

Ornamental Fish Health Newsletter, Vol. 5:1

I hope all of you are enjoying a pleasant summer. After another very long hiatus, we are excited to share the latest issue of our newsletter with you.

The Ornamental Fish Health Program has recently experienced changes that will enable us to provide increased outreach and service to our friends in the ornamental fish world. Dennis Glaze our Aquatic Health and Husbandry Specialist has also assumed the position of Curator of Animal Husbandry for the Hatfield Marine Science Center Aquarium. Dennis' duties include managing our recently completed Aquatic Health and Husbandry Teaching Laboratory, coordinating and instructing many of our workshops and seminars, mentoring practicum students in our laboratory and assisting with ambulatory calls to ornamental fish facilities. Now as Curator, Dennis will also oversee all aspects of animal husbandry in our public aquarium and educational laboratories. Congratulations to Dennis!!

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1. Assessing web-based information

By Dr. Tim Miller-Morgan, DVM, Extension Veterinarian – Aquatic Pets, Oregon Sea Grant Extension

Increasingly ornamental fish keepers are turning to the worldwide web for information about fish husbandry, medical treatments, equipment selection, and life support system design recommendations. The quality of this information varies dramatically from peer reviewed, experimentally derived information to information supplied by companies attempting to sell products to unsupported opinions of individuals or groups. It can be very difficult for a hobbyists, retailer, wholesaler or importer to assess the quality of web-based information. How do we know what to believe? How do we know if the information is authoritative, reliable, or trustworthy? How do we determine if the information is based upon scientific research or upon years of professional experience? Many individuals maintain informational web sites or post on web boards. Some of these individuals have years of experience maintaining a particular fish species and often base their opinions on their own literature research and personal experience. These individuals can be a wealth of information about the culture of particular species but how do we differentiate this type of individual from someone who is posting unsupported personal opinions?

I will briefly outline some criteria you can use to assess the quality of web-site providing information about the care or biology of ornamental fish and invertebrates. I based these criteria, with little modification, upon the scheme proposed in the book *Web Wisdom: How to evaluate and create information quality on the web* by Janet E. Alexander and Marsha Ann Tate (Lawrence Erlbaum and Associates, New Jersey, 1999) and the accompanying web

site,

http://www3.widener.edu/Academics/Libraries/Wolfgram_Memorial_Library/Evaluate_Web_Pages/659/. I have also included a few comments based upon on my own personal experience.

There are 5 criteria you should consider when assessing web-based information:

1. Authority
2. Accuracy
3. Objectivity
4. Currency
5. Coverage

There are a series of question associated with each criterion and the greater the number of questions answered "yes" the more likely the source is of high information quality. Let's take each criterion in turn.

1. Authority – this allows the reader to asses the extent to which the information is provided by a person or organization that is recognized as having specialized knowledge in this subject area.

- Is it clear who is responsible for the contents of the page?
- Is there a link to a page describing the purpose of the sponsoring organization?
- Is there a way of verifying the legitimacy of the page's sponsor? Is there a phone number or postal address to contact for more information? (an email address is not enough)
- Is it clear who wrote the article and are the author's qualifications for writing on this topic clearly stated?
- Is the material protected by copyright and is the name of the copyright holder listed?

2. Accuracy - This is the extent to which the information is reliable and free from errors.

- Are the sources for any factual information clearly listed so they can be verified in another source?
- If information source is cited is there a bibliography in the document?
- If the information is based upon the author's personal experience is this clearly stated?
- If the work is original research by the author is this clearly indicated?
 - If this is original research does the author provide enough information to assess the quality of research?
- Is the information free of grammatical, spelling, and typographical errors?
 - These kinds of errors not only indicate a lack of quality control, but also can actually produce inaccuracies in information.
- Is it clear who has the ultimate responsibility for the accuracy of the content of the material?
- Is there an indication that the information has been reviewed for accuracy by a fact checker, an editor, or the peer-review process?
- If there are charts and/or graphs containing statistical data, are the charts and/or graphs clearly labeled and easy to read?
- If statistical information is presented is it clear when the data was collected?

3. Objectivity - This is the degree to which the information expresses facts or information without distortion by personal feelings or other biases.

- Is the information provided as a public service?
- Is the point of view of the author(s) clearly evident?
- Is the relationship clear between the author and the person, company, or organization responsible for the web site? This is particularly important with ornamental fish related sites since there are often multiple "hot links" between commercial, private and educational/governmental sites.
- Is the information free of advertising?
- If not, is it possible to determine the degree of influence the advertiser might have on the informational content?
- If there is any advertising on the page, is it clearly differentiated from the informational content?
- Are there links to non-profit or corporate sponsors so that the user can learn more about them?

4. Currency - The extent to which the material is up-to-date. Remember, scientific research and husbandry experience is always progressing and it is important to ensure that one is accessing the most up-to-date information.

- Are there dates on the page to indicate:
 - When the page was written?
 - When the page was first placed on the Web?
 - When the page was last revised?
 - Are the frequencies of the updates described?
- **Remember, there is a difference between when the page was created, when it was put on the web and when it was last revised.**
- Are there any other indications that the material is kept current such as the original sources of information cited (publication dates)?
- If material is presented in graphs and/or charts, is it clearly stated when the data was gathered?
- If the information is published in different editions, is it clearly labeled what edition the page is from?
- If taken from a print edition is title, author, publisher, date of print publication listed?

5. Coverage - This is the range of topics included in a work and the depth to which those topics are addressed.

- Is there an indication that the page has been completed, and is not still under construction?
- If there is a print equivalent to the Web page, is there a clear indication of whether the entire work is available on the Web or only parts of it?
- Is it clear if the web version contains additional information not present in the print version?
- If the material is from a work which is out of copyright has there been an effort to update the material to make it more current? Is there a way to determine which material has been updated?
Is it obvious who is the intended audience for which this web page was designed?
- Is the material for several different audiences; is the intended audience for each type of material clear?

- **Usability:** This is really a sub-criterion. The usefulness of the site for the reader's purposes.
 - Is the web site easy to navigate?
 - Is it easy to find the information you are looking for?
 - Is it easy to backtrack to the site homepage?
 - If it is not easy to use individuals will be less likely too use the page as a resource.

To see how to apply these criteria as you navigate a web site I strongly suggest that you work through the web-based tutorial at, http://muse.widener.edu/~tltr/How_to_Evaluate_9.htm The authors of the book I mentioned above developed this exercise. The exercise will allow you to assess two, non-ornamental fish, web sites using the criteria I have described. I think you will find it an enlightening and educational exercise.

The decision to use web-based information is always up to you. Further, the responsibility for accepting and using that information, especially as it relates to animal care, is also yours. So, be very careful what you accept as reliable information and always try to back that information up with several other, preferably non-web based, sources.

2. VHS: Aqua vets advise tougher biosecurity and prevention tactics for all

28 June, 2007

Source: Aquavetmed list-serv, AVMA Media - utilized by <http://tinyurl.com/2cmcbf>, <http://tinyurl.com/2mprbj> and others.

US - Veterinarians and biologists are alerting anglers, aquaculture operators, fish dealers and boaters to a deadly virus that has recently killed thousands of freshwater fish in and around the Great Lakes.

Known as viral hemorrhagic septicemia (VHS), the virus has been detected in eight Great Lakes states and two Canadian provinces, and affects 39 different species of fish. Several of the species affected are favorites of freshwater fishing and are important in the aquaculture industry, including largemouth and smallmouth bass, crappie, bluegill and perch. The virus poses no threat to humans or seafood, but it is easily spread among fish and could have a devastating impact on fish populations.

There is no known cure for the virus, which causes bleeding of the fish's tissues, including internal organs.

A federal order issued by the United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) in November 2006 prohibits the movement of affected species from state to state unless the fish are tested for and documented as being free of the virus.

"This federal order has put a stop on the movement of fish worth many millions of dollars," said Dr. David Scarfe, assistant director of the American Veterinary Medical Association's Scientific Activities Division.

"Aquatic veterinarians are rallying to help aquaculture producers in testing and issuing certificates of veterinary inspection to demonstrate that their fish are free of VHS."

In the meantime, anglers and boaters are urged to take the following steps to prevent the spread of the virus:

- Do not move live fish or fish eggs from one body of water to another.
- Drain all water from bilges, bait buckets, live wells and other containers while leaving the landing or the shore.
- Dispose of leftover bait in the garbage, not in lakes or ponds.
- Clean, wash and disinfect your boat, bilges and all equipment using a bleach solution at a suggested strength of 1 cup of bleach per 10 gallons of water.

3. THE CITES CONFERENCE IN THE HAGUE

Source: Ornamental Fish International

From 3-15 June 2007 the 14th CITES Conference of the Parties took place in The Hague, Netherlands. Over 170 countries are party in CITES and about 125 countries were represented at this CoP, together with numerous observers of international animal protection organizations, animal welfare organizations and nature conservation organization, and seven people representing the international pet trade: Svein Fossa (OFI), Marshall Meyers (PIJAC), Herbert Bollhöfer, Kurt Essmann, and undersigned (EPO), Jim Collins (Pet Care Trust), and Keith Davenport (OATA). Seven people on a total of well over 1000 participants.

Nevertheless we have been able to get results, after a good work in the period before the CoP and due to good cooperation during the CoP.

***Pterapogon kauderni* (Banggai Cardinalfish)**

This popular fish for the marine aquarium industry was proposed for listing in Appendix II of CITES. The species is exported from Indonesia in large numbers. Considering the way of life and the restricted area of distribution of this species, the request for measures did not come unexpectedly for the industry.

The result of CITES II listing, however, will be that the European Union will place the species on CITES B, possibly followed by an import ban. With the latter the fisherman would lose a sustainable source of income and the industry would lose a nice aquariumfish. For this reason the industry has promoted the development of a management plan for this fish by the Indonesian government, containing measures to ensure sustainable collection and better preparation for transport and packing. We have been able to demonstrate that the research which served as a basis for the American proposal, is not as sound as it initially seemed to be. In fact the validity became so questionable that the USA delegation, after the Indonesian delegation promised the establishment of a management plan, withdrew their proposal. OFI has been invited to support Indonesia in the working out of a management plan.

Livelihoods

In the last years the subject of livelihoods of the poor have increased in importance. It is not so difficult to decide about the discontinuation of collection from the wild, but how to deal with the poor communities, which depend on this collection for their income?

For this subject there are in general two main opinions: people who under all circumstances put animals on the first place, and people who also mind about the livelihoods of the poor.

We find both opinions under NGO's and under delegates. A proposal to work out the livelihood issue in more detail was approved.

Sharks and Sawfishes

The European Union proposed to list two shark species in Appendix II: the Spiny dogfish (*Squalus acanthias*) and the Portbeagle (*Lamna nasus*). Both species are not really important in the ornamental aquatic industry and both proposals have been rejected by the CoP.

A proposal to include all species of the family Pristidae (sawfishes) in Appendix I was supported with one annotation: the species *Pristes microdon* will remain on Appendix II with a very small quota for export of live animals for public aquariums with a conservation purpose.

Those of you who want to read a summary of all discussions and all decisions can go to <http://www.iisd.ca/download/pdf/enb2161e.pdf>.

4. Aquarium Science Program Spring Newsletter

Here is the link to the Spring Newsletter from the Aquarium Science Program at Oregon Coast Community College. This 2-year professional program trains husbandry professionals for the ornamental fish industry, public aquaria, aquatic animal research facilities, and fisheries resource facilities. Newsletter link:

<http://www.occc.cc.or.us/aquarium/newsletter/Spring%202007.pdf>

Here's the link to the main Aquarium Science Program web page:

<http://www.occc.cc.or.us/aquarium/index.html>

5. Koi Herpes Virus: OIE Listing Status Update

Source: Tropical Aquaculture Laboratory, University of Florida

The World Organization of Animal Health (OIE) voted at the 74th General Session in Paris (May 2006) to include koi herpes virus disease (KHVD) on the list of fish diseases notifiable to the OIE by member countries.

KHVD is well-known to occur in cultured koi populations in the U.S. and is currently considered an endemic disease. The United States Department of Agriculture Animal and Plant Health Inspection Service (USDA APHIS), as the competent authority reporting to the OIE, will continue to report to OIE on a semi-annual basis that KHVD is "known to occur" in the U.S. There are currently no plans by USDA APHIS to make KHVD a programmable disease or to implement KHV-specific health certification requirements for koi imports.

Private veterinary practitioners and diagnostic labs do not need to report cases to USDA APHIS. Mitigations will be at the discretion of the fish owner under the guidance of the attending veterinarian if applicable.

If you have any questions, please contact Dr. Kathleen Hartman at 813-671-5230 ext. 119 or via email at kathleen.h.hartman@aphis.usda.gov.

Related Web-Links:

- Report of the meeting of the OIE Aquatic Animal Health Standards Commission (March 13-17, 2006)
[http://www.oie.int/aac/eng/FDC%20reports/Mar%202006%20report%20\(English\).pdf](http://www.oie.int/aac/eng/FDC%20reports/Mar%202006%20report%20(English).pdf)
- List of OIE notifiable diseases:
http://www.oie.int/eng/maladies/en_classification.htm

6. New Global Aquatic Veterinary Association Formed

Source: AqVA

STAFFORD, UK; NEW YORK, USA; WELLINGTON, NZ—Emerging from the needs of a large number of veterinarians already involved in aquatic animal medicine a new veterinary organization has been formed, initially doing business under the name **Aquatic Veterinary Association**. The need for the organization is compounded by the demands from companion and food aquatic animal owner, industries such as aquaculture, and governments for veterinary assistance in aquatic animal health and welfare, public health and seafood safety.

“Formalizing organized aquatic veterinary medicine under an incorporated and registered non-profit professional association will also elevate aquatic veterinary medicine from a niche area of veterinary practice to a well recognized discipline within the profession” said Dr. Peter Merrill who is serving as the interim President. We hope this organization will cater to the needs of an estimated 5,000–10,000 aquatic veterinarians world-wide, and those who seek their expertise, he added.

After receiving input from aquatic veterinarians in the UK, France, Germany, USA, Canada, Australia, New Zealand and other countries a group of 6 interim-Directors stepped forward to consolidate the input into formalized preliminary bylaws and structure for the association. These and other official documents will be ratified by the founding members at the first Annual General Meeting in July 2007.

“We are endeavoring to cater to the professional needs of all veterinarians and veterinary surgeons throughout the world, who are involved with all disciplines of veterinary medicine and all aquatic species, suggested Dr. Chris Walster, who is serving as the interim Secretary.

With outbreaks of disease in the fastest growing global sector of animal production and animal ownership —aquatic animals— the demand for veterinarians involved with traditional farmed finfish, crustaceans and molluscs (e.g. farmed shrimp, oysters, and clams) has grown dramatically over the past decade. Three of the five recent animal disease National Emergency Declarations in the US have been for aquatic animal diseases – the other two for Newcastle’s disease and avian influenza in poultry. The problems in the UK, Europe and Canada are similar, added Walster. “A similar situation exists in Australia, New Zealand and Asia” suggested Dr. Colin Johnston, an interim AqVA Director who covers Australasia.

National and International responses from governments and industries have opened up huge demands for aquatic veterinarians. National plans and programs, such as the US and Canadian government’s National Aquatic Animal Health Plans and Programs, Australia’s

AQUAPLAN and AQUAVETPLAN, and European Union directives and regulations that are being developed and implemented, place a huge demand on an aquatic veterinary workforce. The World Animal Health Organization's (OIE) codified standards and their biosecurity initiatives for protecting aquatic animal industries require an organized aquatic veterinary approach.

"We are also seeing a similar demand for aquatic veterinarians in the private practice sector that deals with pet or ornamental aquatic animals owned by clients" said Dr. Julius Tepper, another of the organization's interim Directors who owns a private practice in New York. A similar situation is being felt in the aquarium industry, with marine mammals and in wild managed fisheries and hatcheries, suggested Dr. Tim Miller-Morgan, a Director who is organizing the first AGM.

"The solution to demand for aquatic veterinarians in all spheres of practice and with all aquatic animals is in organized veterinary medicine which requires the formation of an organization that represents aquatic veterinarians" said Merrill. And he added: "If we structure this organization correctly it will substantially contribute to all of veterinary medicine through strong liaisons with existing large and small veterinary organizations, as well as industries, governments and the public that have a need for our member's expertise."

The current Mission of the Association (formed in 2007 and doing initial business as the "Aquatic Veterinary Association") is to serve the discipline of aquatic veterinary medicine in enhancing and advancing the science and art of aquatic veterinary medicine, aquatic animal health and welfare, public health, and seafood safety in support of the veterinary profession, aquatic animal industries and other stakeholders. For more information on this new aquatic veterinary organization, to provide input into its development, or to become a founding member, contact any of the interim Directors or visit the organization's website at www.aquaticvet.org.

7. UPCOMING OPPORTUNITIES

Feel free to send Dr. Miller-Morgan any upcoming events related to fish health and husbandry that you would like us to post in the newsletter or on our website.

For Hobbyists:

- Northwest Koi and Goldfish Club Annual Show, Portland Oregon, July 27-29, 2007, http://www.nwkg.org/new_page_2.htm
- Greater Portland Aquarium Society – Annual Event Schedule, <http://www.gpas.org/MeetSchd.htm>

For Industry Professionals:

Fish Health Management Course, NC State College of Veterinary Medicine, Raleigh, NC: <http://www.cvm.ncsu.edu/conted/fish>

For Veterinarians and Aquatic Health Professionals:

Advanced Fish Medicine – Short Course, 11/11-17/2007, University of Florida, <http://conference.ifas.ufl.edu/ame/afm/>

DONATIONS

Anyone who is interested in making monetary donations to the program to help us offset the costs of maintaining this program may make checks out to Oregon State University and send them to me at the address below. You will receive a thank-you letter from Oregon State University that also documents your donation for tax purposes. All donations will be used solely for support of this program and are GREATLY appreciated.

If you are interested in making a donation of goods or services, please contact me at the phone numbers or email below, and I can tell you about our current needs.

Articles appearing in this newsletter may be reprinted in club newsletters, providing proper credit is given to the authors and the Ornamental Fish Health Newsletter and a copy of the newsletter is sent to us for our files.

We are always open to any comments or suggestions for future newsletter content. Don't hesitate to contact us at the numbers below.

But if you tame me we shall need each other.
To me, you shall be unique in all the world.
To you, I shall be unique in all the world.
You become responsible, forever, for what you have tamed

Antoine de Saint-Exupery (1900-1944)

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