October 11, 2010
The official link to the FHS website is: http://www.fisheries.org/units/fhs

FHS NEWS

A NOTE FROM THE ISAAH ORGANIZERS:

On behalf of the Local ISAAH-6 Organizing Committee, we thank you for your attendance and contributions that have made this symposium an outstanding success. We are proud to report over 300 attendees were represented at the symposium from 24 nations around the globe. The breadth and diversity of sessions and topics were reflected in the many outstanding presentations shared in the platform, poster and plenary sessions. Again, thank you for your efforts to contribute to this collaborative symposium.

In order to provide feedback on our performance in developing, organizing and hosting this symposium, we ask you to take a few minutes to participate in a brief survey. Answers to this survey are confidential (your names or affiliations will not associated with your responses). These survey results will also be helpful in developing the next symposium in 2014. To access the survey, please copy this link into your browser: http://www.surveymonkey.com/s/QQMLLQP. Please complete the survey by October 31 – thank you so much!

In the scarce minutes of available time, we are updating the symposium website to provide access to the abstracts and an archive of the weeklong activities. The website remains http://aquaticpath.phhp.ufl.edu/isaah6. The website will continue to be updated in the coming months, so check back for updates. Until then, we wish each of you good science and good health, and we look forward to staying in touch.

Best regards!

Andy Kane and Sarah Poynton
ISAAH-6 Co-Organizers

PROPOSAL FOR MEMBERSHIP:
SPECIFIC AQUATIC ANIMAL HEALTH TOPIC MODULES

In September 2010, the Fish Health Section Executive Committee voted to have the Professional Standards Committee, Continuing Education Committee, and interested parties develop a pilot training module program for Aquatic Animal Health Professionals.

- Each module would be in a standard format (web, DVD, workbook), focused on a single AAH laboratory topic (e.g. molecular confirmation

techniques, normal fish tissue histology, fish cell culture), designed to complement the latest AFS – OIE methodology and current literature.
- To obtain a module certification, the applicant must pass a written test (≥ 75%) and for some modules complete a proficiency practical (e.g. isolate and identify several unknowns).

In the future, completion of these modules and a basic education perquisite could be used to qualify an individual for FHS's two certificates (Aq. Animal Health Inspector and Fish Pathologist). Before embarking on this effort, we would like to gauge the interest of aquatic animal health professionals in this concept. Please take a minute to answer three yes or no questions on survey monkey.

http://www.surveymonkey.com/s/LLMVKSP

1. Are you a member of the Fish Health Section? Yes / No
2. Do you support this approach to FHS continuing education? Yes / No
3. Would you pay a nominal fee to support administration of proficiency portion? Yes / No

WESTERN FISH DISEASE WORKSHOP – see attached WFDW_2010_booklet.pdf

The Western Fish Disease Workshop was a success, with about 90 people attending the meeting and 70 attending the continuing education session on Pathogens of Naturally Reared Populations. Dinner was held at Tyee Winery. Abstracts attached

MEETINGS AND WORKSHOPS - FOR INFORMATION ON THESE AND OTHER UPCOMING MEETINGS GO TO THE WEBSITE:
http://www.fisheries.org/units/fhs/meeting.php

MEXICAN CHAPTER MEETING
The Mexican Chapter of the American Fisheries Society, the Mexican Fisheries Society, and the University of Sinaloa, Mexico invite the Scientific, Industrial and Technical community involved with fisheries and aquaculture to attend our 3rd Meeting from May 16-20, 2011 at El Cid Hotel, in Mazatlan, Mexico.

The activities that will take place during the meeting are Plenary Speakers, discussion sessions, courses, workshops and social events.

For more information please check the meeting web page:

http://ola.icmyl.unam.mx/mazatlan2011/

This website is being updated constantly. You may also contact Felipe

Amezcua, the General Meeting Chair, at famezcua@ola.icmyl.unam.mx for more information.

JOBS

RESOURCES and ISSUES

WILD FISH HEALTH SURVEY

Here's a link to the narrated video demonstration of the new web interface for the National Wild Fish Health Survey Database. The video is about nine minutes in length and demonstrates all the tools for searching and displaying fish health information in the database. You'll also learn how to easily download and print/save case reports, sample site maps, as well as the raw data in both spreadsheet (CSV) and spatial (KML) formats.

http://www.fws.gov/wildfishsurvey/database/page/quickstart

You'll need a recent version of the Adobe Flash Player installed to view in your web browser (if not, the WMV version can always be viewed in Windows Media Player).

AADAP WEBSITE – LINKS FOR RECENTLY HELD MEETINGS
http://www.fws.gov/fisheries/aadap/recentlyheldmeetings.htm

The AADAP website is a good resource for proceedings of recently held meetings as well as information on drug use. See link above.

FEDERAL REGISTER PROPOSAL – see attached FWS chytrid fungus notice.pdf

Recently the USFWS published in the Federal Register (attached) a "request for information" pursuant to a proposal that they list amphibians infected with Chytrid fungus as an injurious species under the Lacy Act. If this came to pass, it would be the first example of the Service regulating aquatic animal diseases (other than Title 50). Many aspects of this should be of interest to section members. For example, the Lacy Act explicitly disallows listing disease organisms so the proposal is to regulate amphibians infected by Bd, not Bd itself. Another interesting aspect is that the Service appears not to be working on this issue with APHIS and NOAA under the NAAHP. Given the national distribution of Bd, it is also fair to speculate as to whether it may be far to late to restrict its further

spread by requiring certification of animals in intestate commerce. For those that ship live fish interstate, the wording in the Register implies that the presence of an inadvertent tadpole would be a felony (assuming that the tadpole was not accompanied by an OIE-model health certificate). This should be of great concern to both conservation and commercial aquaculture.

NEWS

BACTERIA ON STEROIDS: A NEW WAY TO MAKE WATER AT TILAPIA FARMS SAFER?

Bacteria on steroids: A new way to make water at tilapia farms safer?
VILLAHERMOSA, Mexico It's no secret that baseball stars, bodybuilders and cyclists have used steroids. Now it turns out that even bacteria get juiced. Researchers in Mexico have found that three common species of bacteria have voracious appetites for methyltestosterone (MT), a potentially harmful steroid that fish farmers use to change the sex of tilapia. The discovery may eventually result in a safer environment for farm workers and nearby residents and wildlife. It has global implications given that tilapia is raised in more than 100 countries, according to the U.N. Food and Agriculture Organization.
Tilapia producers add methyltestosterone to the powdered food they dish out to large tanks of tiny tilapias called fry every day for three to four weeks to turn them into males. They want males because they grow faster than females and because having only one gender prevents reproduction. (Breeding makes the farmers' operation less cost-efficient.) The young tilapias swallow the steroid but then excrete it back into the water through their feces and urine.
Fish biologist Wilfrido Contreras Sanchez worries that MT residue might endanger the health of workers who wade into the water to scoop up juvenile fish. Also, many tilapia producers discharge the hormone-laced water from the tanks into streams, rivers and lagoons where it might harm other fish and amphibians, said Contreras, who heads the biological sciences division at the Autonomous Juarez University of Tabasco where the bacterial research was conducted. Additionally, the health of local residents who swim in or wash clothes in these bodies of water might be at risk, he said.
Contreras said little is known about how the use of MT in aquaculture might affect humans or wildlife. MT is an androgen and is prescribed to stimulate puberty in slow-developing adolescent boys and to treat breast cancer. The U.S. Food and Drug Administration has said that prolonged use of high doses of androgens has been associated with the development of liver cancer and that androgens may increase elderly people's chances of developing prostate cancer. High doses in women can lead to deeper voices, facial hair, acne and irregular menstrual cycles, the FDA said.
Contreras hopes that the bacteria he studied will eliminate potential hazards if added in sufficient amounts to the water filters in the tanks where the tiny tilapias dine on MT. They're naturally present in all fish culture systems (particularly in the filters) but not in large enough quantities to degrade the hormone, he said.

In lab tests, he and fellow researchers found that Pseudomonas fluorescens, which spoils milk, and Bacillus ceresus, the culprit of food poisonings, each removed 99 percent of the hormone after 20 days in flasks. Another species, P. aeruginosa, which can cause rashes, pneumonia, bladder infections and swimmer's ear and can even break down crude oil, devoured 97 percent of the hormone after 16 days in flasks.

Because the single-celled P. aeruginosa had multiplied rapidly in the lab, researchers selected it for the next leg of the experiment. They added billions of the bacteria to filters that used gravel and special plastic balls to clean the water of three 8,000-liter concrete tanks. The filters were inside plastic drums that stood on the edge of the tanks. Each tank held 5,700 young tilapias that were fed MT daily (The fish ate the MT before it was pumped into the bacteria-smothered water filters on the other end of the tanks). The trial showed a trend toward lower levels of MT over time in the tanks where bacteria had been added versus the control tanks without bacteria, Contreras said.

He and his team plan to conduct more experiments to fine tune how many bacteria to use, what species or combination of species to use and how long to let them feast, Contreras said. If the kinks are worked out, the university hopes to grow mass quantities of whatever bacteria are finally selected and then sell the microorganisms to tilapia producers in the form of a concentrate, he said.

MT aside, the researchers uncovered something unexpected in their experiment. The fish in the tanks with P. aeruginosa weighed more than those in tanks without the bacteria. Some species of bacteria in aquaculture systems enhance growth, and P. aeruginosa may be one of them, Contreras said. Also, lab tests found no diseases in the kidneys, livers or spleens of fish raised in tanks with the bacteria. Because the bacteria are already ubiquitous and may be eaten by tilapias, Contreras doubts that they would cause any health problems, like infections, in people or fish.

The research was funded by Oregon State University, the University of Arizona, the Autonomous Juarez University of Tabasco, and the U.S. Agency for International Development through its AquaFish Collaborative Research Support Program.