STAGES

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

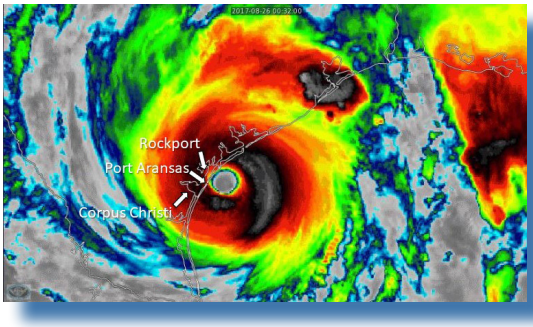
Volume 38, Number 3 | Audrey J. Geffen & Cindy J.G. van Damme, Editors | October 2017

Hurricane Harvey Strikes Texas - and ELHS!

On Monday afternoon, the entire program of the American Fisheries Society annual meeting in Tampa, Florida was suspended so that attendees could go outdoors to view the solar eclipse. While the eclipse reached only about 80% in Tampa, it was one of nature's spectacular events

Solar eclipse as seen in the shadows of a palm in Tampa.

Meanwhile, another of nature's spectacular events was preparing to overshadow the eclipse (sorry, I could not resist). On Tuesday morning, the remnants of Hurricane Harvey, which had fallen apart after crossing Mexico's Yucatan Peninsula, had regenerated into a tropical depression. Projections were for strengthening into a hurricane and making landfall in Texas. At this point, it raised only mild concern because "how much could it strengthen over such a short distance and time? Probably only Category 1 or maybe Category 2." On Wednesday, we



Hurricane Harvey at landfall on the Texas Coast

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President's Message

Dear larval fish friends,

Greetings from the storm-weary Gulf of Mexico. It's hard to put into words the past few months and the devastation left by Hurricanes Harvey, Irma, and Maria on the Gulf coast and Caribbean regions. My thoughts go out to all of our friends, families and colleagues that are dealing with these events, and I hope those impacted by the storms are well on their way to recovery. Several ELHS members live and work in these areas, and we have some of their stories and thoughts in this issue of STAGES. I am writing this message in the wake of Hurricane Nate, which passed over my lab in Mississippi and home in Alabama within the past 24 hours. Nate had the fastest forward motion of any recorded hurricane in the Gulf of Mexico (29 mph; 46 km/h), but fortunately its impact upon landfall was relatively minimal. I speak for all in the region when I say the end of hurricane season cannot come soon enough (53 days and counting!).

Now on to more pleasant thoughts. It's hard to believe it's been three months since many of us gathered at the 41st Annual Larval Fish Conference in Austin, Texas. It was admittedly

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Inside this issue

ELHS Back Then

5 years ago: Second time the LFC meets in Os Norway..

15 years ago: LFC meets in Europe for the first time, the location: beautiful Os, Norway.

20 years ago: Darrel Snyder creates Section's first website.

30 years ago: After 'only' 8 years as editor, Fred Binkowski suggests to begin to groom his replacement.

35 years ago: Excom voted to increase dues from $3 to $5!

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

January 15, 2018

People

In Memoriam
Daniel J. Faber

Dr. Daniel James Faber of Ottawa, Ontario, passed away on 4 May 2017 at the age of 84. He was born in Milwaukee, Wisconsin, and served four years in the U.S. Army Signal Corp. Dan was predeceased in 2009 by his wife Joanne, who often accompanied him when he participated in Larval Fish Conferences. He is survived by his daughter Jill, son Darin, their families, and his wife since 2011, Michelle.

Dan was instrumental in the founding and early operations of our American Fisheries Society (AFS) Early Life History Section. AFS authorized establishment of the Section during the Society's September 1979 annual meeting in West Yellowstone, Montana. During that event, we held an organizational meeting and selected Dan to serve on our provisional executive committee along with Ron Kernehan (who passed away in 2015), Bob Werner, Lee Fuiman, John Dorr, Fred Binkowski, and Darrel Snyder. As a member of that committee, Dan prepared the initial draft of our Section Bylaws. Following the acceptance of those bylaws and newly elected officers by AFS, our Section was officially sanctioned during the next annual AFS meeting on 22 September 1980 in Louisville, Kentucky. As part of that meeting, we held our first Section symposium and official business meeting, during which Dan was installed as President-Elect. By the end of Dan's term as our second President (1981-82), our Section had grown to over 400 members, 85% of whom were voting (AFS) members.

Dan was an enthusiastic larval fish biologist with experience in marine, estuarine, and fresh waters. He studied zooplankton in Narragansett Bay at the University of Rhode Island for his master's degree in 1959 and larval fish in northern Wisconsin lakes at the University of Wisconsin for his doctorate in 1963. After moving to Ontario and working a few years as a Research Scientist for the Ottawa Department of Lands and Forests, he assumed a position with the Canadian National Museum of Natural Sciences in 1967 as Scientific Director of their Aquatic Identification Center (CAIC) in Ottawa, and later, in 1978, as a Museum Scientist. He retired from the Museum in 1988, while serving as president of the Ottawa Chapter of the Scientific Research Society, Sigma XI.

During those decades, Dan conducted or assisted field research in various regions of Canada, including numerous small lakes, Lake Huron, Gulf of St. Lawrence, Bay of Fundy, and Scotian Shelf in the Atlantic, Barkley Sound in the Pacific, and Beaufort Sea in the Arctic. In his presidential address in the December 1981 issue of our Section newsletter, Dan reminisced that "I have been a dedicated member of our fraternity ever since 1959 when I

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Dan Faber, ELHS President, and ExCom at 1982 LFC. (front, l to r: Darrel Snyder, Dan Faber, John "Van" Conner, Fred Binkowski, Al Maiden, and Carroll Norden; back: Bob Hoyt, Nancy Auer, and Mike Sowby).

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First Announcement LFC 2018

The 42nd annual Larval Fish Conference (LFC) will be held from 24- 28 June 2018 in Victoria, British Columbia, Canada. The meeting is being organized by John Dower (dower@uvic.ca), Francis Juanes (juanes@uvic.ca) and Pierre Pepin (pierre.pepin@dfo-mpo.gc.ca). The Delta Victoria Ocean Point Resort, located on Victoria's inner harbour and just a five minute walk to downtown Victoria, will serve as the venue for the conference. Victoria is located on Vancouver Island and can be reached via connections through Vancouver and Seattle airports as well as via car ferries and high-speed catamarans.

The organizers have identified five theme sessions: [1] There is life (and death) after metamorphosis: Recent advances in the ecology of juvenile fish: Yes, it's called the LFC, but it is the Early Life History Section. We would therefore like to highlight research on the ecology of juvenile fish from marine, freshwater and anadromous species; [2] Fisheries oceanography in a changing ocean: This session will explore the potential consequences of changing ocean climate conditions for the ecology/physiology/phenology of larval fish; [3] Predator-prey interactions and

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Using Social Media to promote ELH studies

It should be easy to promote our research in today's world. We are in an era where all the information we need is at our fingertips via smart phones, tablets, and lap tops, but the attention span of our audience is getting shorter (I, too, enjoy a good animal meme). The way we share and access information as well as interact with each other is evolving (Collins et al. 2016). Never before has a good hook been more important to attract your intended audience! As an international organization with members in more than 40 countries worldwide, social media is our connection to each other between our annual meetings and issues of STAGES. Since 2014, the Early Life History Section (ELHS-AFS) has joined social media and now has accounts on Facebook and Twitter, in addition to the website.

The advantages of social media use by scientists and scientific organizations are numerous, it enables us to connect to a large, global audience, information is easily accessible (posts and tweets are succinct), communication is rapid, it is easier to network and collaborate, and it enhances recruitment, (Collins et al. 2016; Carpentier et al. 2017; Moreau 2017). Twitter and Facebook are the top social media platforms (Collins et al. 2016). Every month, on average over 2.0 billion people are active on Facebook (Facebook Newsroom) and 328 million are active on Twitter (Twitter Q2 Earnings) worldwide. However, considering the benefits of sharing our research with such a large potential audience, the use of social media is lagging in the academic work place (Collins et al. 2016). Generally, social media use by scientists is geared to communicating with scientific peers, although the potential to reach members of the general public is higher using social media.

What about the disadvantages? The perceived consequences of social media use are that it is a waste of time (benefits are not clear), it is difficult to maintain privacy, it reduces personal interactions (more likes and retweets but fewer face-to-face interactions), and it lacks scientific content (Collins et al. 2016; Moreau 2017). I know my resistance to using Twitter and other social media platforms to promote my work has been my perception that it is silly, boastful, and not rigorous. With over 28,000 peer-reviewed journals to publish in (Ware and Mabe 2015), promoting your research and recent publications is not boastful but necessary on digital platforms. Social media posts are analogous to sending colleagues postcards announcing your recent publication or handing out reprints to anyone who cannot run away fast enough at a conference. Moreover, they give you and your research global visibility in these highly competitive times. At the end of the day, social media

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News from the Regions

Pacific Rim Region

Akinori Takasuka

Dr. Iain M. Suthers (University of New South Wales, Sydney, Australia) has just returned from a survey cruise off eastern Australia. I am very happy to receive and share his interesting cruise report.

Pelagic ecosystems of the East Australian Current

Recent reviews of larval growth (G) and mortality (M) suggested we may "reconsider the impossible" of fisheries recruitment, if these two rates are integrated in an M:G ratio. Such an analysis in the open ocean needs an ecosystem context, to consider the abundance of prey and predators.

Iain Suthers and his team have just returned from a 3rd voyage on R.V. Investigator, to ecologically characterise pelagic environments off eastern Australia, which can be easily observed by satellite (Fig. 1). We sampled down to 500 m two warm core eddies, and two cold cores, and also the continental shelf and frontal eddy (5 pelagic environments).

While the main aim was to sample different pelagic environments with a CTD, trawl, MOCNESS, an optical plankton counter and bioacoustics (with an EK60), we also sampled larval fish in the upper mixed layer with a 70 cm bongo net and a 1 m^2 MOCNESS to examine their growth rates and mortality rates. It will be interesting to compare larval M with the slope of the zooplankton size-spectrum from the laser-OPC.

As in September 2016, we were plagued by bad weather this year as well (3 frontal systems in 3 weeks) but the vessel is remarkably stable (Fig. 2). Even though gear could not be deployed as it was too rough, we could still sort samples reasonably well even under the microscope (Fig. 3). All 30 pelagic trawls were sorted into functional groups; photographed, weighed, and frozen for ^{15}N analysis. One third of the plankton net tows were sorted for larval fish revealing our main targets for M:G - larval Sardinops, Scomber and Trachurus.

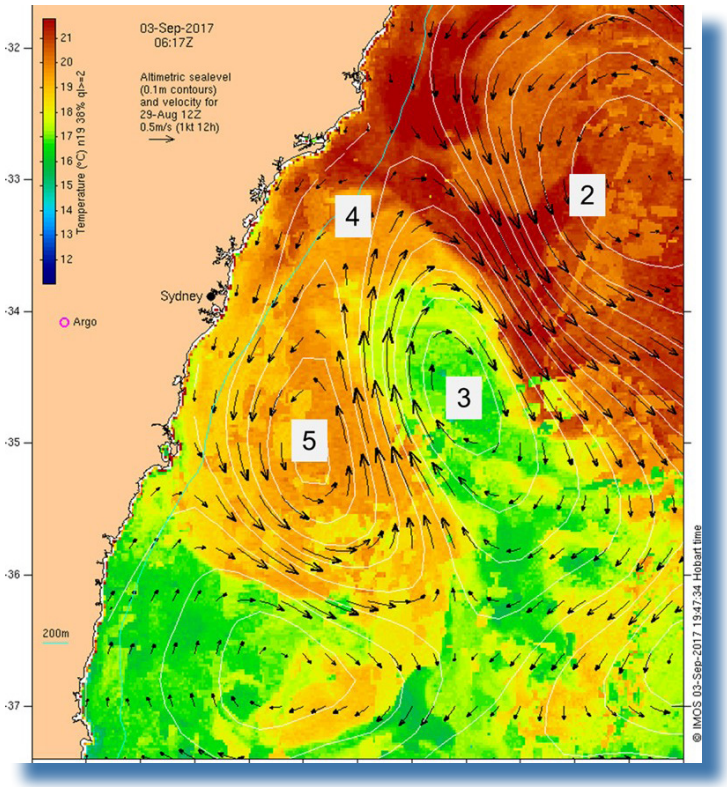


Fig. 1. Major habitats sampled in 2017

Fig. 2. Iain and Charlie in the galley

The 2017 oceanographic context was surprisingly similar to that in 2010, presented by Iain at the Chesapeake meeting in 2016.

Charlie Hinchliffe, a new PhD student, is working through the massive datasets of all 3 years, co-supervised by Pierre Pepin and Tony Miskiewicz. Hopefully some of us can get together in Victoria BC in June 2018.

-- Akinori Takasuka §

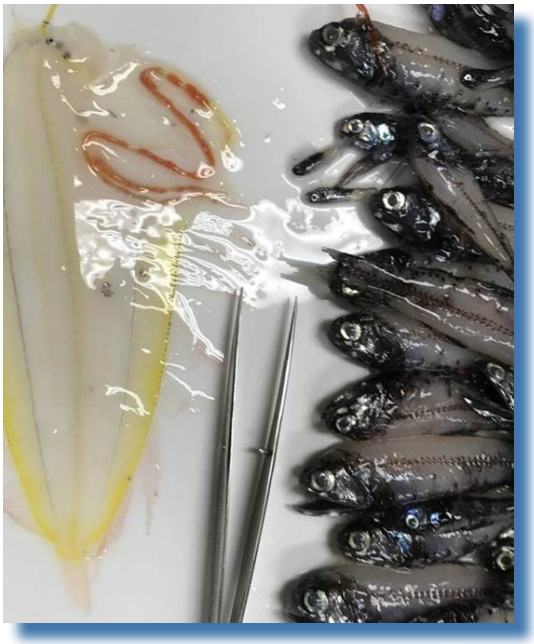


Fig. 3. Larval bothid Chascanopsetta (> 70 mm) from the Danish trawl 200 km east of Brisbane.

HELP KEEP STAGES INTERESTING...

Send us reports of your research activities.

Western region

Dan Margulies

Larval rockfishes confirm the efficacy of a large marine protected area in southern California.

The California Cooperative Oceanic Fisheries Investigations (CalCOFI) program is one of the oldest marine monitoring programs in the world and has greatly increased understanding of how fish respond to the environment. CalCOFI has regularly collected plankton and oceanographic data from fixed stations in southern California since 1949. The NOAA/NMFS ichthyoplankton laboratory at the Southwest Fisheries Science Center in La Jolla sorts and identifies larval fish species from CalCOFI and other plankton sampling program. Recently CalCOFI data was used for the first time to evaluate the performance of a large marine protected area, the Cowcod Conservation Areas (CCAs), in southern California.

The CCAs were established in 2001 to help alleviate the effects of overfishing on cowcod (Sebastes levis), bocaccio (S. paucispinis) and other large, long-lived rockfishes. The CCAs are big; they encompass over 11,000 km2. Within the CCAs fishing is prohibited at depths exceeding 36 m because most large rockfishes live in deep water. Serendipitously, 6 CalCOFI stations were within the CCAs and CalCOFI was the only program that regularly sampled the region (Fig. 1).

Unfortunately, rockfish larvae are notoriously difficult to identify to species based on morphology. There are in excess of 60 rockfish species in southern California and as larvae many of them look alike (Fig. 2). Fortunately, CalCOFI began preserving plankton samples in ethanol in 1998 (prior to this samples were only preserved in formalin). The advantage of ethanol is that, unlike formalin, it does not degrade DNA. We genetically identified all rockfish larvae from winter CalCOFI samples between 1998 and 2013 that were collected over the continental shelf and developed a time-series of larval abundances for 39 species.

The most important way that MPAs can help regional fisheries is by producing larvae. Larvae can drift out of the MPAs and "seed" areas that are open to fishing. We found that larval abundances increased significantly for 7 of 9 rockfish species throughout southern California that were historically intensely targeted by fishers. We also found that larval abundances of 75% of targeted rockfish species increased at a greater rate within than outside of the MPAs. This shows that larval production is relatively high in the CCAs and that the CCAs are contributing to the recovery of once overfished rockfishes. Our study is the first to directly document at such a large spatial and long temporal scale that larval abundances increased in association with an MPA. Results were recently published in the journal Royal Society Open Science.

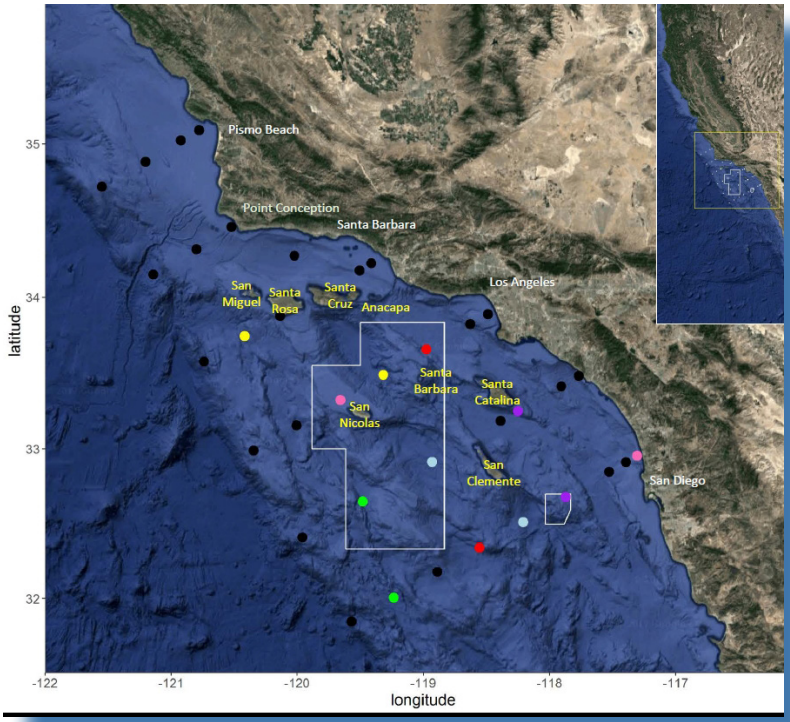


Fig.1. Location of study. Circles depict CalCOFI stations. Colors show which stations outside of the CCAs had similar environmental conditions to those within the MPAs. Boundaries of the CCAs are in white.

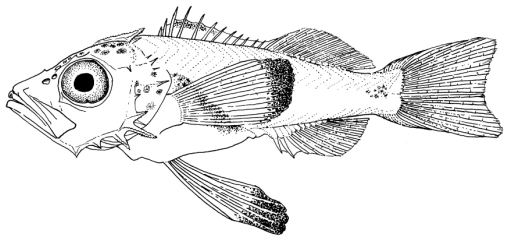


Fig. 2. Line drawing of a bocaccio rockfish larva by Geoff Moser

Citation: Thompson AR, Chen DC, Guo LW, Hyde JR and Watson W. 2017. Larval abundances of rockfishes that were historically targeted by fishing has increased in a large marine protected area over 16 years. Royal Society Open Science 4:170639

-- Andrew Thompson, John Hyde & William Watson, Southwest Fisheries Science Center, National Marine Fisheries Service, La Jolla, CA

Dustin Chen, Department of Environmental and Ocean Sciences, University of San Diego, San Diego, CA

Lian Guo, Organismic and Evolutionary Biology, University of Massachusetts Amherst, Amherst, MA

§

Southern Region

Trika Gerard

Linking habitat to recruitment: Evaluating the importance of pelagic Sargassum to fisheries management in the Gulf of Mexico

Sargassum is a holopelagic brown algae complex composed of *Sargassum natans* and *S. fluitans* found in neritic and oceanic waters of the western North Atlantic Ocean, including the Gulf of Mexico. Sargassum is a presumed "nursery habitat" for several managed species, including Gray Triggerfish (*Balistes capriscus*), Mahi Mahi (*Coryphaena hippurus*), and Greater Amberjack (*Seriola dumerili*), yet quantitative and habit-specific assessments of nursery function are lacking for Sargassum, and little is known about the environmental and climatic factors that drive variability in Sargassum biomass and distribution. A major limitation in improving stock assessments for managed species is the general lack of fisheries-independent indices. Currently, few stock assessments in the Gulf of Mexico include environmental or habitat-related parameters, even though a goal of National Oceanic and Atmospheric Administration (NOAA) Fisheries is to move towards Ecosystem-Based Fisheries Management approaches.

Currently there are many unanswered questions about Sargassum and its relationship to fisheries production. How much Sargassum is in the Gulf of Mexico? What is the temporal and spatial variability in its distribution and biomass? What environmental factors control Sargassum spatial and temporal variability? Are there quantifiable survivorship "advantages" for juvenile fishes associated with Sargassum that lead to enhanced recruitment? Overall, does a "good" Sargassum year equate to "good" recruitment for managed species? Can a Sargassum habitat index provide managers with a valuable assessment tool?

To address these knowledge gaps, the Fisheries Oceanography and Ecology Lab at the University of Southern Mississippi was awarded a research grant in June 2017 by the NOAA RESTORE Science Act Program to evaluate the importance of holopelagic Sargassum to fisheries management in the Gulf of Mexico. This project is a collaborative effort between the University of Southern Mississippi, the University of South Florida, and the Southeast Fisheries Science Center, Mississippi Laboratories. Using a combination of remote sensing observations, vessel surveys, and lab analyses, the overall project objectives are to: 1) quantify Sargassum variability in distribution and biomass at gulf-wide scales in the northern Gulf of Mexico, and understand the environmental controls of such variability; 2) quantify the nursery-role function of Sargassum relative to temporal/spatial variability, habitat morphology, and alternative open water habitats; and 3) develop and test the efficacy of remote sensing and field-derived habitat indices for inclusion in stock assessments of managed species associated with Sargassum.

The first research cruise occurred in July 2017 aboard the R/V Point Sur, and by all measures it was a great success. Information derived from remote sensing observations was used to locate Sargassum habitats in open waters of the northern Gulf of Mexico.

Fig.1. A juvenile Gray Triggerfish (Balistes capriscus) from a patch of Sargassum.

Juvenile and larval fishes (Fig.1) were collected primarily using a 2 x 1 m neuston net in both Sargassum and adjacent open water habitats (Fig.2). In addition to biological samples, water quality and algal reflectance data were also collected to help refine remote sensing algorithms. Additional cruises are planned for 2018 and 2019, and the project investigators are working closely with federal stock assessment biologists throughout the study to maximize the impact of project deliverables for fisheries management. More information on this project can be found on the *University of Southern Mississippi's Fisheries Oceanography and Ecology Lab's website*.

-- Trika Gerard §

Fig.2. A neuston net being towed through a patch of Sargassum in the Gulf of Mexico during the July 2017 research cruise.

North Central Region

Ed Roseman

Larval Fish Specimen Collection at the U.S. Geological Survey Great Lakes Science Center, Ann Arbor, MI

Scientists at the USGS Great Lakes Science Center (GLSC) have conducted fish early life history research at locations on Lake Michigan, Lake Huron, the St. Clair and Detroit River System (SCDRS), Lake Erie, and Lake Ontario. With samples collected over the past 12 years, the SCDRS larval fish collection represents one of the longest-running continuous fish early life history collections in the Great Lakes region.

For all locations to date, over 17,000 samples have been collected using a variety of gear types including paired bongo nets, neuston nets, conical nets, D-frame nets, light traps, seines, egg mats, and egg pumps. Objectives of these studies included documenting species' response to habitat improvements, estimating the number of larvae exported from rivers, assessing the role of ELH in fisheries recruitment , and determining larval fish age, growth, and diet habits, as well other general larval fish community investigations.

*Call for **Stages new feature series:***

Send us your stories of your larval fish collections.

Most samples were preserved in the field and stored using ethanol at the GLSC. Samples are curated annually to replenish ethanol and update labelling.

Identification and measurements are made at the GLSC laboratory or, for graduate student projects, at regional universities. Resolution of identification varies across families, but typically is to genus for most fishes, and species level where possible. Some species-level identifications have been validated through genetic techniques. The collection includes high numbers of gizzard shad, catostomids, rainbow smelt, Morone spp., and yellow perch. Other notable species captured include lake sturgeon, coregonids, burbot, and cottids.

Sample management and archiving is accomplished using relational databases (MS Access, Oracle).

Samples and related data of eggs and larvae are routinely shared with collaborators from across the Great Lakes region and elsewhere. Data have been used for a multitude of studies beyond the scope of the original collection purposes including genetic stock identification, diets, age/growth, micro-chemical otolith assessments, bio-physical modeling, and teaching larval fish identification and sampling techniques.

Highlights of the collection include:

- Extensive time series of SCDRS lake sturgeon eggs and larvae
- Coregonine larvae from Lake Michigan, Lake Huron, SCDRS, Lake Erie, and Lake Ontario
- Depth-stratified, day-night samples in multiple years
- Multiple gears used at multiple depths to sample throughout the system
- Intensive sampling near newly constructed spawning reefs in the SCDRS
- Coincident zooplankton sampling in SCDRS from 2012-2015, Lake Erie from 2013-2015, Lake Huron (2007, 2012, 2017), and Lake Michigan (2010, 2015)

Requests for use of the GLSC collection or potential future collaborations can be made by contacting Ed Roseman (*eroseman@usgs.gov*) who will direct you to the appropriate scientist responsible for the samples of interest.

Part of the USGS Great Lakes Science Center's fish early life history samples collection located in Ann Arbor, MI.

-- Ed Roseman, Robin DeBruyne, Tim O'Brien, Dave Warner, Bo Bunnell §

North East Region

Katey Marancik

NOAA College-Supported Internship Program at the Northeast Fisheries Science Center Narragansett Labs

Over the past six years, the NEFSC's Ocean and Climate Branch (OCB) Plankton Lab at the Narragansett Laboratory in Rhode Island has hosted 10 interns through the NOAA College-Supported Internship Program. For 15 years, NOAA has partnered with 16 colleges and universities that provide students with stipends and help match students with NOAA mentors at facilities across the country. These internships run approximately 10 weeks between late May and early August.

Staff from the OCB Plankton Lab train students in basic plankton sample processing, introducing them to the vast world of larval fish and planktonic-invertebrate research leading to an independent research project and development of oral and/or poster presentations. In addition, interns are offered opportunities to meet other NOAA researchers and visit other labs in the NEFSC system. Field opportunities are also provided when available.

Past intern projects have ranged from helping test new technology to testing old hypotheses using new methods. In 2016, two interns from Mount Holyoke College used plankton samples to examine biodiversity in the Slope Sea. This poorly sampled region of the ocean, from the northeast United States shelf edge to the northern edge of the Gulf Stream, is a new area of interest to NEFSC scientists since the discovery of a bluefin tuna spawning ground in the area.

This year's interns came from Washington College in Maryland and the University of Massachusetts at Amherst. In addition to a three-week research cruise collecting plankton samples from the Slope Sea and down the U.S. Atlantic shelf to Cape Canaveral, Florida, the interns learned about larval fish taxonomy, digital microphotography, and image analysis techniques. They worked with OCB staff to collect data on the survey, sort and process samples back at the lab, and completed an independent research project calculating larval shrinkage rates for several families collected during the Slope Sea survey. The data collected and analyzed suggests that shrinkage rates are similar among multiple taxa. The shrinkage formula from this study will be used to improve age-length relationships for larvae used for stock assessment indices. In addition to a poster and short presentation on this work to the Narragansett Lab, the interns worked with other Center staff, spent a day with the Woods Hole Science Aquarium staff and interns, and did fieldwork with the NOAA Restoration Center to round out their understanding of what it means to be a NOAA Fisheries employee.

Quentin Nichols (UMASS Amherst intern), Chris Gingrich (Washington College intern), Timothy White (BOEM), Chrissy Hernandez (WHOI PhD student), Ciara Willis (Dalhousie / WHOI intern), Glen Davis (Integrated Statistics) aboard the Gordon Gunter Slope Sea cruise June 2017

These summer internships have helped launch students into other exciting experiences. Interns have gone on to present their summer research at the Scientista Symposium/ Women in STEM or to use their summer experience with OCB to get other internships, such as through the NOAA Hollings Scholarships and National Science Foundation (NSF) Research Experiences for Undergraduates (REU) programs, or additional field experiences such as the NSF's STEMSEAS program and the Sea Education Association's Sea Semester programs.

In addition to the Five College Program, which includes Amherst College, Hampshire College, Mount Holyoke College, Smith College and the University of Massachusetts-Amherst in western Massachusetts, the NOAA College-Supported Internship Program has expanded to include Clark University, Stony Brook University, Duke University, the University of North Carolina, and Washington, Vassar, Hartwick, Grinnell, Middlebury, Holy Cross, and Bates Colleges.

- Katey Marancik §

Wrap-up - 41st Annual Larval Fish Conference

Yee doggies, that was good and hot and cool. Greetings ELHS'ers. We had one special LFC in Austin, July 12-16. Thanks to our local hosts (Lee Fuiman and team) and to the Joint Meeting of Ichthyologists and Herpetologists (JMIH) for making it all a great success. For those of you unable to attend, here is what you missed.

After an opening night social, the 41st annual Larval Fish Conference began in earnest on the afternoon of July 13, immediately following the JMIH plenary session. We were able to conduct the entire LFC in a single room with non-overlapping LFC sessions, while having opportunities to catch JMIH presentations.

We were treated to four excellent theme sessions:

Assessing and Evaluating Phenotypic
• Variation in Fish Early Life History Stages: Field Studies, Experiments, and Modeling (Leads: Klaus Huebert, Tom Miller, and Chris Chambers)
• Nutrition and Feeding of Fish Early Life Stages (Lead: Kenneth Webb)
• The Effects of Climate Change on Marine Fish Early Life Stages: Which Stressors are Most Important and How Do They Interact? (Leads: Hannes Baumann and Marta Moyano)
• Complexity and Performance Change During Physiological Development of Larval Fishes (Leads: Warren Burggren and Prescilla Perrichon)

The talks within each session provided an overview of topics and a number of examples to drive home important issues and the status of activities on the respective research fronts.

We also had two contributed paper sessions and a robust group of posters. The presentations and posters by students were especially notable.

Speaking of students, the recipient of the Sally L. Richardson best paper award went to Ms. Andria Salas, University of Texas at Austin, for her paper "The Role of Intermittent, Short-Range Acoustic Cues on Larval Fish Settlement." Congratulations Andria! .

Our section had two Early Career Events during the LFC. These events offered opportunities for students and early career scientists to meet with mentors (speed networking) and discuss among the early career participants the best take-home messages from the speed networking and what else was learned during the LFC. Thanks to Marta Moyano and Alison Dreary for organizing and to Angie Hoover and Olivia Lestrade for stepping in for Marta and Alison who could not attend.

Andria Salas, recipient of the ELHS's Sally L Richardson Best Paper Award, presented by Tony Miskiewicz.

We had several memorable socials. The night at The Oasis, overlooking Lake Travis was incredible. Good conversations, food, and views of the Texas Hill Country. We also had our LFC/ELHS Social at the funk-fest Austin Bar, Cedar Door, where our ELHS awards were announced and the NEW LFC banner was auctioned as a fundraiser of the John H. S. Blaxter Best Poster Award fund.

The North American Tribe placed the highest bid at auction for the NEW LFC Banner - See it again next June in Victoria, BC. Bring it on!

Thanks to Lee Fuiman and Corinne Burns for organizing and the University of Texas Marine Science Institute for sponsoring the social! The evening also gave us the chance to visit the egress of the million plus bats from Austin's Congress Street Bridge. Not spooky, just phenomenal!

We also had a vibrant ELHS business meeting run by our esteemed President Frank Hernandez. Thank you Frank for your work and that of all of the Executive Committee on our behalf!

Last – but certainly not least – thanks to Chris Chambers for coordinating with JMIH and taking charge of the program and to our local committee, Lee Fuiman and Corinne Burns, who did the majority of the local arrangements and generally making us all feel right at home!

- Chris Chambers and Lee Fuiman

Winners of the new LFC Banner. See it again next June in Victoria, BC. Bring it on!

LFC attendees arrived at the Austin Bat Bridge on Friday evening (7/14) just before egress of the million plus Mexican free-tailed bats.

continued on p.12

Hurricaine Harvey ...cont'd from p. 1

left the AFS meeting early to assist with preparations for the approaching storm at the University of Texas Marine Science Institute. By 10 am on Thursday, Tropical Storm Harvey was forecast to become a major hurricane (Category 3 or greater), with projected landfall at Corpus Christi. Well, that would be essentially a direct hit for us. Employees of the Marine Science Institute in Port Aransas, Texas, were dismissed by noon to take care of their families, homes, and property. Most evacuated to the north (San Antonio or Austin), some to west (Laredo), and some to the south (McAllen).

The 4 pm (16:00) bulletin issued by the National Hurricane Center warned "LIFE-THREATENING AND DEVASTATING FLOODING EXPECTED NEAR THE COAST DUE TO HEAVY RAINFALL AND STORM SURGE." At midnight, Hurricane Harvey was at Category 2 with 100 mph (160 km/h) sustained winds. By mid-morning on Friday, the outer rain bands of Hurricane Harvey reached the middle Texas coast. By 2 pm, Hurricane Harvey's 120 mph (195 km/h) winds made it a Category 3 storm. At 7 pm, it had reached Category 4, with maximum sustained winds at 130 mph (215 km/h). Watching live news coverage from one of Corpus Christi's television stations online in the comfort of our hotel room, we saw the satellite images as the eye wall began to move onshore near Rockport, Texas (13 miles / 21 km) north of Port Aransas just after 8 pm. By midnight, Rockport was in the eye of the storm, but Port Aransas was still experiencing the eye wall with winds up to 132 mph. The storm weakened to Category 3 by 2 am, as it moved inland. But, catastrophic rainfall continued as the storm moved slowly toward and through Houston over the next few days.

We returned to our home in Corpus Christi on Monday afternoon, after a 3-day holiday in a hotel in the Rio Grande Valley. Neighbors had already told us that there had been little damage at our home, except for some trees that had blown down. Indeed, the only other damage we had at home was a twisted satellite dish.

Damaged roof at the Fisheries and Mariculture Building

When I was able to visit Port Aransas on Wednesday to assess the damage to the Fisheries and Mariculture Laboratory, it was quite a different story. Our buildings suffered serious roof damage and, although the emergency generator was operating, the storm had destroyed the shed that housed the blowers that supplied air to the tanks in most of our buildings, and we had lost many fish. But the Fisheries and Mariculture Lab fared much better than the main campus of the Marine Science Institute, where there was considerable water penetration into the buildings. That, combined with the lack of electricity to power the air conditioners (which are critical as dehumidifiers), meant that remediation of hazardous mold and replacement of interior walls was necessary on the larger campus. The Director made the decision that FAML could be made habitable soonest, so that was the priority for the work crews.

We were able to return to our offices three weeks after the storm. Now, a month after Hurricane Harvey hit, we have air back to our tanks and hope to have our seawater supply system running this week. We are starting to set up new experiments, but it will be months before we are fully operational, and it will be even longer before the main campus reaches that point. Even more sad knowledge that many residents of Port Aransas and other nearby communities, including many of our faculty, graduate students, postdocs, and staff have had their home destroyed or severely damaged. The mountains of debris that continue to accumulate along the streets of Port Aransas, even now a month after the storm, are a constant and demoralizing reminder of another of spectacular events.

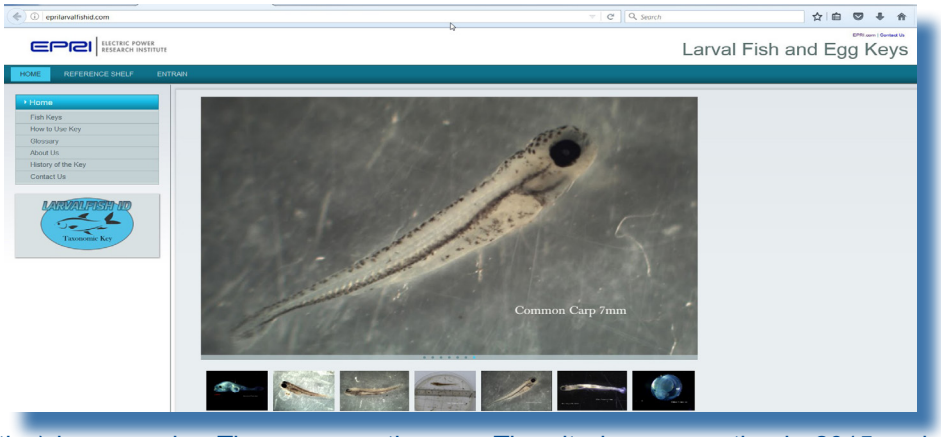
A hearty thanks to all of you who reached out to us in sympathy during and after the storm.

– Lee A. Fuiman §

Before and After - Hurricane Harvey Strikes

Publications & Resources

Web-Based Larval Fish and Egg Taxonomic Keys



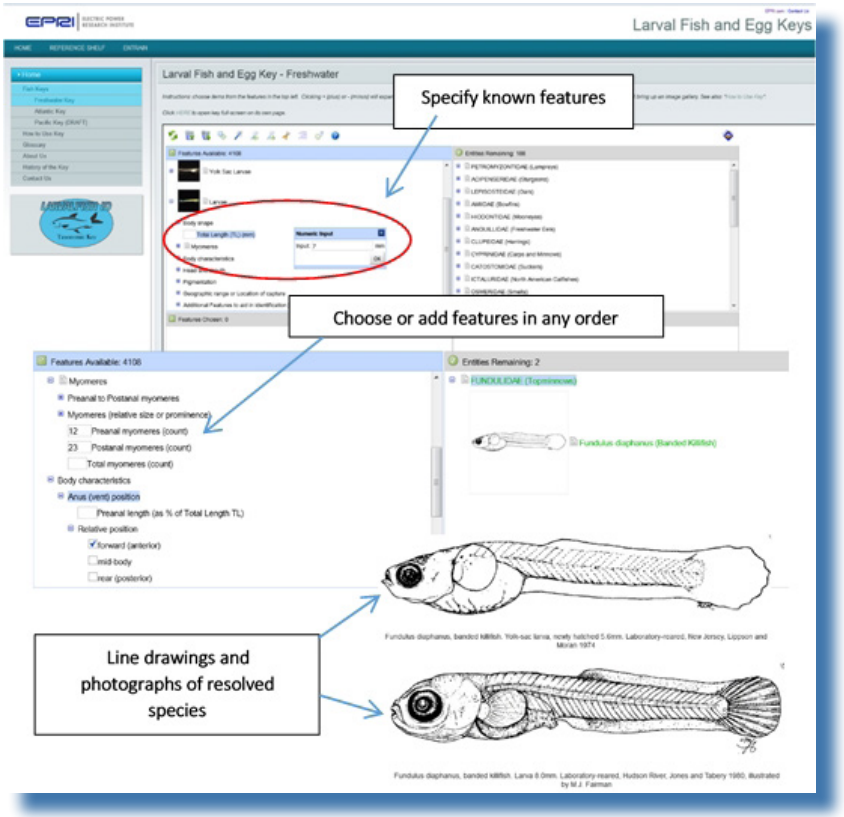
Recent U.S. EPA Clean Water Act §316(b) regulations, which require identification and quantification of entrained fish species at water intake structures, have led research and industry scientists to attempt to find better taxonomic tools to identify both freshwater and marine families and species. Traditionally, these scientists have used hard-copy taxonomic keys which have limitations such as lacking new species introductions/discoveries, requiring the use of numerous keys to identify a single species, and are generally of limited availability. These limitations can result in a high frequency of unidentified or misidentified organisms.

With funding support from the Electric Power Research Institute (EPRI), LimnoTech used multiple, well respected, taxonomic early life stage fish keys to construct a web-based platform of keys for North American freshwater (Great Lakes, Tennessee River, Colorado River, and Ohio River regions) and marine (Atlantic and Pacific coasts) habitats. These keys can be freely and openly accessed at www.larvalfishid.com. To date, the keys include information from nine taxonomic guides, detailing over 150 freshwater species and over 1,000 species from the Atlantic and Pacific coasts. The web-based platform provides greater (open) access to taxonomic resources, improved precision of identification, and allows flexibility for regional updates/corrections, expansion, and the inclusion of high-resolution images.

The keys use Lucid3 software, which, as opposed to the traditional dichotomous format, allows users to specify multiple diagnostic features (characteristics) in any order. The user can thus select only those characteristics that are apparent to them and disregard ones that are difficult or impossible to discern. The keys have been designed to be user-friendly and can emphasize the most important and common diagnostic features for an individual organism. As known features are entered, the list of possible taxonomic identifications is narrowed until a family or species can be identified. Images are included to assist in visual identification and explanations are provided for why specific entities were eliminated from consideration.

The site became active in 2015 and has since been used in sample processing by universities, electric power utilities, and taxonomic identification courses. LimnoTech currently manages the site and appreciates comments, questions, additional species information, or offers of images that can be added to the key. Communications can be directed to Chris Cieciek at LimnoTech (ccieciek@limno.com).

- Nate Jacobson, LimnoTech



continued on p.19

LFC 2017 ...cont'd from p. 9

Reflections of the Early Career workshop at the 41st Annual LFC

This year the ECC organized a workshop entitled "Finding the right career for you!" We all know that deciding the right path to take in any aspect of life can be difficult, particularly when choosing a career path. Therefore, this workshop was intended to aid early career professionals and students with valuable knowledge and advice from experienced professionals already in their prospective fields.

Early Career speed networking event at the 41st LFC in AustinIMG_3892.jpg

The workshop was organized into two sessions: first, a speed networking event, and a follow-up session on what the mentees learned from the mentors and what they thought of the event.

Fourteen mentees participated in the speed networking session. They were Section, but also ASIH members. They were divided into small groups (1 or 2 people) and assigned to one of the ten mentors in the room. Then after five minutes, each group would rotate to the next mentor. The mentors included academic (Warren Burggren, Ione Hunt von Herbing, Monica Garduño, Myron Peck), government (Noelle Bowlin, Tony Miskiewicz, Pierre Pepin, Cindy van Damme) and industry (Uranian Valcéanu) professionals from different locations. The mentees truly appreciated the one-on-one communication and the diversity of mentors in both occupations and backgrounds, but would have liked a larger representation from industry. Moreover, the mentees would have enjoyed having some materials about career opportunities to take home and a bit more time with each mentor. We appreciate the feedback from both the mentors and the mentees, which each year helps us improve the workshops. For future workshops, we will set aside time for an ice-breaker (or a follow-up get-together) in the same room so that the discussions can be started (continued) with a refreshment in hand! In addition, meeting with other societies, as we did this year, adds a lot of logistical barriers that are not present in years when we meet alone. For example, the conference organizers this year changed the room location at the last minute in order to set up the refreshments for the event, which reduced the amount of time each mentee could spend with a mentor, and we were unable to provide outside beverages. However, each hiccup is a lesson learned for us and future members of the ECC.

On the follow-up session, there was an overall feeling of encouragement from speaking with the mentors. Many were reassured about what they were persuing and comforted to know that others shared their doubts. They enjoyed hearing the importance of passion in driving your career. Also, some of the mentee's pre-conceived ideas were challenged, for example, some mentors recommended not rushing into graduate school as real-world experience can be exponentially beneficial before getting a graduate degree. They also stressed that there is room to expand your research interests beyond your PhD niche. Additionally, there was some discussion about how to improve the Section, which included creating a specific job board for early life history positions on the Section website, and working harder to further advertise the Section (e.g. other conferences, social media).

From the ECC, we would like to thank again all the mentors that voluntarily participated in the workshop, as well as the mentees, for making this event successful! It never ceases to amaze us how committed our members are to mentorship and we greatly appreciate your help and guidance! A special thanks goes to Olivia Lestrade and Angie Hoover, both graduate students in Dr. Frank Hernandez's lab, for running the show in our absence. We are already starting to prepare our next workshop in Victoria… stay tuned!

- Marta Moyano & Ali Deary, Early Career Committee

Musings from the 41st Annual LFC post-conference survey

After another successful Larval Fish Conference in Austin, Texas the Early Career Committee (ECC) would like to acknowledge members of the Early Life History Section (ELHS) and meeting attendees for their continued support during the 41st annual Larval Fish Conference (LFC). With this year's conference over, it is now time to start thinking about the 42nd Annual LFC, being hosted in Victoria, British Columbia, Canada. The dates have already been set, June 24th-28th, and if you "like" our Facebook page (@ earlylifehistory) and "follow" our Twitter account (@AFS_ELHS) you can see updates regarding the conference.

As in past years, we have been relying heavily on the feedback from the surveys that we have been circulating since the Quebec meeting in 2014 to determine the theme of the next professional development workshop. The surveys help us gather information for ExCom to recruit and retain early career researchers to our organization. This year, the survey received a facelift. After years of using SmartSurvey, which was the best option available at the time, Marta and I moved the survey to GoogleForms. Part of the reason for the move is that GoogleForms is much easier to edit and looking to the future, is an easier product to deal

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LFC 2017 ...cont'd from p. 12

with when transferring these duties to the next set of ECC chairs. Another reason was that previously, we were modifying and distributing three forms of the survey based on career status. With GoogleForms, we have created a single survey that based on your answers, will display certain questions (i.e., a graduate student will not be asked what they did after they completed their degree). The survey is an assessment tool that has evolved since it was first created to include questions about membership demographics, conference experience, membership incentives, and the early career workshops. In addition, we gauge survey participation based on conference attendance and this is the first year that the same number of people took the survey as attended the conference. Fifty five participants were registered for the 41st LFC and 55 participants took the survey. Of the survey participants, 55% (n=32) were unable to attend this year's conference with finances being the main obstacle.

To understand more about the early career participants, we focused on the participants that have been in the field less than 10 years, which encompasses students (undergraduate and graduate), postdoctoral scholars, and research technicians. About 29% (n=16) of the participants have been in the field less than 10 years and 44% (n=7) were able to make it to this year's conference. Most of the early career participants heard about the LFC by word of mouth (colleague/advisor/supervisor) but one participant heard of our conference through the website and another while networking at a different conference (likely AFS). In regards to membership of the early career participants, 56% were full members, 19% were affiliate members, and 25% were not members.

We also want to continue to encourage people to become full members of the ELHS. This year, more of the participants were full members (65%) compared to last year (53%). For those that were not full members (n=19), 42% (n=8) deem full membership not beneficial since they are only interested in ELHS activities. What would incentivize these participants to become full members? A reduction in registration fees based on membership was by far the most popular incentive (53%; n=10) to convince participants to become full members. A good sign for us with the ECC, is that the second most popular incentive (31%; n=6) was participation in professional development events, which are hosted by the ECC. Based on the survey results, a recommendation for future LFC hosts is to provide a reduced registration at the annual conference based on membership status. This is a common practice at conferences hosted by other societies (AFS, ASIH, ASLO, etc.) and can be effectively used to increase our membership and potential impact. Since finances are consistently the number one obstacle to conference attendance year after year, a financial incentive seems like a suitable strategy to increase membership.

Looking to the future, the three most popular potential professional development workshop themes for the 42nd Annual LFC are (1) Project Management (41%; n=23), (2) Grant Writing (38%; n=21), and (3) Scientific Writing (31%; n=17). Although we have already hosted workshops focused on grant and scientific writing, it is evident these are needed skills and consistently are ranked as a priority in the survey. Therefore, we will likely touch on one of these re-occurring topics again soon. We again want to thank you all for you participation and support of the ECC and the mentorship of our early career researchers.

- Marta Moyano & Ali Deary, Early Career Comittee §

AFS Early Life History Section Business Meeting Reports

The business meeting was held in the Pecos room of the Renaissance Austin Hotel in the afternoon of Friday, July 14th, 2017. The quorum (21 full members) was reached with 22 full members in attendance. Minutes from the 2016 business meetings were approved by the membership.

1) ELHS Secretary's Report - Dominique Robert

1.1) Membership

As of July 10, 2017, the Early Life History Section (ELHS) of the American Fisheries Society (AFS) is composed of 209 full members and 20 affiliate members. Total membership has remained stable from last year, even though the proportion of full members has increased (175 full members and 50 affiliate members in 2016).

At the end of the grace period in March, the Secretary has sent personal renewal reminders to both full and affiliate members that had not yet renewed at the time.

After the presentation on membership, Darrel Snyder suggested that the section needed more visibility to recruit additional members. Enhanced visibility could come from articles published in Fisheries, or from presentations during chapter meetings. Pierre Pepin mentioned that lower membership in recent years relative to the 1980s was largely attributable to the fact that there are currently less larval fish researchers than there used to be at the time.

1.2) Elections

The Secretary also coordinated the election process for the President-elect, the Secretary-elect, and the Southern Region Representative positions. 94 out of 209 full members participated to the election. Results were:

- President-elect: Pierre Pepin was elected by acclamation

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ELHS Business mtg ...cont'd from p. 13

- Secretary-elect: Hannes Baumann won with 48 votes over 46 votes for Hannah Murphy

- Southern Region Representative: Trika Gerard won with 22 votes over 9 votes for Adam Greer (only Southern Region members could vote for their representative)

1.3) Grace Klein-MacPhee student travel grants

For the 2017 LFC, 4 applications were received from 3 graduate students and 1 undergraduate student, all from the U.S. Even though undergraduate students are not officially eligible for these awards, EXCOMM members have unanimously supported that application and agreed that for future LFCs, undergraduate student applications will officially be considered for Grace Klein-MacPhee student travel awards. The Secretary will thus change the labelling of the award for the 2018 LFC in Victoria.

2) ELHS Treasurer Report 2016-2017 - Jeff Buckel

The Treasurer oversaw the transactions in five accounts during 2016-2017.

There are four accounts at First Citizens bank in North Carolina. They are: General Fund, Sally Richardson Fund, Blaxter Fund, and Grace Klein-MacPhee Fund. The debits and credits to those accounts are summarized in financial reports below.

The balance in the General Fund account dropped slightly over the last year. This is a result of front money (~$3,200) provided to LFC 2018. Once those funds are returned, the General Fund balance will have a slight increase. Other expenses include a deficit from LFC 2016 (~$3,600) and four student travel grants to the LFC 2017 meeting ($1,200). These expenses were offset by the 2015 ($3,180) and 2016 ($2,940) dues payments collected by parent society. The current balance in the General Fund is ~$18,400.

The monies raised through raffles at LFC 2016 far exceeded the costs of awards in 2016. In Frank Hernandez's words: "It was a small but generous group!". A total of $1,585 was raised for the Blaxter fund and a total of $1,030 was raised for the Sally Richardson fund. The current balance of Blaxter fund account is $8,598 and current balance of Sally Richardson fund account is $15,509.

The Grace Klein-MacPhee fund has a current balance of $7,334. This account is for student travel though we have continued to use general funds to cover these costs. This account had a large anonymous donation of ~$5,300. Language from the donation letter: "The donation is intended as an anonymous contribution aimed at providing greater opportunities for students to participate in future Larval Fish Conferences. We, as a group, consider that these conferences provide a unique opportunity for students to encounter their peers in a highly stimulating and relaxed environment that provides considerable opportunities for mentoring and collaboration." Thanks so much to these donors for their support of future student travel to LFCs!!

The fifth account is our PayPal account. Twenty affiliate members paid dues through PayPal over the last year for a total net income of $284 (see income and PayPal fees below). The current balance in the PayPal account is $1,608.

Form 990-N was filed with the IRS in July 2017 for tax year 2016. The section has to file this form to maintain non-profit status.

The ELHS accounts are in good financial standing with a total balance of ~$51,000. A complete list of transactions and account balances is provided in Appendix 1.

In the discussion following presentation of this report, Myron Peck questioned how some of these funds could be used to the benefit of section members. Lee Fuiman mentioned that in the past, the section funded initiatives that would benefit the section. For instance, publication fees for the 2002 book Fishery Science: The unique contributions of early life stages were covered by ELHS funding. Pierre Pepin however mentioned the importance to keep a high balance in all accounts to help LFC organizers with front fees for the venue/hotel, and to absorb any deficit in the post meeting.

3) ELHS Newsletter Editors' Report - Audrey Geffen & Cindy van Damme

Stages, the ELHS newsletter, was published in June and October 2016 (37(2 & 3)), and March (delayed February issue, 38(1)) and June 2017 (38(2)).

Issue and date		No. of full members	affiliate members
37(2)	July 5, 2016	278	
37(3)	October 19, 2016	200	14
38(1)	March 21, 2017	186	8
38(2)	May 28, 2017	202	20

There has been a steady and active supply of content from the regional representatives, and from other section members throughout the past year, and we are grateful for their efforts. We hope that this trend continues!

Currently all regional representative positions are filled! At the moment it is difficult for the regional reps to contact the ELHS members in their region. It would be very helpful for them if the membership list could be split by regions.

We would like to remind everyone to encourage the use of twitter and facebook for communication about section activities and activities of section members:

@AFS_ELHS is the twitter account, so please follow and post to it!

www.facebook.com/earlylifehistory is the facebook page – please like it and post to it!

Contact the Secretary (dominique_robert@uqar.ca) if you have material to post to Facebook or twitter, and Klaus Huebert (khuebert@umces.edu) if you have news for the section webpage.

Two regular newsletter sections need more active input from our members: the "ELHS back then" and the "Publications List". We need information updates to keep these relevant and interesting.

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ELHS Business mtg ...cont'd from p. 14

There have been several suggestions for regular article series in Stages, including: memoirs/ comments from retired members, highlighting of larval fish collections around the world, ELHS teaching and learning. We welcome comments and contributions so that we can start to set up contributions in coming issues.

During the discussion that followed the presentation of this report, Frank Hernandez suggested that STAGES could be a good venue for promoting the prestige of ELHS awards. For instance, a bio for the current year recipients should be published along with a personal comment from each recipient. We could also publish short pieces that inform on the career of past student winners. This new section could be titled: Past winners: where are they now?

4) ELHS Time and Place Committee Report - Chris Chambers

The Committee has long sought to identify potential LFC hosts to accommodate the following idealized, 4-yr pattern of venue locations while including opportunities for both stand-alone LFCs and joint meetings with partnering societies (e.g., with AFS, JMIH).

- USA / North America east coast or Gulf of Mexico location
- USA / North America or Gulf of Mexico non-coastal location
- USA / North America west coast location
- International location (outside of North America)

The location for 2018 was accepted by the ExCom at LFC2016, and an offer for the 2019 was presented at the 2016 ELHS Business Meeting for ExCom consideration. This offer still stands and will be restated at the 2017 Business Meeting. The Committee has been in discussions with additional candidate hosts for the out-years that follow the above rotational scheme for LFC venues.

FUTURE LFCs

Year Location / Region Contact Comments

2018 Victoria, BC, Canada John Dower, Francis Juanes, (Univ. Victoria), & Pierre Pepin (DFO St. Johns)
Status: Approved by ELHS ExCom at LFC2016
Details: Stand-alone LFC, late June 2018

2019 Palma de Mallorca, Spain Ignacio Catalan, Patricia Reglero, & Francisco Alemany (Mediterranean Inst. for Advanced Studies, CSIC-UIB, IEO).
Status: Offer to ELHS Business Meeting at LFC2016 (Ignacio confirmed offer as of 24 April 2017)
Details: Stand-alone LFC, May 2019

2020 (for consideration)
1) Avery Point, CT, USA Hannes Baumann, Univ. Connecticut-Avery Point Status: For discussion

(2) Great Lakes Region, USA/Canada T B D (looking for offer) Status: Out-year opportunity

2021 (for consideration)

(1) Great Lakes Region, USA/Canada T B D (looking for offer) Status: Out-year opportunity

(2) La Jolla, CA, USA TBD (developing possible offer from NMFS, Scripps, UCSD)
Status: Out-year opportunity;
Jointly w/ LBS2 - See below for additional details on LBS joint meeting possibilities.

(3) The Netherlands Cindy van Damme & Tinka Murk, (Inst. Mar. Resources & Ecosystems, Wageningen Univ.)
Status: Out-year opportunity;
Jointly w/ LBS2 - See below for additional details on LBS joint meeting possibilities.

CONSIDERATION OF INTEREST IN JOINT MEETING WITH LARVAL BIOLOGY SYMPOSIUM. The Committee has repeatedly been in contact with past participants of the Larval Biology Symposium (LBS) about a future joint meeting of LFC and LBS, which has long been discussed by the ELHS. The LBS had meeting biennially (even yrs) through 2012 but has not met since. It is convening (LBS XI) in August, 2017 in Hawaii (*http://www.larvalbiology2017.org/*). One possible host for the LBS in 2019 was an offer by Dustin Marshall, School of Biological Sciences, Monash University, Melbourne, Australia. Another expression of interest by ELHS to meet with LBS was communicated by the Committee to the LBS 2017 chair, Amy Moran, University of Hawaii at Manoa, on 7/9/17.

Lastly, the Committee wants to acknowledge and thank Lee Fuiman and team for stepping up to host the LFC2017. We all appreciate your efforts!

Following presentation of the report, Pierre Pepin presented an overview of the logistics of the 2018 LFC to be held in Victoria, BC, Canada. The meeting will be hosted at the Delta Victoria Ocean Point Resort, and will start on Sunday June 24th, with an icebreaker. The poster session will be organized on Tuesday June 26th, and the banquet with award presentations will be scheduled on Thursday June 28th.

Myron Peck asked if the organizers could locate budget accommodations to facilitate student participation to the meeting. Hannes Baumann asked whether a group social activity would be organized ahead of or after the conference. Pierre Pepin mentioned that he would relay these request to the other organizers and the full program will be known later.

5) ELHS Historian Report - Jeff Govoni, ELHS Historian

The paper archives of the ELHS are maintained at the home residence of ELHS Historian Jeff Govoni, in Straits, outside of Beaufort, NC. Relevant electronic files are either transmitted to the ELHS Webmaster for posting on the ELHS Website if appropriate, or maintained as electronic files by the Historian.

The EHLS Web Page has become an important, and easily accessible, source of historical information. Listed on this Web Page are: ELHS current and past Officers; past Annual Larval Fish Conferences; and the recipients of ELHS Awards (the Sally L. Richardson Award, the J.H.S. Blaxter Award, the E.H Ahlstrom Award, and the recently established Grace Klein-MacPhee travel grants). The

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ELHS Historian annually reviews this Web Page to check on the status of relevant information and updates. The ELHS Historian finds that all relevant information is up to date, and commends former Web Master Jeff Buckel and current Web Master Klaus Huebert for their efforts.

Contact with the ELHS Historian can be made through the following email address: *JJGovoni@gmail.com*.

6) ELHS Early Career Committee (ECC) - Alison Deary, Marta Moyano

The ECC is in its fourth year as an ad-hoc committee and since our first event in 2015, we have been planning and executing professional development workshops to further develop skills within our section. The goal of the annual events planned by the ECC is to recruit, retain, and enhance the experience of new members to the Early Life History Section. We have seen some change within the ECC with Marta and Alison acting as co-chairs since the 2015 meeting while David and Mathias have taken on new professional responsibilities outside of the ECC. In addition, to make a larger digital footprint, two early career members volunteered to manage our social media accounts and have been posting about the Section throughout the year (Facebook, Olivier Morissette; Twitter, Todd Clardy).

At the 40th Annual Larval Fish Conference last year, Marta and Alison planned the second ECC workshop focused on scientific writing, with some techniques for non-native English speakers. Our mentor for this event was Hannes Baumann (UConn) who gave a great presentation and answered questions from our 27 early career participants. We distributed a survey after the workshop and received positive feedback about the workshop, although the participants would have liked more time.

As with previous meetings, the ECC circulated a revised survey after the 2016 meeting to prioritize professional development topics, gauge the conference experience of our participants, and understand the drivers behind fluctuations in conference attendance. After receiving input during the Business Meeting, we added some additional questions to collect data on the membership status of the participants and potential incentives to become full members. Based on the size of the meeting in Solomons Island, we had excellent participation on the survey with about 86% of the conference participants voicing their opinions. The main takeaway from the survey was that early career professionals (graduate student to pre-tenure faculty) find reduced conference registrations and participation in early career activities as incentives for becoming a full member. For senior researchers, reduced registration is not an incentive to become a full member.

For the 2017 meeting, we planned an ambitious two-part workshop focused on career planning with nine mentors representing careers in industry, academia, and government to highlight the versatility of career options open to early career researchers. Each mentor has a unique story of how they obtained their position, which demonstrates there is no wrong way to achieve your professional goals. In the Fall issue of STAGES, we will update the Section on the success of this workshop as well as the results from the 2017 survey. Moreover, we are planning to write a short article about the benefits of public outreach via social media, to motive EHLS members to contribute and give more visibility to the Section's media accounts.

7) ELHS President's Report - Frank Hernandez

Our section is in a good financial situation and membership is holding steady. Relevant action items to be discussed at this business meeting include:

7.1) Elections

7.1.1) The ExCom has four voting members (President, Secretary, President-elect and Secretary-elect). Other non-voting members include the Treasurer and Webmaster. With elections held within the past year, the ExCom is now at full strength. I thank both Pierre Pepin and Hannes Baumann for their service to the section, and Klaus Huebert for assuming the role of Webmaster at the last business meeting. At the conclusion of next year's business meeting (2018), the current Pierre and Hannes will start their terms as President and Secretary, respectively. Therefore, in order to maintain a full ExCom, we need to have elections before then for the positions of President-Elect and Secretary-Elect. This should be advertised in the next issue of STAGES. Candidates need to be discussed / nominated / approached. The online balloting worked well this year.

7.1.2) STAGES has Regional Representatives. With the election of Trika Gerard as the Southern Regional representative, we now have a full compliment of regional reps. I thank each one for their service to the ELHS.

7.2) Website – I have received several comments of appreciation for the improvements made to the website. I thank Klaus Huebert for his efforts in keeping us up to date online, and I ask him to 'nudge' the membership as he sees fit for content.

The local committee for next year's meeting is encouraged to get in touch with AFS regarding website functionality related to the LFC, e.g., registration portal, etc. As of last year such function were not available. Our contact at AFS is Beth Beard (bbeard@fisheries.org).

7.3) Grace Klein-MacPhee student travel grants -- As mentioned, the ExCom agreed to support the cost of attendance for an undergraduate student this year, in line with the last year's decision to support three advanced undergraduate students for the 2016 meeting. I find this to be an encouraging trend, and support further consideration for undergraduates to attend future meetings.

7.4) Guidelines for hosting the Larval Fish Conference -- The LFC guidelines provide an invaluable reference for local committees hosting our annual meeting. However the last update was in 2010, and some components may need updating. For instance, the guide

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states that the allowable "front money" available from the ELHS to the local hosts is $3,000, which is low given the rate of inflation since this update.

7.5) ELHS recruitment -- One of the advantages of meeting with a large group like JMIH is the opportunity to 'show off' the work of our membership and recruit new members into the fold. In addition, the diversity of our membership means that we have opportunities to promote the ELHS at other conferences we attend. For this year's meeting, Ali Deary was instrumental in quickly assembling a poster for the section booth and a save-the-date postcard for next year's conference. I think we should have a longer term plan for such events and would welcome suggestions and ideas from the members.

7.6) Daniel Faber -- I would like to acknowledge the passing of Daniel Faber earlier this year. Daniel was a founding member of the Early Life History Section, a dedicated contributer to the Section, particularly in the early years, and a lover of larval fishes. Darrel Snyder, Lee Fuiman and Perce Powles have kindly offered to put together an "In Memoriam" piece for the fall issue of STAGES. (see p.2)

Appendix 1 (AFS - Early Life History Section Budget) follows on p 21

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Scenes from the 41st LFC, July 2017, Austin, Texas

42nd LFC 2018 ...cont'd from p.3

consequences to growth-survival: This session will focus on research that aims to understand the interaction between fish larvae, their prey and predators, and consequences to changes in larval fish growth, mortality and survival; [4] Emerging threats to ELH stages and potential consequences to physiological processes: This session will include topics related to the effects of anthropogenic impacts, such as noise, ocean acidification or micro-plastics to larval fish physiology, growth, and survival; [5] Application of ichthyoplankton data to fisheries management: The goal of this session is to explore how ichthyoplankton data may contribute to the management of ecosystems and fisheries through the use of time series and the identification of recruitment bottlenecks. There will also be opportunities for contributed papers and the organizers are still willing to entertain additional topics and will be taking suggestions until the end of November.

In addition to these five thematic sessions, the LFC will host a session specifically aimed at Early Career Scientists, organized by Marta Mayo (marta.mayo@uni-hamburg.de) and Alison Deary (alison.deary@noaa.gov). Previous sessions have proven to be great contributions LFC conferences – the topic of the 2018 session is still being developed.

Also, Drs. Alison Deary (NOAA, Alaska Fisheries Science Center, Seattle) and Peter Konstantinidis (peter.konstantinidis@oregonstate.edu – Oregon State University, Dept. of Fisheries and Wildlife) will host a one-day Larval Fish Identification Workshop. During this crash course, we will sort through ichthyoplankton samples to give you hands-on experience in: 1) understanding the morphological characteristics used to identify early stage fishes, 2) using larval fish identification keys, and 3) curation of ichthyoplankton collections. The workshop is tentatively scheduled to take place the day before the conference (23 June 2018) at the University of Victoria. Participation will be limited to 15 people, with students having priority. Further details are to follow.

There will be four full days of presentations, with the poster session on Tuesday evening and a social event is being planned for Wednesday. The 2018 LFC conference website will be operational in early November.

Looking forward to seeing you next June in Victoria

– John Dower (dower@uvic.ca)
Francis Juanes (juanes@uvic.ca)
Pierre Pepin (pierre.pepin@dfo-mpo.gc.ca)

§

Faber....cont'd from p.2

experienced the thrill of capturing limnetic larvae in small isolated lakes on moonlit evenings." He was especially interested in larval fish ecology and the development of survey methods, including some pioneering work with a light trap he designed and developed with his son Darin's assistance. Darin wrote "Most of my fondest memories are spending summers either sorting larval fish at the CAIC or working on field research collecting samples for my father's research." Also, "My father was science and nature and I truly am a better person for this."

For illustration of many of the fish larvae he and associates had encountered, Dan enlisted the talents of Sally Gadd. Crediting Dan with facilitating her work as a biological illustrator at the CAIC, Sally recalled: "I was grateful that he discovered the keys I used to draw myself for help in identifying zooplankton. He asked if I would be interested in drawing rather than identifying. I certainly would! Always pleasant to work for, Dan showed a certain amount of creativity in shifting me to drawing rather than identifying. That opened up a whole range of drawing jobs which I enjoyed very much."

Beginning in 1998, Dan advocated making larval fish illustrations and associated information available online and contributed to the establishment of a "Gallery of Larval Fishes" on our Section website. But there were copyright and other technical issues, and with the advent of Larvalbase (http://www.larvalbase.org) as a repository for such, our gallery was no longer needed. Dan then submitted illustrations and information from his descriptive work to Larvalbase.

In addition to participating in many of our earlier Larval Fish Conferences, Dan organized or helped run several regional larval fish and related workshops (e.g., Larval Fish of the St. Lawrence Estuary, Gulf of St. Lawrence, and Coastal Waters, Quebec City, 25-26 March 1980). In 1999, he compiled, with some assistance, the original listing of past Larval Fish Conferences and resulting publications that is posted on our Section website.

Dan was also intensely interested in the development and maintenance of preserved natural history collections, including those of fish eggs and larvae. To that end, he helped organize the first Workshop on the Care and Maintenance of Natural History Collections in 1981 (Canadian National Museum of Natural Sciences), conceived and helped found the Society for Preservation of Natural History Collections in 1985, and then served as its first president. In 1987, the Society recognized Dan by establishing the Faber Research Grant for support of innovative projects addressing collection issues. Within our Section, Dan advocated for a reference manual on preservation and a registry of larval fish collections and chaired a special committee established in late 1982 to address "Methods of Preservation and Status of Collections." Even as late as 2010, he began to update a list of larval fish repositories to be posted on the internet, but unfortunately never finished it.

After retirement, Dan took a strong interest in genealogy and served as president of the National Capital Genealogical Society in 1995-98. In a message to Darrel Snyder, he wrote "I used to chase baby fish, now I chase dead people." But indeed, as noted above and below, he continued to make information about larval fish available to the public and work on resources for fellow biologists.

Dan's most recent contribution to our field of study is his website "Baby Fishes of Canada" (http://www.fishbabies.ca), which he established in 2006 with his son Darin's technical assistance and had since periodically updated. Intended mostly for students and the general public, the site illustrates and summarizes information on the larvae of many of the freshwater and marine fishes he and associates had described or studied and provides an introduction to the study and biology of fish larvae.

Those of us who knew Dan will miss him, but his contributions to science and our Section remain as part of his legacy.

Dan Faber's Scientific Publications:

Faber, D. J. 1963. Larval fish from the pelagial region of two Wisconsin lakes. Doctoral dissertation. University of Wisconsin, Madison, WI.

Faber, D. J. 1966. Free-swimming copepod nauplii of Narragansett Bay with a key to their identification. Journal of the Fisheries Research Board of Canada 23:189-205.

Faber, D. J. 1966. Seasonal occurrence and abundance of free-swimming copepod nauplii in Narragansett Bay. Journal of the Fisheries Research Board of Canada 23:415-422.

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Faber, D. J. 1973. A high school field and laboratory study of Lac LaPeche in Gatineau Park, Quebec, during March, 1972. Syllogeus 4.

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Kohler, A. C., D. J. Faber, and N. McFarland. 1974. Eggs, larvae and juveniles of fishes from plankton collections in the Gulf of St. Lawrence during 1965, 1966 and 1967. Fisheries Research Board of Canada Technical Report 285.

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continued on p.19

Faber....cont'd from p.18

(Canada) Fisheries and Marine Service Technical Report 490, 521, 645, and 747, respectively.

Faber, D. J. 1976. Hyponeustonic fish larvae in the Northumberland Strait during summer 1962. Journal of the Fisheries Research Board of Canada 33:1167-1174.

Faber, D. J. 1976. Identification of four northern blennioid fish larvae in the Canadian Atlantic Ocean (Stichaeidae, Lumpenidae). Journal of the Fisheries Research Board of Canada 33:1798-1802.

Faber, D. J. (chairperson). 1976. Identification of reference collections and recommendations for future development. Pages 102-106 in J. Boreman, editor. Great Lakes fish egg and larvae identification: proceedings of a workshop. U.S. Fish and Wildlife Service FWS/OBS-76/23.

Faber. D. J. and D. E. McAllister. 1979. Book review: Development of Fishes of the Mid-Atlantic Bight. An Atlas of Egg, Larval and Juvenile Stages. Journal of the Fisheries Research Board of Canada 36:706-707.

Faber, D. J. 1980. Observations of the early life of the golden shiner, Notemigonus crysoleucas (Mitchell), in Lac Heney, Quebec. Pages 69–78 in L. A. Fuiman, editor. Proceedings of the Fourth Annual Larval Fish Conference. U.S. Fish and Wildlife Service FWS/OBS-80/43.

Faber, D. J. 1981. A light trap to sample littoral and limnetic regions of lakes. Verhandlungen Internationale Vereinigung für Theoretische und Angewandte Limnologie 21:744-749.

Faber, D. J. 1982. Fish larvae caught by a light-trap at littoral sites in Lac Heney, Quebec, 1979 and 1980. Pages 42-46 in C. F. Bryan, J. V. Conner, and F. M. Truesdale, editors. The Fifth Annual Larval Fish Conference. Louisiana Cooperative Fishery Research Unit and School of Forestry and Wildlife Management, Louisiana State University, Baton Rouge, Louisiana.

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Faber, D. J. 1984 and 1985. Water babies, larval fishes of Ottawa and vicinity. Part I—distribution and phenology of baby fish in lakes and ponds, part II—anatomy of larval fishes, part III—larval fishes of shallow water species, and part IV—Larval fishes of deep water species. Trail and Landscape (Ottawa Field Naturalist's Club) 18:84-92, 18:198-204, 18:273-283, and 19:18-25, respectively. [Combined reprints in 1985 by the Canadian National Museum of Natural Sciences, Ottawa, Ontario and 1999 by the Ottawa Field-Naturalists' Club; also, an online modification thereof by Faber in 2008-09 at http://www.fishbabies.ca/waterbabies.]

Cucin, D., and D. J. Faber. 1985. Early life studies of Lake Whitefish (Coregonus clupeaformis), Cisco (Coregonus artedii) and Yellow Perch (Perca flavescens) in Lake Opeongo, Ontario. Ontario Fisheries Technical Report Series 16.

Faber, D. J. 1985. The early development of the northern redbelly dace, Phoxinus eos (Cope). Canadian Journal of Zoology 63:1724-1729.

Simon, T., and D. J. Faber. 1987. Description of eggs, larvae and early juveniles of the Iowa Darter, Etheostoma exile (Girard), from Lac Heney, Quebec. Canadian Journal of Zoology 65:1264-1269.

--- Darrel E. Snyder, Larval Fish Laboratory, Colorado State University, Fort Collins, Colorado;

Perce M. Powles, Biology Department, Trent University, Peterborough, Ontario;

Lee A. Fuiman, Marine Science Institute, University of Texas at Austin, Port Aransas, Texas. §

Darrel Snyder reviews Dan Faber's contributions to ELH research. 41st LFC, 2017

Publications ...cont'd from p.11.

Copies available:

CalCOFI Atlas 33

"The early stages of fishes in the California Current region" ,

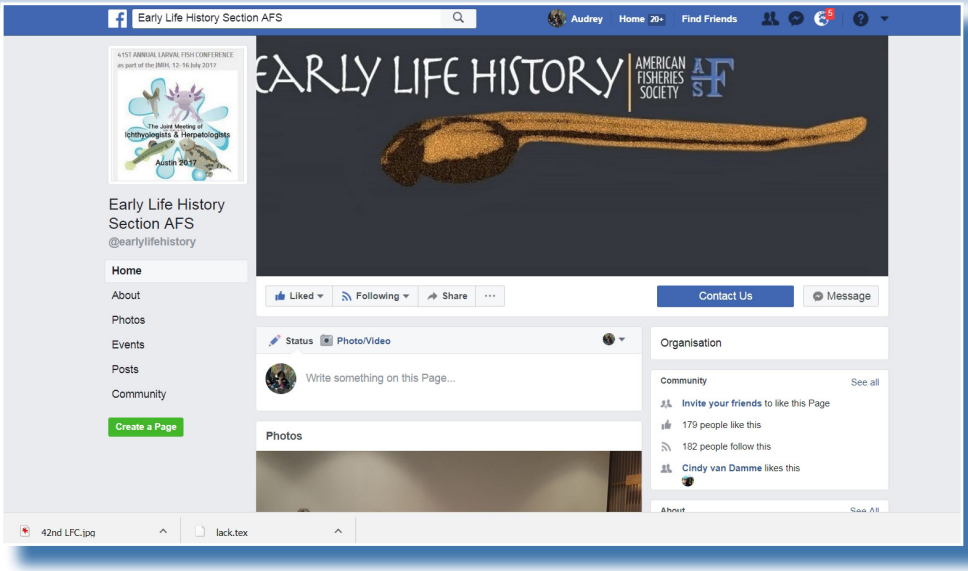
Allen Press has discovered a number of copies of CalCOFI Atlas 33, "The early stages of fishes in the California Current region", in the back of their warehouse. The books are still in the original plastic shrinkwrapping and in excellent condition. Allen Press has offered to give them to the CalCOFI Committee, but there are more than the Committee can accommodate in available storage space. Allen Press plans to destroy any surplus copies and recycle the paper. If there is interest in obtaining any of the surplus copies before they're recycled, it might be worth contacting Allen Press (Stephanie Hull, Director, Client Experience, telephone 800-627-0326, extension 117, email shull@allenpress.com) to ask if it's possible to get them.

William Watson, NOAA§

News: social media ...cont'd from p.3.

is a tool. As for the time commitment, it really depends on the product. Having written blogs, they can be a huge time investment. I would argue that social media posts are not a huge time investment, or a waste, especially with modern phones that take high-quality photos. You can disseminate some aspect of your research in under five minutes on social media and with editing, you can quickly address any pesky spelling errors that may have infiltrated an otherwise great post. An option for those worried about the time commitment or privacy, email Marta and I (Early Career Committee) or Dominique (Secretary), some pictures and a quick sentence and we will post your content to the ELHS Facebook page and/or Twitter account.

Another consideration with the rise in popularity of social media is the added emphasis on branding; creating and communicating a clear, attractive, and distinctive image of an organization for a target audience (Carpentier et al. 2017; Backhaus and Tikoo 2004). As ELHS-AFS develops its internet presence, how do we, as members of ELHS-AFS, want our organization to be perceived? An organization's social media profile can influence how a user perceives that organization (Carpentier et al. 2017), which means social media platforms need to be crafted with care and updated to maintain a reputation of being current. So when users visit (or stumble upon) our social media accounts, how do we want them to perceive us? Up until recently, Marta and I used our Facebook and Twitter accounts to provide conference updates. As of July 2016 (after 2016 LFC), we had 103 Facebook followers. As of today, we have 163 followers. Between 2015 and 2016, only 14 posts were posted and, on average, only 87 people saw each post. Since the 2017 meeting and our conscious effort to improve our Facebook activity, we have posted 19 times with an average of 204 people seeing each post. As for the Twitter account, we had 9 followers as of late July 2017, which has now risen to 24. All in all, we are becoming more active as an organization on social media and continuing to build our reputation as a close-knit community of diverse researchers sharing our current research and high-impact publications globally. But, still, we need your collaboration to boost the social media impact of the ELHS-AFS!



The ELHS facebook page: https://www.facebook.com/earlylifehistory/

Marta and I hope to foster further discussion on the best social media platforms for ELHS-AFS to promote the science of its members. For us, this is a nascent discussion as we navigate the digital world. There are many platforms available for us to share our research; we chose Facebook and Twitter because they were the most popular platforms at the time and we deemed them the best ways to keep connected. As we look to the future, should we strategically place ourselves on another social media site? Instagram is nice because it is focused more on photo sharing and we can link it to our Facebook and Twitter accounts but is it the right forum for ELHS-AFS? Do we want to start recording (e.g. via Periscope; Wood 2017) our Conference talks and workshops and make them available to the general public? Finally, we know that we need to continue recruiting active early career researchers to our organization but what is the best strategy to connect with them on social media? Using social media to highlight the amazing work we all do with ELHS-AFS is a start but we also need to emphasize opportunities available within ELHS-AFS for professional growth. Marta and I welcome further discussion and would love to hear your thoughts. In the meantime, remember to follow us and to share your work on our Twitter (@AFS_ELHS) and Facebook (@earlylifehistory) accounts!

References:

Backhaus, K., and S. Tikoo. 2004. Conceptualizing and researching employer branding. Career Development International 9(5): 501-517.

Carpentier, M., G. Van Hoye, S. Stockman, E. Schollaert, B. Van Theemsche, and G. Jacobs. 2017. Recruiting nurses through social media: Effects on employer brand and attractiveness. J. Avd. Nurs doi: 10.1111/jan.13336.

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"Twitter: Q2 2017 Earnings Report." Twitter. June 2017. <www.investor.twitterinc.com/releases.cfm>. Accessed 16 Aug. 2017.

Ware, M., and M. Mabe. 2015. Celebrating the 350th anniversary of journal publishing IN The STM Report: An overview of scientific and scholarly journal publishing. Vol. 4. International Association of Scientific, Technical and Medical Publishers: Netherlands.

Wood, N. 2017. The engaging world of Periscope: Live-streaming science to the masses. Fisheries 42(4): 185-186.

- Alison Deary§

ELHS Business mtg ...cont'd from p. 17

Appendix 1: AFS - Early Life History Section Budget (July 2016 – June 2017)

General Fund - Beginning Balance (July 2016)	20,322.76		
INCOME			
Wire deposit of 5,320.34 (anonymous donation to Grace Klein-MacPhee fund)		5,320.34	
2015 Membership Dues from AFS		3,180.00	
2016 Membership Dues from AFS		2,940.00	
Move $325 from Blaxter fund to General fund to cover Blaxter award		325.00	
TOTAL INCOME	11,765.34		
EXPENSES			
LFC 2016 deficit		3,613.73	
Wire transfer fee (anonymous donation to Grace Klein-MacPhee fund)		16.00	
Move donation to Grace Klein-MacPhee acct (5,304 plus $1 check fee)		5,305.00	
Wire payment of $300 for Blaxter award (plus wire fee of $25)		325.00	
LFC 2017 Student travel awards		1,200.00	
LFC 2018 front money		3,212.00	
Wire transfer fee (LFC 2018 front money)		25.00	
TOTAL EXPENSES	13,696.73		
BALANCE & INCOME – EXPENSES	18,391.37		
ENDING BALANCE FOR THE GENERAL FUND AS OF June 30, 2017			18,391.73
Sally Richardson Fund - Beginning Balance (July 2016)	15,079.30		
INCOME			
Income (LFC 2016 Raffle)		1,030.00	
TOTAL INCOME	1,030.00		
EXPENSES			
Student award, lfc 2016		600.00	
TOTAL EXPENSES	600.00		
BALANCE & INCOME – EXPENSES	15,509.30		
ENDING BALANCE FOR THE SALLY RICHARDSON FUND AS OF June 30, 2017			15,509.30
Blaxter Fund - Beginning Balance (July 2016)	7,338.10		
INCOME			
Income (LFC 2016 raffle)		1,585.00	
TOTAL INCOME	1,585.00		
EXPENSES			
Blaxter award, 2016 ($300 + $25 wire transfer fee)		325.00	
TOTAL EXPENSES	325.00		
BALANCE & INCOME – EXPENSES	8,598.10		
ENDING BALANCE FOR THE BLAXTER FUND AS OF June 30, 2017			8,598.10
Grace Klein-MacPhee Fund - Beginning Balance (July 1, 2016)	2,066.00		
INCOME			
Anonymous donation for future student travel		5,304.00	
TOTAL INCOME		5,304.00	
EXPENSES			
Paper statement fee		36.00	
TOTAL EXPENSES	36.00		
BALANCE & INCOME – EXPENSES	7,334.00		
ENDING BALANCE FOR THE KLEIN-MACPHEE FUND AS OF June 30, 2017			7,334.00
PayPal Fund (dues payment account for affiliate members)			
- Beginning Balance (July 1, 2016)	1,324.69		
INCOME			
Income ($15 dues payment by 20 affiliate members)		300.00	
TOTAL INCOME	300.00		
EXPENSES			
PayPal fees		16.28	
TOTAL EXPENSES	16.28		
BALANCE & INCOME – EXPENSES	1,608.41		
ENDING BALANCE FOR THE PAYPAL FUND AS OF June 30, 2017			1,608.41 §

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

one of our smaller conferences in terms of attendance, but certainly not in terms of impact! The oral and poster presentations were up to their usual high standards, and it was exciting to see all of the great work being conducted by larval fish enthusiasts throughout the world.

A highlight of our annual Business Meeting (with a quorum!) was a presentation by Pierre Pepin to introduce the venue for the 42nd Annual Larval Fish Conference in Victoria, British Columbia, Canada, next year (June 24-28, 2018). Pierre, John Dower and Francis Juanes will serve as our local hosts and are busy preparing an exciting program. As you may expect, the presentation generated a lot of excitement, and I'm certainly looking forward to next year's conference already. Stay tuned to the ELHS website and future issues of STAGES for more details.

And speaking of future LFCs, Chris Chambers (head of the LFC Time and Place Committee) presented an offer at the Business Meeting on behalf of Ignacio Catalan, Patricia Reglero, and Francisco Alemany to host the 2019 LFC in Mallorca, Spain. The offer was warmly received by the membership in attendance, and the ExCom voted unanimously to accept. Those who have graciously volunteered to host LFCs in the past know how much time and effort is involved, but they can also attest to how rewarding the experience can be. On behalf of the Section, I would like to thank our future hosts in Canada and Spain for their generous offers.

While I'm thanking folks, on behalf of the section I would like to thank Lee Fuiman and Chris Chambers for serving as our 'regional' hosts, coordinating our events with JMIH organizers, and arranging a wonderful ELHS social, which of course included a visit to the South Congress Bridge to watch the bats emerge at dusk--truly a great spectacle! Thanks also to Tony Miskiewicz, Myron Peck and others who helped organize the judging of student talks competing for the Sally Richardson Award. Lastly, thanks to Alison Deary, Marta Moyano, Angie Hoover, and Olivia Lestrade for organizing the early career scientists events. I'm sure I'm forgetting many others. Suffice it to say, the success of the Larval Fish Conference depends on the participation of ELHS members, and we certainly had great support this year.

Further, the small gathering did not dampen the giving nature of the attendees, as both the Sally Richard Raffle and Blaxter Flag auction were huge successes. A special thanks to Lee Fuiman for providing a new flag for the Blaxter auction, which generated nearly $800. I hope the flag will make its way around to the team of winning bidders; I'm working on a flag 'tour' schedule, so stay tuned for pictures as the flag makes its way around.

I've mentioned that the attendance at this year's conference was relatively low. Student presentations are one of the highlights of the LFC, and this year we were unable to select a winner for the Blaxter Award for best poster because there were not enough entries, which was disappointing. Certainly attendance ebbs and flows each year, and there may be any number of reasons why this year's gathering was particularly small. The ExCom continues to discuss those issues and welcomes your input. Based on these discussions, I think that as a Section (with leadership from your ExCom), we need to do a better job promoting our conference and encouraging participation, particularly from early career scientists. Towards this end, we will invest in "save-the-date" postcards, flyers, and other means of advertising future conferences. In addition, we will try to expand our presence on social media platforms to spread the word. And lastly, although our hosts do much of the heavy lifting in preparing for the LFC, they need our help as well. So I ask everyone to consider making suggestions regarding symposia, special sessions, or plenary speakers, and to respond to our hosts when they ask for opinions or make other requests, such as donations for the Sally Richardson raffle. The ELHS is defined by the participation of its members. Together, we will continue to make the LFC the wonderful gathering we've all come to enjoy!

And with that, I'll sign off.

Thanks to all and Best regards,

- Frank Hernandez,

President (and hurricane loather) §

Newsletter Production Team

Stages is published in February, June, and October each year. It is assembled by the Newsletter Editors with contributions from 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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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: *http://earlylifehistory.fisheries.org/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

We went from slight panic with no newsletter material on the deadline of mid-September, to a bumper issue with news, views, and reports from the LFC past and future. Thank you all for your contributions. And a special thanks to those who shared their personal experiences – remembering past friend and colleague Dan Faber. We can also take a moment to reflect on the impact of natural disasters, on our personal and professional lives. It can often be difficult to separate the two – and very few of us would want to!

Some might ask why we have filled so many pages with reports of the business meeting. The answer is that this is the best way, short of a mass-email, to ensure that all section members get a record of the section business and an opportunity to send comments and questions to the officers. Many members missed this year's LFC in Austin, and it is important to keep you all up to date on the year-round activities as well as the highlights of the meetings. Hopefully, this will also spark an interest in wider participation in the section business, and encourage you to consider serving as section officers in time.

October is a wonderful month, where one can reflect over the frantic pace of the year's activities so far, make plans for the next season of work, and enjoy the often beautiful weather while trying to shed some kilos in preparation for the round of festivities that look to the year's end. We hope all of you can enjoy taking a small break and send out a short report on your activities to your regional reps, or take a moment share a comment on our facebook page, or include @AFS_ELHS in your twitter feed.

- Cindy and Audrey §