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Not a fish story: This vet operates on fish!

Written by: Ward Lucas
 Posted by: Colleen Locke
KUSA - Denver [Excerpt]

It may be hard to visualize a goldfish undergoing surgery on an operating table, but there really is a veterinarian in Denver who specializes in such surgeries.

A squirming fish is hauled out of a fish pond, anesthetized and put through a physical examination. X-rays are taken of the fish and it's given an ultrasound. As odd as it sounds, a fish owner who has paid \$5,000 to \$10,000 for a prized Japanese Koi may find that special medical care for a fish is well worth the cost.

Meet Dr. Koi, a fully certified veterinarian who knows about fish ailments and their cures. Dr. Koi is the pseudonym for veterinarian Jena Questen. Questen was a vet technician for a number of years and decided she wanted to become a doctor of veterinary medicine. She eventually got her degree from Colorado State University in 2001.

"We had little fish training in vet school," Questen said. "I got into it primarily because there wasn't anyone out there treating fish. I just saw so many of them dying needlessly."

Through her DrKoi.com Web site and her Colorado license plate that says "Dr Koi," Questen says she's picking up an increasing number of customers. For \$350 to \$450, Jena can examine an average fish pond for parasites and a variety of bacterial and viral diseases.



Dr. Jena Questen (right) examines and injects medications into a sick Koi fish, with the aid of her husband Scott Eddy.

Jena showed her expertise at spotting a sick fish in a pond of hundreds of others. "That one is sick. He's not schooling with the others. He's very lethargic. He's swimming very slowly and always facing the walls." Questen and Eddy hauled out the 18 inch long orange and white Koi and put it into a bucket. "This one probably has a bacterial infection," she says. She loads up a syringe with antibiotic and injects into the fish. It's then put into an isolation pond away from the others. "That one will probably live now," she says.

For the full story go to: <http://www.9news.com/rss/article.aspx?storyid=104870>



EDITOR'S NOTE

It's a new year for the WAVMA, with exciting new events planned. **Aquaculture America** has just finished their annual convention in Seattle Washington. Learn more about the World Aquaculture Society, which sponsors Aquaculture America, by visiting www.was.org.

Also new in this volume of the newsletter will be commercial advertising. If your company or organization would like to place an advertisement in a future issue, please contact me.

You will need to send me the advertising copy and any images by email, and then forward payment to our Treasurer using a credit card, or by sending a bank check by mail. Payment information will be issued when the advertisement has been submitted for publication.

The AVN newsletters are published quarterly, and the advertising deadline is the 15th of the middle month of the quarter (i.e., Feb 15, May 15, August 15, November 15).

All Sponsor companies or Allied Organizations of WAVMA will receive a free listing and link to their company's website in the newsletter and on our website: WAVMA.org. In addition, any display advertising placed by a Sponsor will be at half the regular advertising rate. This is another benefit for aquaculture related companies to get involved in WAVMA!

Contact me with any questions regarding advertising, or any other issues about AVN.

Nick Saint-Erne, DVM
AVN Newsletter Editor
Saint-Erne@qwest.net

Aquatic Veterinary News**Commercial advertising rates:**

\$200 per quarterly issue for full page.

\$110 per quarterly issue for ½ page,

\$60 per quarterly issue for 1/4 page,

\$40 per quarterly issue for 1/8 page.

Sponsors get a **free** listing in our sponsor section and ½ price on any display ads they place in the AVN Newsletter.

WAVMA MEMBERS:

Share your contact information - Email me a digital image of your veterinary business card for a **free** insertion into the next AVN newsletter! E-mail your advertising copy to Saint-Erne@qwest.net

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Click on the above links to be taken to that page.

EXECUTIVE REPORTS

PLEASE FEEL FREE TO CONTACT ANY OF THE WAVMA EXECUTIVE BOARD MEMBERS OR COMMITTEE CHAIRS ON ISSUES INVOLVING THE ASSOCIATION.

PLEASE REFER TO THE "CONTACT CORNER" AT THE END OF THE NEWSLETTER FOR EXECUTIVE BOARD AND COMMITTEE CHAIR'S CONTACT INFORMATION.



President's Report

As with 2007, the year 2008 was successful for the World Aquatic Veterinary Medical Association. However, to continue this success, to build on our accomplishments, and to fulfil our mission, we need your continued support. Please renew your WAVMA membership and encourage others to do the same. As approved by the WAVMA Executive Board, individuals that joined during 2007 and continue uninterrupted membership will always be recognized as Founding Members.

Since formation in July 2007, some of WAVMA's achievements are:

- Publishing the informative quarterly *Aquatic Vet News*
- Establishing a members email listserv to allow easy communication among members
- Helping organize the aquatics branch of the World Veterinary Congress 2008, and organizing this event for the WVC 2011 in South Africa (<http://worldveterinarycongress2011.com>)

- Serving as a coordinating entity of the International Aquaculture Biosecurity Conference (www.IABConference.org)
- Providing an information booth at the AVMA Convention (2008, 2009) and WVC 2008
- WAVMA has become a co-sponsor of Aquaculture America allowing WAVMA to have booth space and to organize a day of aquatic veterinary talks.
- WAVMA takes part in consultation for the implementation of EU 2006/88 (EU fish health directive)
- WAVMA continues to forge links with OIE and FAO and held talks with UK government departments.

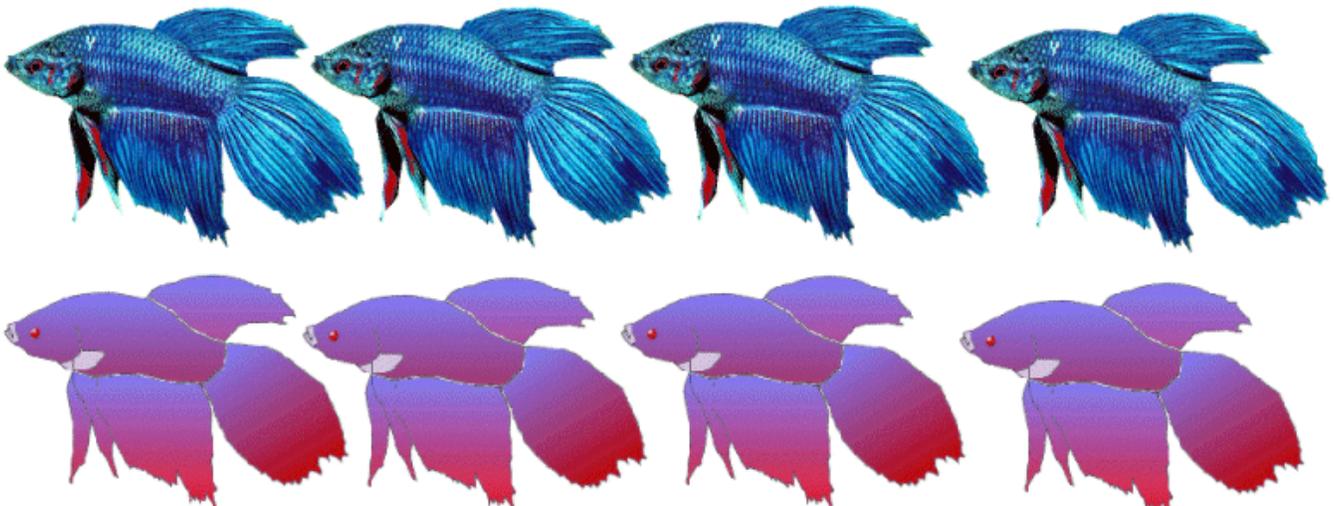
Furthermore, Executive Board members have attended the WVC, AVMA, FAVA, and BVA meetings in 2008 and Executive Board members will attend: Aquaculture America (www.was.org), the AVMA Convention (www.avma.org), the International Aquaculture Biosecurity Conference and the Aquaculture

Insurance and Risk Management Conference (<http://conference.aquacultureinsurance.com/index.cfm>).

As demonstrated above, WAVMA has the ability to lobby on an international scale in support of our mission statement and to enhance the input of national veterinary organizations. Much has been achieved since WAVMA's inception, and members will see the benefits from these activities over the next few years. There is still much more to do and this cannot be done without the continued input and support of our members. Please let us know what you would like to see for the future of your Association.

Sincerely,

Hugh Mitchell, DVM, MSc
WAVMA President 2009
hughm@aqualifesci.com



Secretary's Report

Much of what I would usually report here is either ongoing, such as the arrangements for the I-ABC (www.iabconference.org), or is reported elsewhere within the AVN. One thing, though, that has struck me in the last couple of months is how reliant WAVMA is on technology. The use of Skype for internet conference calls, the email listserv for members, even the website. Without this technology, WAVMA could not exist, or at least not be able to even achieve half of what it does. We are so used to being "connected" these days that it is difficult to remember what life was like a few years back.

This led me to thinking about what was for me one of the highlights of the last few months, and that was the recent discussion on the member's listserv about the use of salt and formalin in combination. Although this seems a pretty trivial thing to consider as a "highlight," it demonstrates the power of belonging to a group and the use of technology.

My field of aquatic medicine is

mainly ornamental fish and from the day I started, the mixing of salt and formalin was a no-no, due to the combination forming "toxic substances". This was and is perceived wisdom, yet I have never found any report in a scientific journal confirming this wisdom, nor could I find a veterinary colleague who whole heartedly agreed with this opinion. Since my routine is to advise clients over the phone to use salt as a "first aid treatment," I have always feared the court summons, when having followed my instructions, all the "very expensive koi" die due to the client failing to inform me that they had previously added formalin to the water.

This might be classed as a form of paranoia, but as we all know veterinarians have ended up in court for less (or at least the PI insurers tell you this). Now, thanks to the responses from veterinarian on three continents I think I have a viable defense. The conclusion from these responses on the listserv was that the combination is unlikely on its own to cause an adverse effect

but can cause problems where there is gill damage or low dissolved oxygen. Keep the dissolved O₂ level up and all should be well!

This is really only anecdotal evidence about the effects of using salt and formalin together in a pond, but what made it a "highlight" was the realisation that being a member of WAVMA gives you access to the leading aquatic veterinarians around the world. If you have a problem or just need advice, you can ask the question on the member's listserv. Now just imagine that you have a client suing you and as is most likely the case revolves around their word (and their experts) or yours. Would it not be nice to be able to easily and quickly find your own experts? Or obtain evidence supporting your side of the case? That on its own makes the cost of WAVMA membership worthwhile, demonstrates the power of belonging to a group and the use of technology.

Chris Walster
WAVMA Secretary
chris.walster@onlinevets.co.uk

WAVMA COMMITTEE REPORTS

Communications Committee

The Communications Committee has implemented a new layout for the *Aquatic Vet News* for Volume 3, using Microsoft Publisher software. Let us know how you like the new format for the newsletter.

We will also be accepting display advertising in future issues. If your company would like to advertise in the newsletter, please contact the editor. See display advertising rate box on page two for more information. For all WAVMA members, we will publish a FREE business card advertisement. Email a digital image of

your business card for insertion in the next issue to Saint-Erne@qwest.net!

Any member who has experience designing or managing websites is asked to volunteer a bit of time to help maintain and update the WAVMA website. Contact the Secretary, Chris Walster (chris.walster@onlinevets.co.uk).

Our next Communications Committee conference call will be on April 11, 2009. Contact me if you would like to assist with the newsletter or would like to join the WAVMA Communications Committee.

Nick Saint-Erne, DVM
WAVMA CC Chair
saint-erne@qwest.net

Don't miss out on important WAVMA news and information!

If you haven't already subscribed to WAVMA Members-L we suggest you do so at your earliest convenience.

WAVMA Members-L is YOUR list-server.

See AVN 2(4) for complete information on how to register for the WAVMA Listserv.

ASSOCIATION'S ENDEAVORS

We are inviting any WAVMA member to participate in the regular Thursday Executive Board Conference Call. Please email President Hugh Mitchell to get details as to the conference call time:
hughm@aqualifesci.com

WAVMA was a cosponsor of Aquaculture America held in Seattle, February 2009. The President, Past President and several other members attended Aquaculture America.

This quarter has seen a lot of activity on behalf of WAVMA members and has seen progress with the many ongoing projects.

The new website is progressing slowly, with discussion by the Communications Committee, Executive Board members and the website developers regarding the design. At the start of March there will be a meeting with the web designers to discuss costs and feasibility. Once it is clear that WAVMA will proceed with the update there will be a further call to members for content such as interesting case discussions, pictures etc.

Further information about the website is available from Dr Chris Walster:

chris.walster@onlinevets.co.uk

As you can see the AVN has been redesigned and we would like to hear your comments on the new format. There are further changes in the pipeline to hopefully make it even more relevant to WAVMA members and to be a greater resource for aquatic information. However what goes in to WAVMA comes from our members – if you do not send us your information or make us aware then it cannot get published. Send information to Dr Nick Saint-Erne:
Saint-Erne@qwest.net

All of the scientific speakers for the International Aquaculture Biosecurity Conference have now confirmed. This has been a major project for WAVMA to be involved in and has built bridges with numerous veterinary and non-veterinary organisations.

See:

www.IABConference.org.

Although still awaiting confirmation of room space, preparations are going ahead for three themed WAVMA evenings of CEPD to be held during AVMA Convention 2009, Seattle. Further information from Dr Julius Tepper: cypcarpio@aol.com.

Two members of the Board representing WAVMA will present at the AIRM Conference during March. See:

<http://conference.aquacultureinsurance.com/index.cfm>.

The necessary forms to ensure WAVMA maintains its not for profit status and ability to lobby in the USA were completed and returned.

The 2009 Budget and cash flow were completed by the Treasurer and agreed to by the Executive Board.

There has been some interesting discussions on the WAVMA listserv recently. Be sure to sign up for the members listserv. Go to AVN 2(4) for sign-up instructions:

<http://www.wavma.org/index.cfm/id/5/did/3126>

MEMBER'S LETTERS

I wonder if you can please distribute this through the World Aquatic Veterinary Medical Association.

You might have heard by now about the tragedy that has engulfed the people and creatures of Melbourne, Australia.

My colleagues at Boronia Aquarium have set up a Bush Fire Appeal to help raise funds to be donated to Australian Red Cross and Help For Wildlife....

Please see:

www.boroniaaquariumbushfireappeal.com.au

If you have any veterinary consumables that you can spare to be used in helping with the injured animals, please send them down here as they are very much needed.

Use the following address:

Mr Chris Rout
Boronia Aquarium,
262a Dorset Road,
Boronia, 3155 Victoria,
AUSTRALIA.
Ph: +61 3 9762 2044
Fax: +61 3 9762 2144

May we include in our prayers, those who have been affected by this tragedy.

Yours sincerely,

Dr Richmond Loh
BSc BVMS MPhil (Vet Path)
MACVSc (Aquatic Animal Health) CMAVA DipPM

<http://www.thefishvet.com.au>
+61 421 822 383

HELP WANTED

Communications Committee Members



To assist with Newsletter & Web Designs

Contact Nick Saint-Erne
Saint-Erne@qwest.net

BOOK / LITERATURE REVIEWS**New AFS Open-Access Marine Fisheries Journal Now Online**

Bethesda, Md.—

The first papers to be published in the new AFS journal *Marine and Coastal Fisheries: Dynamics, Management, and Ecosystem Science* are now available online at <http://afs.allenpress.com>.

The new open access online journal will continue to add new articles as they are accepted, and its online-only format allows for new features such as video, databases, and discussion forums to be included in articles.

"We're excited about the launch of this new journal, which will appeal to many authors and readers due to its open access format and its speed of publication," said Editor-in-Chief Don Noakes of the

School of Advanced Technologies and Mathematics, , Thompson Rivers University, British Columbia. "The online format, along with our diverse group of subject editors from around the world, should ensure a truly international scope that covers all aspects of the marine and coastal fisheries science field."

The first three papers posted are:

"Maturation of Little Skate and Winter Skate in the Western Atlantic from Cape Hatteras to Georges Bank," by Michael G. Frisk and Thomas J. Miller;

"Relationships between Larval and Juvenile Abundance of Winter-Spawned Fishes in North Carolina, USA," by J. Christopher Taylor, Warren A.

Mitchell, Jeffrey A. Buckel, Harvey J. Walsh, Kyle W. Shertzer, Gretchen Bath Martin, and Jonathan A. Hare;

"Geometric Morphological Differences Distinguish Populations of Scup in the Northwestern Atlantic Ocean," by Joseph W. Love and Peter D. Chase.

AFS has a long tradition in quality publication, starting with its *Transactions* in 1872. Now, with *Marine and Coastal Fisheries*, AFS is making quality scientific information rapidly accessible to a worldwide audience. Development Editor Don Noakes and the rest of the editorial team should be proud of their accomplishment.

STUDENT'S ISSUES

We invite student members to contribute issues or information to this column.

Important news for students wanting to join the WAVMA – all students currently enrolled in recognized veterinary academic programs (including post-graduate programs, internships and residencies) can join the WAVMA for 50% off the normal dues. This could be the best \$50 you ever spent.

Further information is available on the WAVMA.org website and on the 2009 Membership Application at the end of this Newsletter.

NOTE: WAVMA IS AWARE THAT OWNERS (POTENTIAL CLIENTS) AND GOVERNMENT AGENCIES THROUGHOUT THE WORLD ARE UTILIZING THESE ONLINE RESOURCES TO LOCATE AQUATIC VETERINARIANS & DIAGNOSTIC LABS !!!

**ONLINE AQUATIC VETERINARIAN & DISEASE
DIAGNOSTIC LABORATORIES DIRECTORIES**

A free resource for all aquatic veterinarians and an
opportunity for clients to find you.

Simply go to

AquaVetMed.Info

If you are active or interested in any areas of aquatic veterinary medicine register in the free online directory.

Register AT NO COST TODAY at www.AquaVetMed.info

COLLEAGUE'S CONNECTION

Tumor removed from Lafayette koi fish

Fish surgery successful
Friday, 21 Nov 2008
Niccole Caan

LAFAYETTE, Ind. (WLF1) -

Purdue's veterinary school often performs operations on animals, but one surgery went particularly swimmingly.

Veterinarians removed stitches from Karla the koi fish. This summer her owner Dick Thomas noticed her stomach bulged at an odd angle. He took her in for an exam.

"We took some X-rays and did an ultrasound. She had a mass in her abdomen," said Veterinarian Dr. Lori Corriveau.

Dr. Lori Corriveau and her team removed the tumor during a two hour initial surgery.

"Anesthesia is always

the tricky part," said Corriveau.

Vets dissolved the anesthesia in water so Karla was comfortable. A tube of water was also inserted into her mouth so her gills were kept wet and she could breathe. Her owner said even though he owns 25 koi like Karla, he's particularly fond of her.

"You don't attached to a fish like you do a dog or cat because you don't have the intimate contact with them, but you still do. All the fish have personality," said Dick Thomas.

The almost seven pound Karla returned to her Lafayette pond with a scar marking her belly. Her owner said he hopes she won't be a fish out of water again and end up back on the operating table.

"I'm hoping the progn-

sis is good, but Dr. Corriveau said the tumor she took out looked like cancer," he said.

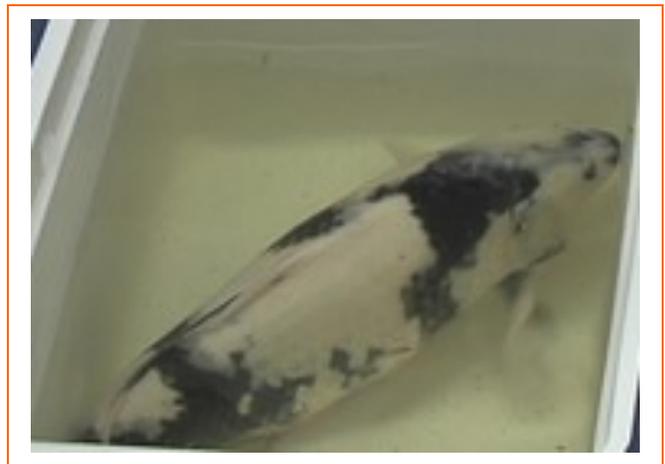
Koi can live up to 60 years. Karla is young at three and half and Purdue's veterinarians hope she'll now have a chance to swim for many more.

Karla's surgery cost \$600. Normally an the operation would be \$1,200, but her owner got a discount because of the rare educational opportunity Karla offered to students.

See the full story at:

http://www.wlfi.com/dpp/news/local/wlfi_West_Lafayette_fish_surgery_20081120_rev1

Karla the Koi



Bristol Zoo 'first' to breed dragon fish

Only eight individual dragon fish are thought to be housed in UK zoos - four at Bristol zoo and four at Chester Zoo.

Jonny Rudd, from Bristol Zoo, said: "According to Zoo records, no dragon fish have ever been bred in

Europe. This could even be a world first."

Jonny Rudd, assistant curator of the aquarium at Bristol Zoo, said: "Dragon fish are notoriously difficult to breed - this is the first time any fry have survived in the 13 years the zoo has

had these four dragon fish."

Mr Rudd said the successful breeding may have been helped by recent efforts to purify the water in the dragon fish tank, using reverse osmosis, as well as increasing the water temperature by a few degrees.

The species, *Scleropages formosus*, is on the International Union for Conservation of Nature's endangered list and as a result the trade of dragon fish is strictly monitored.

Dragon fish are native to South East Asia where their ownership is a sign of wealth and status. The species is thought to be close to extinction in Thailand and is so rare it is protected by the Convention on International Trade in Endangered Species in an international agreement between governments that came into force in 1975.

Story from BBC NEWS:

http://news.bbc.co.uk/go/pr/fr/-/2/hi/uk_news/england/bristol/somerset/7829283.stm



The dragon fish at Bristol Zoo have produced 15 fry (offspring).

CLINICAL REPORTS**Clinical Case from the WAVMA Members Listserv:**

I currently consult for one of the public aquariums in Australia and they have a 3m female grey nurse shark that has sustained traumatic injuries to both her eyes (the left eye is more severely affected). She has been residing in this same aquarium for the last 25+ years. There have been no changes in the aquascaping, water flow/pumps, etc for many years. Other fish in the tank include 5 other grey nurse sharks, a couple of turtles, some smaller reef sharks, snapper, and other small fish.

Initial clinical signs were observed in the first week of February 2009. It started with corneal opacity and progressed to redness. Oxytetracycline per-os began during the week starting 16 Feb, together with Meloxicam per-os. Her condition improved (became more active and eating), however, we suspect a 2nd traumatic event occurred during the first week of March and her eyes have gotten worse.

We suspect she may now be blind (not reacting to light) and bumps into objects when she swims. She is a placid fish, but never handled. She is eating well and maintains steady buoyancy control, preferring to hang at mid-water level.

My questions:

What else can be done to remedy the situation?

Can her vision return?

Can she adapt to being blind in this tank?

How can we modify the aquarium to allow her to adapt?

Dr Richmond Loh
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Buphthalmia and hyphaema with corneal lens opacity in left eye of a grey nurse shark.

One of several replies from WAVMA Members:

Sudden onset of corneal opacity in a placid animal makes me wonder about cataracts. A luxated lens could easily cause the initial signs. Did anyone notice any haziness or change in eye color or reflectivity before the severe signs? Is the pool outside with sunlight? Is Ozone or UV used in the life support system? A bad ORP sensor might cause ozone problems. In Marine mammals UV from sunlight may be part of the cause of cataracts or corneal changes.

By-products of disinfection should also be considered whenever eye problems develop in systems using ozone or even UV in systems with high organic loading.

A tank big enough to have a 3 meter shark for 25 years probably doesn't have major percentage water changes at one time, and even well treated back wash recovery water might have by-products of disinfection. I have a report I am working on concerning that problem relative to marine mammals if you are interested.

The worst time for a blind animal is when they first lose vision. After they learn to navigate without vision they do fine. You might consider trying things like air stones at the base of fixed objects in the tank. She might be able to perceive the sound of the bubbles or the current produced to allow orientation and avoiding the obstacle. Water dripping or flowing onto the surface of the water above obstacles might also be helpful. She needs some way to orient without having to bump into things. Not having sharp projections that might cause injury would be ideal but moving things around when she is already used to the existing positions might not be helpful. Always feeding at the same station and using auditory cues from the same location each time might help.

Hypersaturation might be a consideration. If the system hasn't been changed for some time there might be someplace where a suction leak before a pump has developed. The eye gets highly oxygenated blood right after passing through the gills so it might be the only organ affected.

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EMERGING ISSUES

This is the dawning of the age of aquariums - Fish surpass dogs, cats in popularity

By Cristin Ross

Jacksonville Daily Progress
Jacksonville, Texas

Every dog may get his day, but these days America's favorite pet is finned, not furred.

According to the American Pet Products Association, there are twice as many pet fish in the U.S. as there are dogs. Local aficionados say they're not surprised at all that keeping fish has grown in popularity.

"Fish have always been popular,

and I've definitely seen an increase in that popularity lately," said Sandy Catlett, owner of The Pet Store in Jacksonville, Texas.

Medical officials have reported keeping fish has been shown to lower blood pressure and improve a person's overall health when people watch, observe and appreciate them as pets.

According to the Dive In! Aquarium Fish Program's Web site, "children who have fish as pets experience an improvement in their grades in school, and high school students who keep fish have higher grade-point averages than those who did not have pets ..."

A study conducted at the University of Pennsylvania's School of



Veterinary Medicine found that people gazing at an aquarium experienced a drop in blood pressure and heart rate similar to that of people who interacted with dogs ...

See the source (<http://tinyurl.com/9s6xjq>) for the full story.

Experts work to combat deadly amphibian *Batrachochytrium* fungus

By LORINDA TOLEDO
Associated Press Writer
LOS ANGELES --

The tiny Panamanian golden frog, with its sunflower yellow skin and dark brown spots, is usually a symbol of good fortune. But it appears the tropical frog's luck may have run out unless experts find a way to combat a deadly fungus threatening amphibian populations around the world.

"This is not a natural extinction event," said Allan Pessier, a scientist from San Diego Conservation Research, which has been researching the spread of the chytrid fungus. "It is caused by humans, and it is our responsibility - almost our moral responsibility - to do something about it.

"Twenty-five of the world's leading amphibian veterinarians, disease researchers and animal care specialists convened this week at the San Diego Zoo to write a definitive conservation manual to combat the spread of chytrid fungus. Thought to be caused by the exportation of am-

phibians from their natural habitats, the fungus is killing off amphibians at an accelerated rate, Pessier said.

The golden frog, for instance, is believed to be extinct in the wild, when years ago thousands of them inhabited Panama. People would often find them in the forests and keep them for good luck. Now, the golden frogs and other amphibians are threatened by the spread of the microscopic fungus, which attaches to the animal and thickens its skin, making it more difficult to absorb the water they need.

The problem started off slowly in the 1930s, when frogs were widely transported to other countries for medical purposes, food and pets. By the late 1990s scientists realized a solution was needed. Working long hours throughout the three-day conference that ended Wednesday, experts created an 80-page guide for bringing threatened species of amphibians into captivity and testing them for disease. The guidelines are intended to prevent the spread of the fungus to healthy amphibians already in captivity and conserve rare

species, Pessier said. Experts hope they can later be reintroduced into the wild.

Central America, South America and Australia are some of the regions most affected by chytrid fungus. Some North American amphibians such as the mountain yellow-legged frog, native to California, and the Wyoming toad are also in danger of extinction.

Factors such as habitat loss and global warming also contribute to the declining amphibian population, but the chytrid fungus is a serious problem, said Donal Boyer, the zoo's curator of herpetology. There are about 6,000 species of amphibians in the world, and one-third of those are endangered or threatened, Boyer said.

"It's a big deal if something that forms an important part of an ecosystem in terms of numbers and sheer mass start to disappear," Boyer said.

For full article, see:
http://www.sacbee.com/state_wire/story/1638914.html

Two-headed bass in Australia

SYDNEY (AFP) —
January 2009

Toxic chemical contamination was the likely cause of fatal fish mutations in northern Australia in which thousands of bass larvae spawned with two heads.

Dr. Matt Landos, an aquatic animal specialist and member of the Australian College of Veterinarian Scientists, said the mutant larvae at a Noosa River fish farm survived just 48 hours and were dying en masse.

"When we used the water on-site or have taken bass from the Noosa River those fish appear to have been contaminated and they give rise to deformed or convulsing larvae," he told AFP.

"I have been working in aquaculture for 10 years and this is the first time I have ever seen anything like it."

Tests had excluded the presence of a virus or bacteria, leading Landos to suspect that pesticides from a neighbouring macadamia nut farm were to blame.

"It leaves us sitting with toxic chemical contamination as a likely cause," he said. "I believe that it's some of these chemicals at very low levels that are impacting on the breeding ability of these fish."

Deformities in the fish had increased as the neighbouring macadamia nut plantation had expanded in the past two

years to virtually border the hatchery on three sides, said Landos.

Rapidly developing pest-control technology also meant smaller particles of pesticide could travel further.

The organophosphates in question -- carbendazim and endosulfan -- had been recognised as potentially dangerous and even banned in some countries, but were still recommended for use in Australia, said Landos.

The Queensland state government said tests gave no indication that the macadamia farm was using the chemicals against the manufacturers' instructions.



Two-headed bass embryo.

The local fisheries department is investigating, and expects to receive results from tests of dead fish specimens next month.

Newly identified species is a carnivorous sea squirt

A newly identified species of carnivorous sea squirt lurks in the deep sea off Australia, where it traps and devours meaty prey swimming past.

The deep-sea resident, along with two other marine species that are new to science, were discovered by an international team of scientists during a month-long voyage aboard the research vessel RV Thompson to a marine reserve near Tasmania. The findings were announced today.

An expedition below the surface relied on the remotely operated submersible called Jason, which dropped to depths of more than 13,000 feet (4,000 meters).

During the voyage, researchers explored the so-called Tasman Fracture Zone within the Tasman Fracture Commonwealth Marine Reserve. Until now, scientists had only observed this zone to a depth of about 5,900 feet (1,800 meters).

Jason allowed scientists to peer much deeper into the abyss. That's where researchers spotted the new sea squirt, which is about 1.6 feet (half a meter) tall. The transparent organism is triggered to feed when a fish or other swimming snack touches the [sea squirt](#). Similar to what happens in a Venus flytrap, the funnel-shaped section of the squirt's body traps and collapses around prey.

Sea squirts are considered tunicates, a type of [marine organism](#) with a rubbery outer covering called a tunic. The animal typically feeds by pushing water in and out of tiny tubes, filtering out bacteria and algae and other bits of food.

For more information go to:

<http://www.msnbc.msn.com/id/29021242/>

Photo by: WHOI; Jess Adkins / Caltech



LEGISLATIVE & REGULATORY ISSUES

Turtle Safety Brochure

February 10, 2009

The U.S. Food and Drug Administration's Center for Veterinary Medicine (CVM) would like to announce the availability of its brochure, **Pet Turtles: A Common Source of *Salmonella***, through GSA's Federal Citizen Information Center in Pueblo, Colorado. The brochure provides information on the risks associated with small pet turtles (less than 4 inches) especially for infants, children, elderly people and those with lowered natural resistance. The brochure is available in quantities of 100 or individually and can be ordered free of charge at:

<http://www.pueblo.gsa.gov/rc/turtles.html>.

For more information on pet turtles, please see:

<http://www.fda.gov/cvm/turtles.htm>

U.S. FDA to inspect Chilean salmon farms

CHILE,
Friday, February 06, 2009

Experts from the US Food and Drug Administration (FDA) will inspect several Chilean salmon plants next month in order to assess, for its own purposes, how the local industry is combating its sanitary problems.

The FDA is not happy with some of the measures implemented by the Chilean government and by the salmon farming industry to control the spread of viral infectious salmon anaemia (ISA). An inspection carried out in April 2008 led to various companies testing positive for using chemical products banned in the US.

National Animal Health Reporting System

This year, the USDA-APHIS is preparing to launch the aquaculture portion of NAHRS. This will involve reporting to the USDA any aquaculture/aquatic animal diseases that are currently listed as reportable by the OIE.

For more information, contact:

Dr. Stanley Bruntz
nahrs@aphis.usda.gov
stanley.d.bruntz@aphis.usda.gov
970-494-7000

USDA APHIS VS
Centers for Epidemiology & Animal Health
2150 Centre Ave., Bldg. B, MS 2E7
Fort Collins, CO 80526

Website:
<http://www.aphis.usda.gov/vs/ceah/ncahs/nahrs/#AboutNAHRS>

US inspectors will work jointly with the staff of the National Fisheries Subsecretariat (SERNAPESCA) when it visits the country in March.

Chilean salmon imports are still under the microscope. The New York Times reported, despite FDA recognition that the Chilean salmon farming industry has made progress in managing its problems.

The Pew Environment Group, an environmental organisation, confirms they have had access to FDA documents that reveal three salmon companies, among them two major salmon producers in Chile, used emamectin benzoate pesticide in parasitic treatments and used oxolinic acid and flumequin antibiotics.

New Website Focuses on VHS Disease Prevention

AMES, Iowa -

Viral hemorrhagic septicemia (VHS), a serious disease of fresh and marine fish species, has been found in the Great Lakes region of the U.S. and Canada. As part of a national outreach campaign to educate the public about VHS, a new web site has been launched.

www.FocusOnFishHealth.org

The campaign and web site are funded by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (USDA APHIS) and was a collaborative effort of fisheries and aquaculture stakeholders from industry, universities, state and federal agencies and national organizations.

The Web site was developed by the Center for Food Security and Public Health (<http://www.cfsph.iastate.edu/>) at the Iowa State University College of Veterinary Medicine.

In 2008, the FDA placed an 'import alert' on three local firms: Cultivadores de Salmones Linao Ltd - controlled by Marine Harvest -, AquaChile, and Food Cuisine Solutions.

See the source (<http://tinyurl.com/d4rg2m>) for the full story.

Still no Source for ISA Outbreak in Scotland

January 21, 2009

SHETLAND -

Investigations are continuing into the outbreak of Infectious Salmon Anaemia (ISA) at a fish farming site in the south west of Shetland, but experts are no nearer to finding the cause of the outbreak.

A control zone has been established around the site containing 26 farms of which 18 have been emptied and eight are still stocked.

There are a further 14 farms in the surveillance zone of which four still have fish stocks.

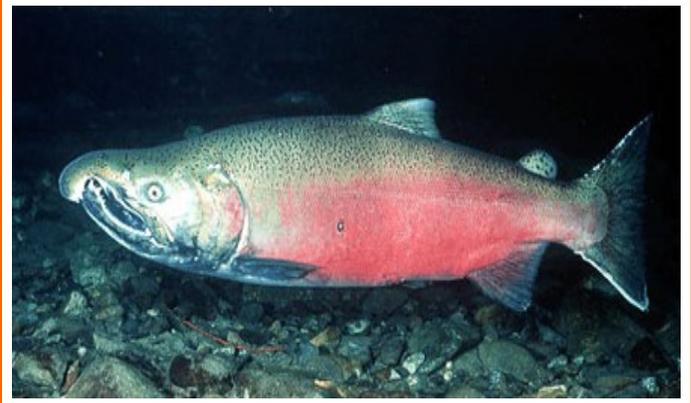
The Fisheries Research Service said that all of the fish farm sites are being inspected by staff from the FRS Fish Health Inspectorate, with further samples

being taken from some of those sites, to establish the current situation on each site.

There are 40 registered fish farming sites in the south west Shetland management area, although not all of these sites are currently holding fish.

All sites holding species susceptible to, or able to act as a vector for ISA virus will require to be fallowed (emptied of stock), cleaned and disinfected before being restocked. The length of this fallow period will vary depending upon a site by site risk evaluation.

See the source (<http://tinyurl.com/bjayye>) for the full story.



A SECOND case of the fish disease Infectious Salmon Anaemia

31 January, 2009

(ISA) has been reported on a fish farm in Shetland.

Source:

<http://tinyurl.com/c2q98b>

Government scientists confirmed yesterday (Friday) that they had found ISA in a sea cage fully stocked with salmon owned by Hjaltland Sea-farms in the same area west of the village of Scalway where the disease was found earlier this month.

On 2 January scientists found ISA on a Scottish Sea Farms site east of Hildasay and immediately imposed a control zone, restricting fish movements and testing fish being farmed in the area. It was the first time in 10 years the disease had appeared in Scotland.

All the fish on the Hjaltland site will have to be killed as soon as possible under the supervision of the Fisheries Research Services (FRS) to prevent the spread of the virus.

The government stressed that ISA poses no threat to humans, but it can cause huge levels of mortality in fish and decimated the industry in 1999 when the last outbreak occurred.



Salmon Farming In a pen.

AQUATIC CONTINUING EDUCATION AND PROFESSIONAL DEVELOPMENT**Subject: Participation in ILDEX India Aquaculture 2009**

Dear Sir/Madam,

Welcome to **ILDEX India 2009**

May I have this privilege to invite your good office to the forth coming **ILDEX INDIA (Aquaculture 2009)** to be held at **Pragati Maidan, New Delhi on July 02- 04, 2009.**

In 2008, ILDEX set a modest record of 142 exhibitors and 12,000 visitors from 17 countries. In the 3rd edition we expect *more than 200 exhibitors and more than 17000 visitors from 18 countries and from within India.*

India has a traditional base in aquaculture and stands 2nd in aqua culture and 3rd in captive fisheries in Asia. **MPEDA** (Marine Products Export Development Authority) has ambitious target of achieving **US \$ 3 billion through sea food export** during next five years. This has created a huge demand for **fish processing equipment** for the export-oriented units in India.

Growth of organized F&G retail has also created the demand for **improved logistics, warehousing, state-of-the art technology** and availability of **quality processed and packaged food.**

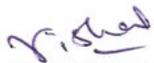
Marine Food Parks & Agricultural Special Economic Zones are already being worked out to ensure that farmers are not displaced. The opportunity is huge...ILDEX INDIA 2009 shall provide a common platform for all these.

ILDEX INDIA 2009 shall include **Exhibition, Technical Sessions** (Seminars & Lectures by eminent professionals from India and abroad), **Corporate Presentations, Meet & Match International club, Interactive Dinners, Students Programme, Placement Services,** and **Industry specific tours** for international delegations.

I seek your support and co-operation, on the above subjects, to make this Expo a successful event. For more details of stall booking, please visit us at www.ildexindia.com

If you have any queries, it will be my privilege to reply.

Looking Forward,



Vishal Gupta
Chairman
(M). +91 98120 82121
Email: vishal@pixie.co.in

Encls: • **ILDEX Brochure**



Jitender Kumar (JK)
Business Executive
+91 999 170 5006
ildex@pixie.co.in



Pixie Consulting Solutions Ltd.

923, Sector-9, Urban Estate,
KARNAL - 132 001 (Haryana) INDIA
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E-mail : info@pixie.co.in
Website : www.pixie.co.in



N.C.C. Exhibition Organizer Co. Ltd. (

Queen Sirikit National Convention Center
60 New Rachadapisek Road, Klongtoey
Bangkok 10110, Thailand
Tel: +66 2 203 4260-2
Fax: +66 2 203 4250-1
E-mail: info@ildex.com

For more Aquatic Education opportunities, see the last issue of AVN
and review the listings on the WAVMA.org website.

Web-based VIN course: Intermediate Fish Medicine

Web-based VIN course: EXOT201-0209 - Intermediate Fish Medicine February 26 - March 26, 2009

INSTRUCTORS:

E. Scott Weber, VMD, MSc (course coordinator)
 Brian Palmeiro, VMD
 Drury Reavill, DVM, DABVP (Avian), DACVP
 Helen Roberts, DVM
 Shane Raidal, BVSc, Ph.D, FACVSc
 Peter L. Merrill, DVM
 Paul Egrie, VMD

DATES:

February 26 - March 26, 2009

Real-time sessions:

Thursday evenings;

February 26, March 5, 12 and 19;
 9:30-11:30 pm ET (USA)

Course Description:

This intermediate fish medicine course is designed to further your experience with fish medicine. The basic concepts will be expanded and applied to case examples. The instructors are experienced fish practitioners who will provide important tips on running a fish practice as well as the important issues facing aquatic medicine.

COURSE OUTLINE:

Week 1 (February 26):

Review of Basics

In this week, we will cover most of

the basic techniques and information that is necessary for fish medicine. This will be a whirlwind of a review. Any areas needing further review, can be addressed in the later sessions. (Palmeiro, Reavill, Roberts)

Week 2 (March 5): Surgery and Anesthesia (Roberts)

Week 3 (March 12): Infectious and Non-Infectious Diseases (Weber and Reavill)

Week 4 (March 19): Regulatory Issues (Merrill and Egrie)

MESSAGE BOARD**DISCUSSIONS:**

Discussions will begin on the start date of the course and continue for 7 days following the last real-time session.

TUITION:

Member/\$144, Non-Member/\$223 by February 12, 2009; Member/\$160, Non-Member/\$248 after February 12, 2009

Course enrollment also open to VSPN members.

All course registrants: Please be aware that this is an intermediate level course, which assumes a basic level of knowledge on fish medicine.

This basic level of knowledge may constitute completion of the Basic Fish Medicine course or past or current experience in a fish practice. Please read the course description and weekly outline carefully to judge whether this is the appropriate course for you.

For additional details go to

<http://www.vin.com/CE/EXOT201-0209.htm>.

TO REGISTER:

[https://www.vin.com/CE/](https://www.vin.com/CE/RegStart.htm?)

[RegStart.htm?](https://www.vin.com/CE/RegStart.htm?)

ClassCode=EXOT201-0209,

or call 1-800-700-INFO (4636) or

email CEonVIN@vin.com, and list

the course title, your full name, and

your preferred method of payment (credit card, check).

CE HOURS: 8

This course has been submitted (but not yet approved) for 8 hours of continuing education credit in jurisdictions which recognize AAVSB RACE approval; however participants should be aware that some boards have limitations on the number of hours accepted in certain categories and/or restrictions on certain methods of delivery of continuing education.

Call VIN at 1-800-700-4636 for further information.

**34th Annual Eastern Fish Health Workshop
 27 April - 1 May 2009.**

High Peaks Resort, Lake Placid, New York

For more information:

Rocco Cipriano: rcipriano@usgs.gov

**40th annual IAAAM Meeting and Conference
 May 2-6, 2009.**

Radisson Hill Country Resort and Spa,
 San Antonio, Texas, USA.

For more information www.iaaam.org

4th Annual Marine Species Histopathology Workshop

**Radisson Hill Country Resort and Spa, San Antonio, TX
May 2nd, 2009**

The 4th Annual CL Davis DVM Foundation Marine Species Histopathology Workshop will be held at the Radisson Hill Country Resort and Spa, San Antonio, TX on Saturday, May 2nd. The format for this year's conference will be very similar to that of previous years, with a keynote presentation on fungal infections by Dr. Mike Rinaldi on Saturday morning at 8:00am followed by case presentations by conference attendees throughout the rest of the day. Cases this year can consist of marine mammals, birds, reptiles, or fishes.

Dr. Michael G. Rinaldi is perhaps best known for his reverent love affair with the fungi. He is currently Professor of Pathology, Microbiology, Medicine, and Clinical Laboratory Sciences and Director, Fungus Testing Laboratory, Department of Pathology, University of Texas Health Science Center at San Antonio. He is a dynamic speaker with abundant experience with fungal diseases of marine species. Dr. Rinaldi is most noted for his presentations concerning opportunistic fungal infections. He is often termed "the international missionary for medical mycology".

Registration will cover food and beverages during breaks. Registration is \$75/ participant. (That's a bargain for a full day of entertainment and education!). Please and send your registration materials and checks for payment to:

Dr. Judy St. Leger
SeaWorld
500 SeaWorld Dr.
San Diego, CA 92109
Fax: (619) 226-3951

If paying by check, please make the check payable to "CL Davis DVM Foundation". If paying with a credit card, please fill out the appropriate information on your registration form.

This year we will again be distributing virtual, rather than glass slides for the participant case presentation portion of the conference. All conference participants will receive a DVD containing digital images of representative areas from scanned glass slides of each participant case presentation prior to the conference. Presenters should send in **two** glass slides from their cases, along with an electronic case summary by **February 27th**. As mentioned above, please use the case summary from last year attached to the e-mail announcement as a template, and submit

case summaries to me electronically. Presenters at the conference can prepare a Powerpoint presentation of the case or can use the digital slide to present important points of the case.

Two glass microscopic slides and electronic case summaries using the case summary from last year as a template should be submitted to Dr Judy St. Leger **NO LATER THAN February 27th, 2009.**

For further information, please contact Dr. Judy St. Leger at (619) 225-4259 or at judy.st.leger@seaworld.com.

For general information about the IAAAM 2009 conference, you can visit the website at:

<http://www.iaaam.org/displaycommon.cfm?an=1&subarticlenbr=15>

14TH INTERNATIONAL CONFERENCE ON DISEASES OF FISH AND SHELLFISH

**Prague, Czech Republic
14th-18th September 2009**

"The 14th International conference on diseases of fish and shellfish" (organised by the European Association of Fish Pathologists - EAFP) will be held at the Clarion Congress Hotel in Prague, Czech Republic. Scientific and technical sessions consisting of poster presentations, invited talks, keynotes, oral presentations, workshops and an EAFP General Assembly will

take place during the Conference. We will welcome suggestions for potential topics for scientific sessions and workshops. Planned social events include a Welcome cocktail, Civic reception and the traditional Conference Banquet.

More information about the conference will be available on the EAFP website (<http://eafp.org/>) as well as in the 2nd announcement.

Feel free to contact the Meetings Secretary for questions or additional information:

Stephen Feist,
EAFP Meetings Secretary
Centre for Environment, Fisheries and Aquatic Science (Cefas)
Weymouth Laboratory,
Barrack Road The Nothe,
Weymouth, Dorset DT4 8UB, UK
Tel. +1305 206600,
Fax. +1305 206601.
E-mail. stephen.feist@cefasc.co.uk



INTERNATIONAL AQUACULTURE BIOSECURITY CONFERENCE:
Practical Approaches for the Prevention, Control, and Eradication of Disease

August 17-18, 2009 • Trondheim, Norway • www.iabconference.org
Held in conjunction with Aqua Nor 2009, the international aquaculture venue,
August 18-21, 2009 Trondheim, Norway • www.nor-fishing.no



A two day program of Internationally-recognized keynote speakers and contributed posters on the following topics:

- » Economic impact of disease and biosecurity programs
- » Components of ideal biosecurity plans and programs
- » International, regional and national strategies
- » Identifying and prioritizing hazardous diseases and evaluating risks
- » Determining and mitigating hazardous disease critical control points and risks
- » Disease epidemiology, surveillance and monitoring
- » Determining disease status and freedom
- » Control and eradication contingency plans and programs
- » Disease diagnostics, medical and farm record keeping
- » Implementing, auditing and certifying biosecurity programs

The goal of this conference is to provide expert opinions and tools for implementing practical, economic and effective biosecurity plans and programs. A call for posters is forthcoming on the website.

- » Registration by May 1, 2009: NOK 3500 (≈ \$500 USD) • Registration after May 1, 2009: NOK 4500 (≈ \$650 USD)
- » A tentative agenda and additional information is available at www.iabconference.org



PHARMAQ



Harmonisation of the Care & Use of Fish in Research

International consensus meeting, Oslo, Norway 22 – 24 September 2009:

Why are we arranging this meeting?

Fish comprise one of the largest but least understood group of animals used in research in Europe. In Norway alone, over 5 million animals were used in animal research in 2007, and 90% of these were fish. There is considerable political interest in many countries to reduce the numbers of animals used.

What is less well known is the work currently being

undertaken in Brussels and Strasbourg to revise the EU directive and to follow up the revision of Appendix A of the Council of Europe convention on the protection of animals used in research. These documents have great consequences for all those conducting research on live animals, including fish.

The 3 R's: Replace, Reduce, Refine

International focus on ethical and scientific evaluation of animal research, summarised in "The Three R's" has led many countries, including Norway, to revise their

legislation. It is vital that researchers participate while these decisions are being made.

This meeting aims to review what we consider to be "best practice" within research on fish species. It follows up an international consensus meeting held in Oslo in May 2005. What have we achieved during the last 4 years, and what still remains to be done?

We welcome suggestions for topics from the participants!

Can we reach consensus?

The next World

Congress on the three R's will be arranged in Rome in August 2009. We hope to be able to report the conclusions from that meeting, including a consensus statement from the participants, at the Congress.

This meeting is arranged by Norecopa, Norway's consensus-platform for the replacement, reduction and refinement of animal experimentation. Please see <http://www.norecopa.no> for more details.

10TH WORLD CONGRESS OF VETERINARY ANAESTHESIA

31ST AUGUST TO 4TH SEPTEMBER 2009, GLASGOW, UK
FOR FURTHER DETAILS VISIT WCVA2009.COM



The 10th World Congress of Veterinary Anaesthesia

is to be held in Glasgow, Scotland on 31st August to 4th September 2009.

Bute Hall provides an impressive backdrop for a panel of world class speakers, including Dr Duncan Young, Dr Andrew Lumb and Dr Sue Hill.

Convening every three years, this event explores the very latest research and developments in veterinary anaesthesia, providing an unparalleled opportunity for the exchange of ideas and discussion at an international level.

The full scientific program has yet to be finalised, however topics under discussion will include pharmacogenetics, pulmonary function, ethics and physiology in avian and **piscine anaesthesia**.

Controversies will be led by Dr Jo Murrell & Dr Bruno Pypendop on "MAC – an irrelevant outdated and misused construct or the basis of safe surgical anaesthesia?"

"Acepromazine, nitrous oxide and halothane – 50 years past their sell by date or the bedrock of safe anaesthesia?" – (Dr Martina Mosing & Dr Emma Love).

And... "Ethics: medical and veterinary viewpoints" (Dr Peter Sandoe & Dr Dominic Wilkinson).

Sponsorship opportunities for this prestigious event are still available in a number of options and can be tailored to suit individual requirements, either within the commercial exhibition or as a major sponsor of the congress.

For further information on either registration or sponsorship please contact:

Mrs Louise Holder
R&W Communications
Suites 3&4, 8 Kings Court,
Willie Snaith Road,

Newmarket, Suffolk.
CB8 7SG
Tel. 01638 667600

Mobile 07813 218396
Email: louise.holder@rw-communications.co.uk

AQUATIC VETERINARY JOB OPPORTUNITIES

Fish Veterinary /Health Faculty Position

Lake Superior State University, Sault Sainte Marie Michigan seeks a tenure-track faculty member in the Department of Biological Sciences beginning fall semester 2009.

Closing Date:

Priority Deadline is March 1, 2009.

Search will continue until position is filled.

Qualifications:

Candidates must be trained in the discipline of fish health with a DVM or Ph.D. in Biology or related discipline. Preference will be given to candidates who demonstrate potential for exceptional teaching and expertise in analytical techniques such as QELISA, Q-PCR and histopathology.

Description:

The successful tenure-track candidate will be expected to teach undergraduate classes and laboratories, create innovative instructional materials and laboratory experiences including web-based instruction, establish a record of sustained scholarship, develop sources of external funding for applied research and projects with industry, promote the program through local, regional and national engagement, participate in program assessment activity related to accreditation, and perform student advising and other departmental service, including internal

and University committee work. The successful candidate will be appointed half-time to oversee the Aquatic Research Laboratory's Fish Health Lab and half-time to teach upper level undergraduate courses such as Virology, Ecology of Animal Disease, and Histopathology.

Salary:

Salary and academic rank will be commensurate with qualifications and experience.

To Apply:

Submit a signed cover letter, CV, statement of teaching philosophy, and names and contact information for three references to: Fish Health Search Committee, Human Resources Office, Lake Superior State University, 650 W. Easterday, Sault Sainte Marie, MI 49783. For more information, contact Human Resources at 906.635.2213.

Location:

Lake Superior State University, a four-year, comprehensive institution, is Michigan's smallest public university. We're small by choice. With an annual enrollment of approximately 3,000 students, we feature a strong focus on serving undergraduates. Academic offerings include a broad variety of programs in the liberal arts and sciences, as well as professional programs in business administration, criminal justice, education, engineering, fire science,

nursing, fisheries and wildlife management, and more. Our athletic teams compete in the NCAA Division II, with the exception of men's ice hockey, which competes at the Division I level. LSSU is located in Michigan's beautiful Eastern Upper Peninsula, home of a wealth of activities for the outdoor enthusiast in all four seasons. The campus is in historic Sault Ste. Marie (pop. 18,000) overlooking the St. Mary's River and the Soo Locks, one of the busiest shipping lanes in the world. The EUP climate is ideal during the summer, with temperatures normally in the 70s. Winters offer plenty of snow for skiers and snowmobilers. The campus is adjacent to the International Bridge, which crosses to our twin city of Sault Ste. Marie, Ontario, pop. 83,000.

Further Information:

LSSU's Department of Biological Sciences offers undergraduate degrees in Biology, Fisheries and Wildlife Management, Clinical Laboratory Science, and Biology Secondary Education. A new BS degree in Fish Health will begin Fall 2009. The department has a strong tradition of teaching excellence in organismal biology, pre-professional studies, and natural resources ecology. The department currently has 300 majors, and 12 full-time faculty covering the range of biological sciences. See http://www.lssu.edu/hr/view_posting.php?id=158 for more information or contact Dr. Barbara Evans, (906) 635-2164, bevans@lssu.edu. For more information about the Biology department and the Aquatic Research Lab, visit www.lssu.edu/biology and www.lssu.edu/arlab.



Aquatic Animal, Wildlife & Zoological Medicine Combined Internship Program

St. Matthew's University, School of Veterinary Medicine and Boatswain's Beach/Cayman Turtle Farm, Grand Cayman, Cayman Islands invite applications for an internship beginning May 4, 2009.

The intern will work under the supervision of faculty members at SMU and will be responsible for working with a wide variety of marine and terrestrial species (30% captive turtles and other reptiles, 30% fish, eels, and elasmobranchs, 30% avian and small mammal, and 10% wildlife). The intern position is a non-degree graduate student program leading to an official University Certificate of Internship in Zoologic Medicine from SMU.

Interns are encouraged to attend a veterinary conference, as well as college or university seminars or

special lectures throughout the year. They are further encouraged to publish case reports or research papers in veterinary medical journals.

Responsibilities of this role:

- * Participate in the daily activities of the medical service of the park, including primary case responsibility and case rounds with park staff and SMU faculty.
- * Report to the Park's Chief Scientific Officer, the Manager of the Turtle Farming unit, the Curator of the Terrestrial and Education Exhibits Unit, and the Curator of the Marine Exhibits Unit, to establish and implement protocols for the proper husbandry and care of the animals.
- * Work with the Water Chemist to establish and maintain optimal water quality parameters for the health of the fish and

guests.

* Assist in determining research priorities and become involved as necessary in any research projects supported by the facility.

* Determine medication regimes and treatment methods as necessary.

* Establish industry standard record keeping.

* Plan/participate in research and conservation programs related to the goals of the facility.

* Prepare monthly reports for distribution to all relevant managers.

* Train and update husbandry staff in areas of basic medical care to ensure staff comprehension in cases of care for minor incidents.

* Provide assistance in instruction and supervision of veterinary students.

* Provide emergency care for the animals in the park.

Qualifications:

Veterinary licensure in North America or the United Kingdom. Preference will be given to candidates with experience in a zoo, aquarium or exotic animal medicine OR who have served an academic internship in large or small animal medicine.

Salary:

\$36,000 Cal/yr plus benefits. Intern must register as a graduate student with SMU and pay \$725 US in tuition per semester. Student housing available.

Application procedure:

A curriculum vitae and 3 letters of reference should be sent to Heather W. Barron, DVM, Dipl. ABVP-avian at hbarron@smu.ky by March 1, 2009. Applicants will be informed of decisions by March 4. Position starts May 4, 2009.

Aquatic - Exotic Animal Medicine Internship

The National Aquarium in Baltimore is offering a one year veterinary internship.

The collection is approximately 16,000 animals (700 species): invertebrates, fresh and salt water fishes, amphibians, reptiles, birds, and mammals, including bottlenose dolphins.

The intern is integral to all aspects of animal medicine and surgery including daily interaction with husbandry personnel, physical examination and sample collection, diagnosis, routine and emergency medi-

cal treatment, radiology, anesthesia, surgery, and clinical pathology. In addition, interns have primary responsibility for daily case management of Marine Animal Rescue Program stranded animals (generally 2-5 seals and 1-3 sea turtles annually). Exceptional communication skills are essential.

Qualifications:

Required - Veterinary Degree (DVM, VMD) from accredited university; Desired - 1-year clinical veterinary internship in small animal or large animal

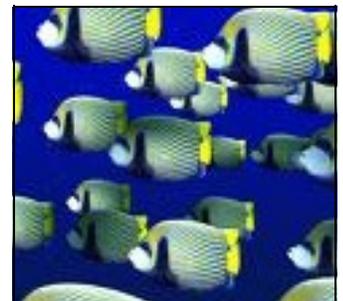
medicine, demonstrated proficiency in aquatic animal medicine, ability to obtain Maryland veterinary license.

Job Time Frame: June 22, 2009 to June 18, 2010

Application: Interested applicants should submit a letter of intent, curriculum vitae, school transcript, and three letters of reference to:

Dr. Leigh Clayton,
Director of Animal Health,
National Aquarium in Baltimore,

501 E. Pratt St.,
Baltimore, MD 21202;
phone (410) 576-3853;
email mmartin@aquaria.org.



Fish Veterinarian with quality control background

Muscat, Sultanate of Oman, Ministry of Fisheries Wealth

Salary: Commensurate with experience

Closing Date:
Sunday, February 15, 2009

Qualifications:
DVM/PhD degree from accredited veterinary college or university.

Description: The duties of the selected candidate will be to: 1) review and suggest modifications to international legislation regarding seafood production and quality control based on international standards (Codex Alimentarius, EU directives); 2) supervise routine laboratory analy-

ses, especially of farmed fish, for chemical residues (antibiotics, hormones); 3) coordinate and develop technical cooperation with other agencies regarding safety and hygiene of aquaculture with emphasis on implementation of the HACCP concept; 4) provide technical consultation with producers with respect to the judicious use of biologicals and, 5) develop an appropriate monitoring system to ensure seafood quality and safety.

Appointment will be on a rolling annual basis. Apart from tax-free salary, one round-trip airline ticket, to point of origin, will be provided for family members per year as well as full medical coverage while in

the Sultanate of Oman. The appointment will be based in the capital region which maintains excellent international schools and shopping malls as well as access to many unique recreational areas.

Contact: Nashwa Ali Mohammed Al-Mazrooei
Phone: +968 24738611
e-Mail: nashwa.almazrooei@gmail.com
Fax: +968 24738222

Qualified applicants should submit: 1) a letter of intent including statements of experience; 2) a comprehensive curriculum vitae and, 3) names and contact information of at least three academic references.



USDA/APHIS Aquaculture Import/Export Vacancy

USDA National Center for Import/Export USDA, APHIS, Veterinary Services

The deadline for applications is midnight EST Wednesday, February 25, 2009.

The APHIS Veterinary Services National Center for Import and Export is currently seeking to fill one Veterinary Medical Officer/Microbiologist position at the GS-13/14 level. The position will focus on developing policies and requirements for the import and export of aquaculture and exotic species. The position will be located in Riverdale, Maryland.

Applicants not currently in US Government service are encouraged to apply to Vacancy Announcement No. 28VS-2009-0019. The following link will take you directly to the announcements:

<http://jobsearch.usajobs.gov/getjob.asp?JobID=79095382>

For questions about this job, contact:
Human Resources
Phone: 301-734-8428
Fax: 301-734-4984
TDD: 301-734-4953
Email: Tracey.H.Brown@aphis.usda.gov



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A well
planted
display
aquarium
built into
a wall –

Photo by
Nick
Saint-Erne

World Aquatic Veterinary Medical Association

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2009 MEMBERSHIP APPLICATION

INITIAL APPLICATION or **RENEWAL** (check one)

For your convenience please complete and mail with the correct remittance (in US\$), or credit card information, to:

Dr. Dusan Palic
4211 Welbeck Dr.
Ames, IA 50010-4018 USA
Phone/Fax: (515) 294-2571
e-Mail: dulep@iastate.edu

Credit Card Payments		<input type="checkbox"/> Visa; or <input type="checkbox"/> Master Card
Name on Card	_____	
Card Number	_____	Expiry Date: _____(Mo); _____(Yr)
Card Security Code	_____	Signature _____
<small>For e-Copies Typing your name will indicate your signature</small>		

Please complete **all mandatory fields marked with an***. Please be as accurate and comprehensive as possible.

Contact Information

*Name (First, Middle, Last) _____ Date _____
Business/Organization (if applicable) _____ Position/Title _____
*Mailing Address _____
*City _____, *State/ Province/ Canton/ County (UK) _____
*Zip/Postal Code _____, *Country _____
*Primary Phone _____ Is this a business ? /home ? or /cell/mobile ?
Secondary Phone _____ Is this a business ? / home ? or /cell/mobile ?
*Primary e-Mail _____; Secondary e-Mail _____
(Secondary e-Mail addresses will be used if the primary address becomes non-functional)

Check one membership category ¹

Full Member (US\$100) **Student Member** (US\$50)
Primary Veterinary Degree (as awarded e.g. DVM; VMD; BVMS; DEDV; Dr. vet. med.; MVZ, etc) _____
Year _____; University _____; City _____; Country _____

Veterinary Technician/Nurse Member (US\$50)
Name of supervising veterinarian _____; Phone _____; e-mail _____

Affiliate Member (US\$100)
*Degree _____; *Year _____; *University _____; *City _____, *Country _____

Allied Veterinary Organization Member (US\$500)
*Total number of current members _____; *Number (or %) of members that are *veterinarians* _____;
*Estimated number (or %) of members involved with *aquatic veterinary medicine* (any species/disciplines) _____

Would you like any information to be excluded from your membership listing in an Annual Membership Directory? If so, please specify what information you want excluded _____

¹ Membership Categories & Privileges

Full Member—individual veterinarians that have graduated from veterinary Schools, Colleges or Universities recognized by any country as being a prerequisite for practicing veterinary medicine. Full Members are eligible to be nominated and serve as WAVMA Officers, and to serve on any WAVMA Committees.

Allied Veterinary Organization Member—legally formed organizations or entities (association/society) whose members are predominantly veterinarians. Allied Veterinary Organization Members are eligible to appoint a delegate and alternate delegate (must be WAVMA Full Members in good standing) to serve on the WAVMA Advisory Council.

Student Member—students enrolled fulltime in veterinary Schools, Colleges or Universities recognized by any country as being a prerequisite for practicing veterinary medicine. Student Members are entitled to all the right and privileges of Full Members, except to serve as an Officer of the Association, or to vote in any general election, referendum or ballot of the association's Full Members.

Veterinary Technician/Nurse Member—any non-veterinarian that is employed to assist in the legal practice of veterinary medicine, while under the direct supervision or direction of a veterinarian. Veterinary Technician/Nurse Members are entitled to all the rights and privileges of Student Members, except to serve in any voting capacity on any committees, councils, trusts, boards, liaisons or other entity that may be formed to do Association business.

Affiliate Member—any non-veterinarian that is a graduate of a nationally recognised university or institution of higher education, and who supports the Mission and Objectives of the Association. Affiliate Members are entitled to all the rights and privileges Student Members, except to serve in any voting capacity on any committees, councils, trusts, boards, liaisons or other entity that may be formed to do Association business.

World Aquatic Veterinary Medical Association

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One Voice – Cohesive & Inclusive!*



WHO ARE WE

The mission of the World Aquatic Veterinary Medical Association is to serve the discipline of aquatic veterinary medicine in enhancing aquatic animal health and welfare, public health, and seafood safety, in support of the veterinary profession, aquatic animal owners and industries, and other stakeholders.

The purpose of the World Aquatic Veterinary Medical Association is:

- To serve aquatic veterinary medicine practitioners of many disciplines and backgrounds by developing programs to support and sustain members, and the aquatic species industries that they serve.
- To identify, foster and strengthen professional interactions among aquatic medical practitioners and other organizations around the world.
- To be an advocate for, develop guidance on, and promote the advancement of the science, ethics and professional aspects of aquatic animal medicine within the veterinary profession and a wider audience.
- To optimally position and advance the discipline of aquatic veterinary medicine, and support the practice of aquatic veterinary medicine in all countries.

We're on the Web:

WWW.WAVMA.org

The ideas presented in this publication express the views and opinions of the authors, may not reflect the view of WAVMA, and should not be implied as WAVMA recommendations or endorsements unless explicitly stated. Information related to the practice of veterinary medicine should only be used within an established valid Veterinary-Patient-Client Relationship.