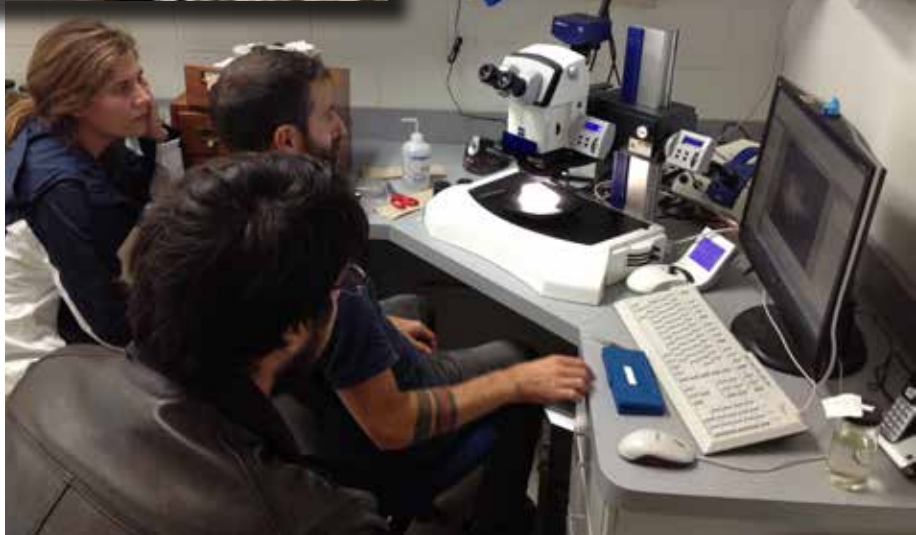
--Eric Hilton, Sarah Huber, & Peter Konstantinidis §



Sarah Huber is giving a tour through the collection

of larval fish collections at the Australia Museum, VIMS, and the Museum of Comparative Zoology at Harvard University by Jeff Leis and Sarah Huber, Tammy Cullins, a course participant and collection manager for the SEAMAP larval fish collection, and Katherine Maslenikov, collection manager at the Burke Museum at the University of Washington, gave presentations on curation and organization of these larval fish collections.

The workshop in October, and the one planned for June 2016 (see page 5



Peter Konstantinidis is demonstrating the imaging setup

Pacific Rim region...cont'd from p. 5

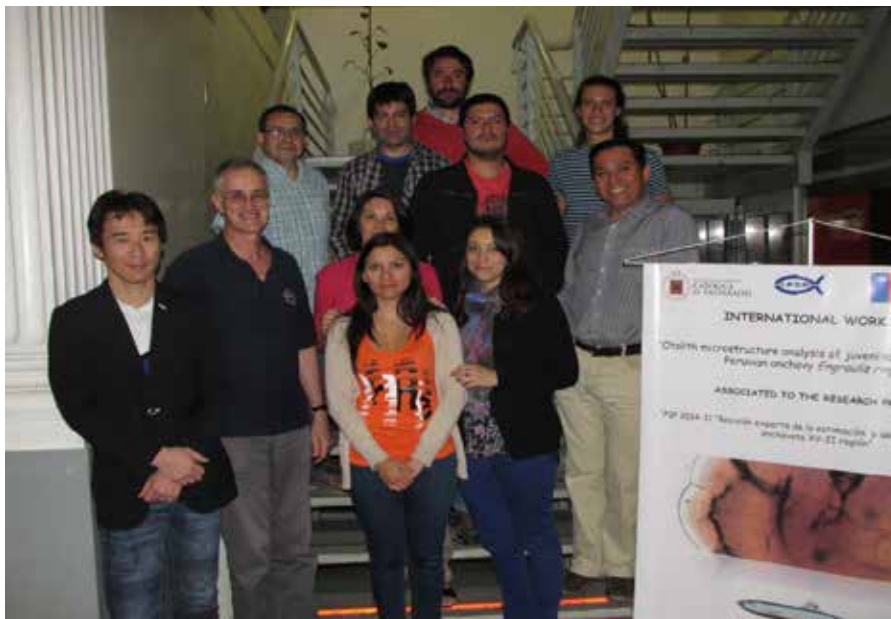
much faster than previously recognized (La Mesa et al. 2009, Aldanondo et al. 2011). Based on a recent study which validated daily increment formation in otoliths of juvenile and adult anchovy (Plaza and Cerna, 2015), the organizers proposed to test the hypothesis of fast growth of anchovy and to establish

reliable reading criteria for otoliths of juvenile and adult anchovy.

During the workshop, a total of 9 participants were involved in revisiting technical aspects of otolith reading, for example, double ring structure formed under specific laboratory conditions and possible missing rings around the core. The workshop was organized well

in a practical style by a combination of laboratory works and discussion. An established otolith protocol during the workshop is anticipated to contribute to aging juvenile and adult anchovy and may also be applicable to other taxa. The accuracy of aging would promote understanding ecology of these

...continued on p. 7



Group photo including the workshop participants (Guido Plaza, Francisco Cerna, Steven Campana, Akinori Takasuka, Mauricio Landaeta, Mackarena Gómez, Cecilia Machuca, Guillermo Moyano, Alejandra Hernández)

Pacific Rim region...cont'd from p. 6
species throughout their life histories.

Further, it could influence age-length key in the stock assessments.

Pacific Rim region...cont'd
Report of visit to the
Oceanographic Institute of the
University of São Paulo

In January 2016, I had an opportunity to visit the Laboratory of Biology and Ecology of Marine Ichthyoplankton at the Oceanographic Institute of the University of São Paulo (IO - USP), São Paulo, Brazil. This laboratory is managed by Professor Mario Katsuragawa, who is an expert in ichthyoplankton taxonomy but has a broad interest in fisheries oceanography. There, I had a chance to see their biological sample maintenance system called "Biological Collection Prof. Edmund F. Nonato of the Oceanographic Institute (ColBIO)". The system aims to promote the permanent maintenance of the biological samples obtained from various surveys along the Brazilian and Antarctic coasts over the last 50 years. This was indeed a good reference to me, since I am currently responsible for management of egg and larval samples

and data from the waters off the Pacific coast of Japan at my organization. Then, I had a discussion with Professor Katsuragawa, his laboratory members, Ms. Jana Menegassi del Favero and Dr. Claudia Namiki, and his colleague, Dr. Douglas Francisco Marcolino Gherardi. A major topic was a possibility of future collaboration to compare spawning habitats of anchovy (*Engraulis anchoita*) and sardine (*Sardinella Brasiliensis*) in the southern Brazilian Bight with those of anchovy (*Engraulis spp.*) and sardine (*Sardinops spp.*) in the Kuroshio and Humboldt Current systems. My visit to their laboratory was short, but I was very happy to learn a lot from their current activities as well as their publications.

Jana previously reported the activities of the laboratory of Professor Katsuragawa in STAGES Vol. 34 (3) (October 2013). Here is a quick update of their activities. Their current research topics related to ichthyoplankton are (1) description of the early stages of the life cycle, (2) assessment of fisheries resources and

References

Aldanondo, N., Cotano, U., and Etxebeste, E. (2011) Growth of young-of-the-year European anchovy (*Engraulis encrasicolus* L.) in the Bay of Biscay. *Scientia Marina*, 75: 227–235.

La Mesa, M., Donato, F., Giannetti, G., and Arneri, E. (2009) Growth and mortality rates of European anchovy (*Engraulis encrasicolus*) in the Adriatic Sea during the transition from larval to juvenile stages. *Fisheries Research*, 96: 275–280.

Plaza, G. and Cerna, F. (2015) Validation of daily microincrement deposition in otoliths of juvenile and adult Peruvian anchovy *Engraulis ringens*. *Journal of Fish Biology*, 86: 203–216.

--Akinori Takasuka§

spawning biomass, (3) examination of the distribution and abundance of eggs and larvae, (4) studies on feeding, growth, and mortality, and communities of fish larvae. Professor Katsuragawa is working as a coordinator of the project "Mapping biological samples from the Oceanographic Institute of the University of São Paulo: support for studies on marine biodiversity of the southeastern Brazilian coast and the Antarctic region". The aim of this project is mapping the entire biological materials of the existing collection at the Oceanographic Institute of the University of São Paulo. The data sharing will promote open access system for research and educational institutions and scientific community in general. They have published papers from recent studies actively (see below). Moreover, they had progress in many topics, as follows. (1) Vertical and horizontal distribution of lantern fish larvae (*Myctophidae*) under influence of water masses in the Southwest Atlantic. (2) Larval and juvenile development of *Cynoscion microlepidotus* (*Sciaenidae*:

...continued on p. 8

Publications

Other Publications

An Atlas of Early Stage Fishes in Japan. 2nd edition. Edited by Muneo Okiyama. Tokai University Press, Hadano, Japan. 2014. ISBN: 978-4-486-01775-2 C3645

Guide d'Identification des Post-larves de Méditerranée. Edited by G. Lecaillon, M. Murenu, F. Hackradt, and P. Lenfant. Ecocean Nova Science Publishers, Inc.. 2012.

Proceedings of the 36th Annual Larval Fish Conference. Edited by H.I. Browman and A.B. Skiftesvik. *ICES Journal of Marine Science* 71(4). 2014.

A Handbook to Help Identify Hudson River Fish Larvae. By L. G. Arvidson and J. B. Alber. Published by the authors, Rosendale, New York. 2013.

Larval Fish Aquaculture. Edited by Jian G. Quin. Published by Nova Science Publishers, Inc.. ISBN:978-1-62417-899-3. 2013

Zooplankton of the Atlantic and Gulf Coasts: A Guide to Their Identification and Ecology. 2nd edition. By William S. Johnson and Dennis M. Allen. Published by Johns Hopkins University Press. ISBN-13:978-1421406183. 2012.

Larval Fish Nutrition. Edited by G. Joan Holt. Published by Wiley-Blackwell. ISBN-0813817927. 2011.

Identification of Eggs and Larvae of Marine Fishes. Edited by A.W. Kendall, Jr. Published by Tokai University Press. ISBN-978-4-486-03758-3. 2011.

Ecology of Estuarine Fishes: Temperate Waters of the Western North Atlantic. By Kenneth W. Able and Michael P. Fahay. Published by Johns Hopkins University Press. ISBN-0801894719. 2010.

Early Stages of Marine Fishes Occurring in the Iberian Peninsula. P. Ré and I. Meneses. Published by IPIMAR/IMAR. ISBN-978-972-9372-34-6.

Pacific Rim region...cont'd from p. 7

Teleostei) from Brazilian waters. (3) Feeding, growth, and mortality of fat snook *Centropomus parallelus* larvae and juveniles from Brazilian waters. (5) Variability in distribution and abundance of eggs and larvae of the Brazilian sardine *Sardinella brasiliensis* in the southeastern Brazilian coast. (6) Distribution of pelagic polychaetes in the southeastern Brazilian coast.

Lastly, I would like to introduce a blog about marine science which is managed by Jana, Claudia, and their friends: <http://chatwithneptune.blogspot.com.br>

This blog is intended to introduce marine science to general readers. The main page is written in Portuguese, but they have started posting English texts once a month.

Recent representative publications from their laboratory:

Katsuragawa, M. et al. (2014) Patterns in larval fish assemblages under the influence of the Brazil current. *Continental Shelf Research*, 89: 103–117.

Garbini, C. N. et al. (2014) Distribution and abundance of Pleuronectiformes larvae off southeastern Brazil. *Brazilian Journal of Oceanography*, 62: 23–34.



Group photo with the members of the Laboratory of Biology and Ecology of Marine Ichthyoplankton and their colleagues at the Institute of Oceanography, University of São Paulo

Porcaro, R. R. et al. (2014). Spatial and temporal distribution patterns of larval sciaenids in the estuarine system and adjacent continental shelf off Santos, Southeastern Brazilian Journal of Oceanography, 62:149–164.

Favero, J. M. et al. (2015) Using new tools to identify Engraulidae (Clupeiformes: Teleostei) eggs of the southeastern Brazilian bight. *Journal of Fish Biology*, 86: 822–826.

Namiki, C. A. P. et al. (2015) Growth and mortality of larval *Myctophum* affinis (Myctophidae Teleostei) from southeastern Brazilian waters. *Journal of Fish Biology*, 86: 1335–1347.

Favero, J. M. et al. (2015) Comparison of the effects of two bongo net mesh size on the estimation of abundance and size of Engraulidae eggs. *Brazilian Journal of Oceanography*, 63: 93–102.

--Akinori Takasuka§

Elections for Excom members

Elections were held for Excom members President-Elect and Secretary-Elect. Frank Hernandez and Dominique Robert were elected as the next President-Elect and Secretary-Elect, respectively. They will be installed as section President and Secretary at the 2016 LFC in Maryland.

Frank Hernandez elected as President-Elect



Frank is an assistant professor in the Department of Coastal Sciences at the University of Southern Mississippi (Ocean Springs, Mississippi, USA). He received his BS degree (Zoology, 1993) from Louisiana State University, his MS degree from the University of North Carolina at Wilmington (Marine Biology, 1996), and his PhD degree (Oceanography and Coastal Sciences, 2001) from Louisiana State University. Frank leads an active Fisheries Oceanography and Ecology Lab, which often includes a diverse mix of research technicians, postdocs, graduate and undergraduate students, as well as high school interns. His research interests include larval fish ecology, planktonic

food webs, and recruitment dynamics. He has been a regular member of AFS since 2007, and has presented or co-authored oral or poster presentations at 12 Larval Fish Conferences (his first being the 1996 meeting in New Orleans). As a member of the Early Life History Section, Frank has held the offices of Secretary-Elect (2011-2012) and Secretary (2012-2014), served as a judge for the Sally Richardson and John Blaxter awards, and assisted with soliciting content for STAGES (2013-2014). He is eager to continue his service to the ELHS and is honored to be considered for this office.

Dominique Robert elected as Secretary-Elect



Dominique is a Research Scientist at the Centre for Fisheries Ecosystems Research of Memorial University of Newfoundland, with interests in pelagic ecology and fish population dynamics. He is particularly interested in the factors driving variability in the distribution and recruitment of exploited marine fish stocks. After completing a PhD thesis from Laval University in 2008 that focused on the link between larval growth and recruitment of Atlantic

mackerel, a large portion of his research has aimed to provide a better understanding of the relationships among feeding success, growth and survival during early life stages of fish. Dominique recently co-convened a highly successful symposium and workshop on the Growth-Survival Paradigm during early stages of fish, which was held in Yokohama in November 2015. He has been a member of the Early Life History Section since the start of his graduate studies in 2003, and has participated in many Larval Fish Conferences dating back to 2005, when he was awarded the John H.S. Blaxter Award. He was a co-organized of the 38th Larval Fish Conference in Quebec City in August 2014, which was the largest and most international symposium of the 144th Annual Meeting of the American Fisheries Society. §

Early Career Committee will host workshop on scientific writing at 40th Larval Fish Conference

Again, thank you all for helping us prioritize the professional development efforts of the Early Career Committee (ECC)! We appreciate your responses and are pleased to announce another professional development opportunity at the upcoming meeting in Solomons Island, Maryland. This year's workshop will focus on scientific writing, particularly common mistakes to avoid and strategies

...continued on p. 10

Publications...cont'd from p. 8

Ecology of Anguilliform Leptocephali: Remarkable Transparent Fish Larvae of the Ocean Surface Layer. M.J. Miller. Published by Aqua-BioScience Monographs. TERRAPUB. 2009.

A.M. Malzahn, M.A. Peck, and D. Schnack, eds. *Scientia Marina*, volume 73S1, Supplement 1. Consejo Superior de Investigaciones Cientificas. 2009.

Plankton. A Guide to Their Ecology and Monitoring for Water Quality. I.M. Suthers & D. Rissik. Published by CSIRO Publishing, 272 pp. 2009. ISBN: 9780643090583.

Manual of Recommended Practices for Modelling Physical – Biological Interactions during Fish Early Life. Edited by E.W.

North, A. Gallego, and P. Petitgas, Jr. ICES Cooperative Research Report No. 295. 111 pp. 2009. ISBN: 978-87-7482-060-4.

Early Life History of Marine Fishes. B.S. Miller and A.W. Kendall, Jr. Published by University of California Press. ISBN: 978-0-520-24972-1. 2009.

Fish Larval Physiology. R.N. Finn and B.G. Kapoor. Published by Science Publishers. ISBN: 1578083885. 2008.

Ecology of Juvenile Salmon in the Northeast Pacific Ocean: Regional Comparisons. Edited by C. B. Grimes, R. D. Broder, L. J. Halderson and S. M. McKinnell. American Fisheries Society, Symposium 57, Bethesda, MD. 2007. §

President's Message...cont'd from p. 1

Second, elections were held a few weeks ago and, by almost unanimous support, Frank Hernandez is our new President-elect and Dominique Robert is our new secretary-elect. I look forward to working with Frank and Dominique in the coming months as we ramp up to our June meeting in Maryland. With their elections, we now have a complete Executive Committee. A complete ExCom is important because it allows us to not only discuss but also to put into effect ways to help ensure that our section continues to run smoothly. These elections were delayed, hence, Frank and Dom will officially start their terms as President and Secretary, respectively, quite soon - at the end of our business meeting in Maryland. We will hold new elections for secretary-elect and president-elect a few months after that - which will get us back on track. Please step up and get your name on the ballot!!

Third, the 40th (!!) annual Larval Fish Conference website is up and running Hjort.cbl.umces.edu/LFC2016.html. Please visit the site to register for the meeting, learn about the venue and the theme sessions and to submit an abstract. Tom Miller, Dave Secor and crew have developed an interesting mixture of theme sessions. This upcoming meeting brings us back to the Chesapeake Biological Laboratory

in Solomons, Maryland where some of you "more mature" section members will fondly remember our 6th Annual LFC held in 1982 (ahem, when I was 13 years old). Please remember to 1) spread the word, 2) register and attend (!), and, if you are an MSc or PhD student, 3) apply for a Grace Klein MacPhee Travel Grant. I look forward to seeing you at CBL this June!

Fourth, remember that our section's digital footprint has changed. Our new ELHS website is hosted by AFS at <http://earlylifehistory.fisheries.org/>. Please update your bookmarks!! I would like to thank Sarah Gilbert Fox and Beth Beard at AFS for helping us with various aspects of this transition. We are searching for a webmaster to make periodic updates to our homepage - self nominations are welcome! Please contact Fred Scharf or me if you want to serve the section in this capacity. I hope that this position is filled prior to our meeting in June... thanks in advance!

At this point, I would like to indulge in a bit of personal banter. Last November, a fairly large group larval fish ecologists and modelers working around the globe (from clear blue tropical waters to the ice-covered Arctic) were invited to visit Yokohama and discuss/debate the growth-survival paradigm of fish early life stages. The five-day meeting was organized by four members of our section (Akinori Takasuka, Jun Shoji, Dominique Robert

and Pascal Sirois). At this point, I feel compelled to use a stereotypical US American word -- what an AWESOME meeting! It seems that somewhere along the way, in our busy lives, we now get fewer and fewer opportunities to sit together and focus our minds on a singular topic (at least I find this to be the case for me). In Yokohama, we discussed and debated how phenotypic and/or genetic differences in intrinsic traits of individuals, cohorts and populations interact with specific extrinsic (environmental) features to create various patterns in size- or growth-selective mortality. Stemming from that meeting will be a series of papers which, I hope, you will find thoughtful and provocative. I would like to thank the organizers of this meeting (particularly Akinori) for bringing us together and helping us (collectively) move forward. AWESOME.

In closing and in summary (before my third plane of the day lands at my destination), I can briefly state that our section is in good financial condition - allowing us to provide opportunities such as student travel grants - we have a full set of officers in the ExCom ready to serve the section - we have a new website (which needs a little tender loving care) and we have a great upcoming meeting planned in June. I wish everyone safe travels to warm destinations! §

— Myron Peck, President

Wk scientific writing...cont'd from p. 9

to writing a strong manuscript. The workshop is entitled, "Scientific Storytelling: How to write a strong, publishable scientific manuscript." One motivation for a workshop on scientific writing was from a study by Handley et al. (2015) that observed manuscripts authored by non-native English speakers are at a disadvantage during the manuscript review process relative to manuscripts written by native English speakers. A second motivation was that during our most recent ECC survey graduate students (57%), postdoctoral researchers (45%), and senior researchers (32%) all indicated a strong interest in a professional

development event that focused on scientific writing.

Therefore, we invite you all to join us for our workshop on scientific writing. The workshop will be held during the conference on the evening of Tuesday, June 21st after the last talk of the day. It will be open to all interested attendees so be sure to indicate your interest in attending when registering for the conference. We are currently planning the specifics of the workshop so check our Facebook page (Early Life History Section AFS) and the conference website (<http://Hjort.cbl.umces.edu/LFC2016.html>) for updates. The ECC would also like to thank the organizers of the conference, Drs. Tom Miller and

Dave Secor, for providing us with the space and time slot for the workshop. Thank you again for all of your support and see you at the 40th Annual Larval Fish Conference!

Reference

Handley, G., Frantz, C.M., Kocovsky, P.M., DeVries, D.R., Cooke, S.J., Claussen, J. 2015. An examination of gender differences in the American Fisheries Society peer-review process. *Fisheries* 40 (9): 443-451.

--Alison Deary and Marta Moyano §

Newsletter Production Team

Stages is published in February, June, and October each year. It is assembled by the Newsletter Editor 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 Editor.

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Join ELHS

Membership in ELHS is open to all persons or organizations interested in furthering ELHS objectives, regardless of membership in the American Fisheries Society (AFS). If you are an AFS member, simply add ELHS membership when you pay your Society dues.

Affiliate membership is open to persons or organizations who are not members of AFS. Affiliate members are encouraged to participate in Section meetings, committee work, and other activities, but they cannot vote on official Section matters, run for or hold an elected office, or chair standing committees. All members receive **STAGES**.

ELHS has a PayPal account to receive affiliate membership dues. To join ELHS as an affiliate or to renew affiliate status online, go to: cmast.ncsu.edu/elhs/how-to-join or mail your name, institutional affiliation (if appropriate), mailing address, telephone and fax numbers, e-mail address, and dues (US \$15 per year) for the current and/or upcoming year(s) to the ELHS Treasurer (see page 2).

Please specify the membership year(s) for which you are paying dues. Make checks or money orders payable to "AFS-ELHS."

Editor's Ramblings



"Sure, if you collect the material then I'll put the first issue together". That's what Cindy said to Audrey nearly one month ago. And here we are, with the new issue of *Stages*. It is a little late, but hopefully with the content that you've all been anticipating. We're grateful to our regional representatives and other contributors for the features and announcements that keep everyone connected and up to date between Larval Fish Conferences.

The experience of putting together this first issue has shown us just how much work Lee Fuiman contributed over the years - all behind the scenes. Thank you, again, Lee for eleven years of editing 33 issues of *Stages*, and thank you for your help and tips during the handover of the newsletter over to us. After editing this issue we can echo the President's Message wording to say that Lee's work on this task was AWESOME!. Dusting off the archives of *Stages* we found out that Lee exceeded any predecessor in his term as editor. Most editors took on the job for 5 years, with the exception of Fred Binkowski, who served for 10. I guess Lee wanted the extra year to come on top and no one will probably ever exceed his term in years. Lee was also the one to prepare the first all-electronic edition of *stages* 5 years ago.

The archive also showed a 'slight' skewing of the gender in editorship. All previous editors were male, so it is about time we women took over! Thanks Lee, you left us with big shoes to fill, but a challenge we will take on with a feminine touch. §