The Aquatic Veterinarian

Journal of the World Aquatic Veterinary Medical Association



How many is too many? See page 24 for the answer.

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WHO ARE WE

MISSION

The Mission of the 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.

To fulfill this Mission, the World Aquatic Veterinary Medical Association has established the following:

Objectives

1. 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.
2. To identify, foster and strengthen professional interactions among aquatic medical practitioners and other organizations around the world.
3. 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.
4. To optimally position and advance the discipline of aquatic veterinary medicine, and support the practice of aquatic veterinary medicine in all countries.

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 Veterinarian-Patient-Client Relationship.

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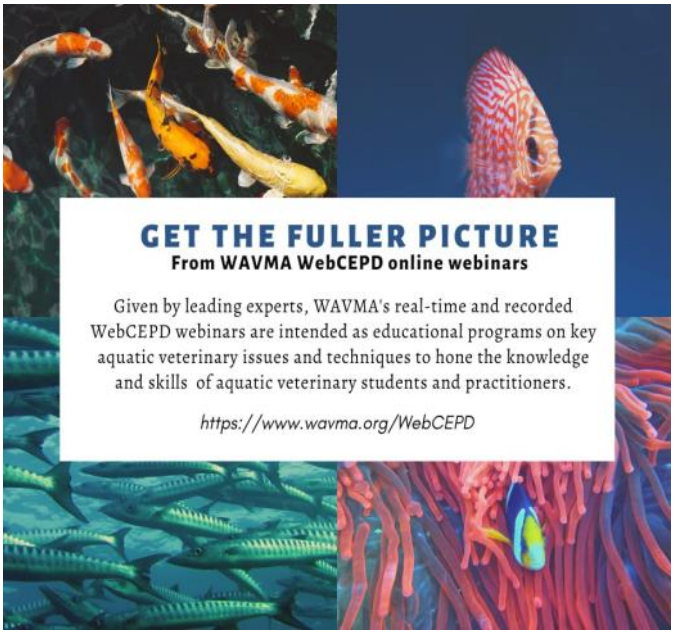
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Cover photo:
How many koi is too many?
See page 24 for the answer.

Photograph by Nick Saint-Erne.





Discover core knowledge, skills & experience needed to become a WAVMA Certified Aquatic Veterinarian *(CertAqV)*

Did you know that WAVMA's ***CertAqV Program*** offers members the opportunity to become recognized and certified as having competency in 9 core areas deemed necessary to practice aquatic veterinary medicine? Find out more information online at: http://www.wavma.org/CertAqV-Pgm.

EDITORIAL

Editor's Note

It has been another busy year for me, and I hope you also have been keeping busy. I did have time to travel again since the last issue, and just returned from three weeks visiting Ireland. You will find throughout this issue some of the fishy finds from the Emerald Isle, such as a mechanical fish that actually rides a bicycle (page 8) from the Guinness Brewery in Dublin.

Dr. Nelly Isyagi, who will be the WAVMA President in 2025, represented WAVMA at the Fish-Vet Dialog in June, and has her report on page 7 of this issue. New webinars are available on the WAVMA.org website, with the next one scheduled for July 25 (see pages 9 and 27 for more information). The Education and Students Committee has been very active and has awarded the Pitts Aquatic Education Awards to students for the year, listed on page 15.

Dr. Jessie Sanders and her Aquatic Veterinary Services were featured in *The New York Times* and you can read part of the article on pages 18-19. Further literature is provided by book reviews of two new fish health books: *Pathology and Epidemiology of Aquatic Animals Diseases for Practitioners* (page 21) and *The Aquarium Fish Medicine Handbook* (page 22). Finally, on page 24 there is a Listserv discussion about how many koi can a koi pond hold if the koi pond doesn't hold too many koi!

Hoping all have a great summer in the Northern Hemisphere and a mild winter in the Southern Hemisphere. The next issue will be out at the beginning of October, and I would appreciate WAVMA members submitting case reports and other items of interest to be published.

Nick Saint-Erne, DVM, CertAqV
Executive Editor
TAVeditor@wavma.org

Here I am at a Fishy find in Kinsale, Ireland.



Download a QR reader onto your Smart Phone and scan the Quick Response Code to the right. It will take you to the WAVMA.org website page for accessing all of the past WAVMA Newsletters.

You will need your WAVMA User ID and Password to access the most recent issues of *The Aquatic Veterinarian.*

The latest editions are available for download at https://www.wavma.org/TAV-Current-Issues.

Past years' editions are available for download at https://www.wavma.org/TAV-Archives.

The Aquatic Veterinarian

The Quarterly Magazine of the World Aquatic Veterinary Medical Association

Consider promoting your products, services or programs to aquatic veterinarians, veterinary students, nurses & paraveterinary professionals throughout the world

Advertising Rates (per issue)

	Commercial	Non-Profit
Full page (~7" x 9")	$100	$50
1/2 page (~7" x 4.5") **or 1 column** (3.5" x 9")	$60	$30
1/4 page (~3.5 x 4.5")	$30	$15

WAVMA Members can place a free 1/8 page (business card size) advertisement in the TAV. Contact TAVeditor@wavma.org for information on advertising and payment options.

EXECUTIVE REPORTS

President's Report

Dear Members of the WAVMA Community,

As I sit down to write this address, I find myself in the midst of an incredibly busy season filled with clinical cases. It is indeed a bustling time for all of us in the fish veterinary field. Despite the hectic schedule, I am reminded of the importance of our shared mission and the progress we continue to make together.

Over the past months, I have had the privilege of attending several conferences, some with our director for South America, Paola Barato. These events have not only provided valuable learning opportunities but also reinforced the strength and camaraderie within our community. It is inspiring to see so many dedicated professionals working towards common goals.

This busy season has not deterred us from our commitment to strengthening international relationships. WAVMA has been actively working on fostering collaborations across borders, enhancing our global reach and impact. These efforts are vital as we navigate the complexities of aquatic animal health in an interconnected world.

I am pleased to share updates about our regional directors. Our Director for the Middle East, Farah Gonul Aydin, has been representing WAVMA at the global AMR network, contributing significantly to the fight against antimicrobial resistance. Our Director for South America, Paola Barato, is in the midst of a series of WAVMA workshops across the region, helping to spread knowledge and best practices. Our Director for Europe, Simon Doherty, was awarded Veterinarian of the Year by the WVA and continues to strengthen the aquatic veterinary agenda on a global scale. Additionally, our Director for Asia, Win Surachetpong, is preparing for future events in the region and is actively making connections to further integrate WAVMA's presence and initiatives.

Our Education and Students Committee (ESC) has been particularly active, organizing a series of great webinars that have been both informative and engaging. The next webinar is Thursday, July 25, by Dr. Brian Jones. These webinars are a testament to our commitment to providing our members with continuous education and professional development.

Additionally, significant work has been underway concerning the Pitts Aquatic Veterinary Education Awards and Student Chapter mini-grants. We have made considerable progress on these and are excited to announce these initiatives soon. These awards and grants are designed to support and recognize the exceptional work being done within our field, and we look forward to celebrating these achievements with you.

In closing, I want to extend my heartfelt gratitude to each of you for your dedication and hard work. Together, we are making significant strides in advancing aquatic veterinary medicine. I am proud to be part of such a dynamic and passionate community.



Thank you for your continued support and commitment.
Warm regards,

Matthijs Metselaar DVM PhD Dipl ECAAH
CertAqV, MIFM, MRCVS
WAVMA President for 2024
www.aquaticvets.com
President@wavma.org



EXECUTIVE REPORTS

Secretary's Report

Dear WAVMA Members,

Time Flies!!! And we are already at the end of the second quarter of the year! As the year continues, we continue to see more members successfully completing the Aquatic Certification and Renewals, both for the Certificate of Aquatic Veterinarian (CertAqV) and for the Certificate of Aquatic Nurse/Technician (CertAqVNT), enlarging the pool of colleagues and mentors/adjudicators to strengthen the program. We continue receiving more applications, the process now is 100% online, which is allowing us to shorten the adjudication period. Applications are welcome via https://www.wavma.org/CertAqV-Pgm. In the same context, the Certification for Aquatic Nurses and Technicians (CertAqVNT) is receiving more and more applications as well, more information and applications in https://www.wavma.org/CertAqVNT-Pgm. We encourage the applicants to check the application online for comments on the details and submit additional information requested in the last stage of revision by our Executive Board.

WAVMA keeps moving…. Members of the EB, from the President to Regional Directors, are actively contributing to represent WAVMA on a series of Congresses, Exhibitions and Meetings occurring this year. Briefly, Dr Simon Doherty, WAVMA Director for Europe, attended the WVA Congress in Cape Town from April 16-19 wearing a "WAVMA hat"; in this instance he was awarded the 2024 WVA Global Veterinary Award for One Health and the WVA World Veterinarian of the Year!! WAVMA is so proud having Dr Doherty on board!! On another arena, Dr. Nelly Isyagi, WAVMA President Elect, has been present at the FAO 2nd Fish-Vet Dialogue: Vaccinate or not vaccine, held on June 20th. President Dr Matthijs Metselaar and Dr Win Surachetpong, Director for Asia, had a preliminary meeting with the Nepal Veterinary Council; something is being baked here, stay tuned!!!

As mentioned in a previous TAV issue, a new partnership between WAVMA and WVEPAH – World Veterinary Education in Production Animal, is moving forward to start the new Professional Certificate in Animal Health: Aquaculture Production. The course will start soon in October, so be ready to check WVEPAH webpage, early bird registration is starting July 1, 2024!!! **Attention!!** For WAVMA CertAqV members, a special fee has been agreed!

As mentioned last time, we are very excited as this year we are completing 5 years in a row delivering a continuous WebCEPD Program!! The WAVMA webinars have become a rockstar within WAVMA!! Now we have more than 100 excellent lectures dealing with different topics within aquatic veterinary medicine. We continue organizing interesting lectures with lead experts in their field. Keep tuned, every month, here for more information: https://www.wavma.org/WebCEPD.



Attention!! The last webinar lectures are available on our WAVMA website, please have a look at webinars on Amphibian diseases, Myxozoan Parasites, Safety on farmed fish products, and the Giant Freshwater Stingray. Coming soon, at the end of July, an interesting lecture on Providing fish health services!!!

The Education and Students Committee – Education Resources subcommittee has done an excellent job developing an objective process to select the winners for John L. Pitts Aquatic Veterinary Education Awards Program, thank you to Dr Rob Martinez and Dr Dave Scarfe on a great job done! The subcommittee already selected the winners for the program; this year we received lots of interesting applications!!! We are also looking for more donations from members to increase the coverage of new talents in the aquatic veterinary medicine student's community. Selected applicants are being individually contacted regarding this great news!! For more information, please visit https://www.wavma.org/scholarships.

We continue to work to keep the WAVMA website updated, thanks to our Administrator, Dr Chris Walster, with all the news and updates to WAVMA programs. We are also present in different social networks, so please have a look on our Facebook page, Instagram and in LinkedIn. These are great places to ask your aquatic questions, share stories or pictures and jobs, and talk to other colleagues involved in aquatic animal health. Don't hesitate to use our Members or Students-L listserv! I also encourage you to submit articles dealing with Clinical Cases, and Book Reviews to *The Aquatic Veterinarian* or short news stories for the WAVMA e-News!

WAVMA needs your contribution to keep going with our motto: *One Profession, One Discipline, One Voice – Cohesive and Inclusive!*

Claudia Venegas, MV, PhD, CertAqV, MVetClinTr
WAVMA Secretary
Puerto Varas, Chile
Secretary@wavma.org

EXECUTIVE REPORTS

Conference Report from Africa



Recently, I participated in the second Fish-Vet Dialogue: "To Vaccinate or Not Vaccinate" meeting organized by FAO from 18-20 June, 2024. During these meetings I delivered two presentations where I acknowledged WAVMA's contributions to Africa's planned continental aquatic animal health strategy and its perspectives on vaccination in aquaculture.

The presentations, discussions, and consequent participants' recommendations from the WAVMA/AU-IBAR at AFRAQ21, the Global Aquatic Health conference, as well as WAVMA members' participation in the online and in-person meetings regarding establishing regional aquatic animal health networks in Africa, contributed a lot towards the continental planned strategies.

I wish to thank WAVMA EB and all the members for their support in the above-mentioned activities during my tenure as Director-at-Large for the Africa region. The current Director for Africa, Kunda Ndashe, and other members within our region look forward to your continued support. Preparations for AFRAQ24 Aquatic Animal Health Session have commenced.
Thank you very much.

Nelly Isyagi
WAVMA President-Elect
AU Interafrican Bureau of Animal Resources (AU-IBAR)



Executive Board Responsibilities

The WAVMA Executive Board consists of the President, Immediate-Past President, President-Elect, Secretary, Treasurer and Directors. The Executive Board will provide oversight and approve all fiscal and administrative activities of WAVMA and its committees, programs and services in accord with the Bylaws, and facilitates the development and implementation of WAVMA programs.

The President will: Schedule, draft agendas and preside over the Executive Board meetings; Monitor and facilitate implementation of all active WAVMA and Committee programs, services and other initiatives; serve on the Budget Committee; Provide an update of WAVMA activities for the association's quarterly publication; Work with the Meetings Committee to finalize and implement the WAVMA Annual General Meeting; Preside over the WAVMA Annual General Meeting.

The President-Elect will: Assume the President's responsibilities in the absence of the President; Serve as a member of the Budget Committee; Identify at least one new WAVMA program or initiative to implement during his/her 3-year tenure; Assist in facilitating and implementing active WAVMA programs and initiatives during his/her 3- year tenure;

The Immediate Past-President will: Assume the President's responsibilities in the absence of the President and President-Elect; Assist the President-Elect and other Board members in developing or implementing new or existing WAVMA initiatives and programs.

The Secretary will: Serve as the primary WAVMA point of contact for the public; Inform members of WAVMA programs & initiatives; Assist the developments and distribution of WAVMA official correspondence; Serve as Chair of the Communications Committee;

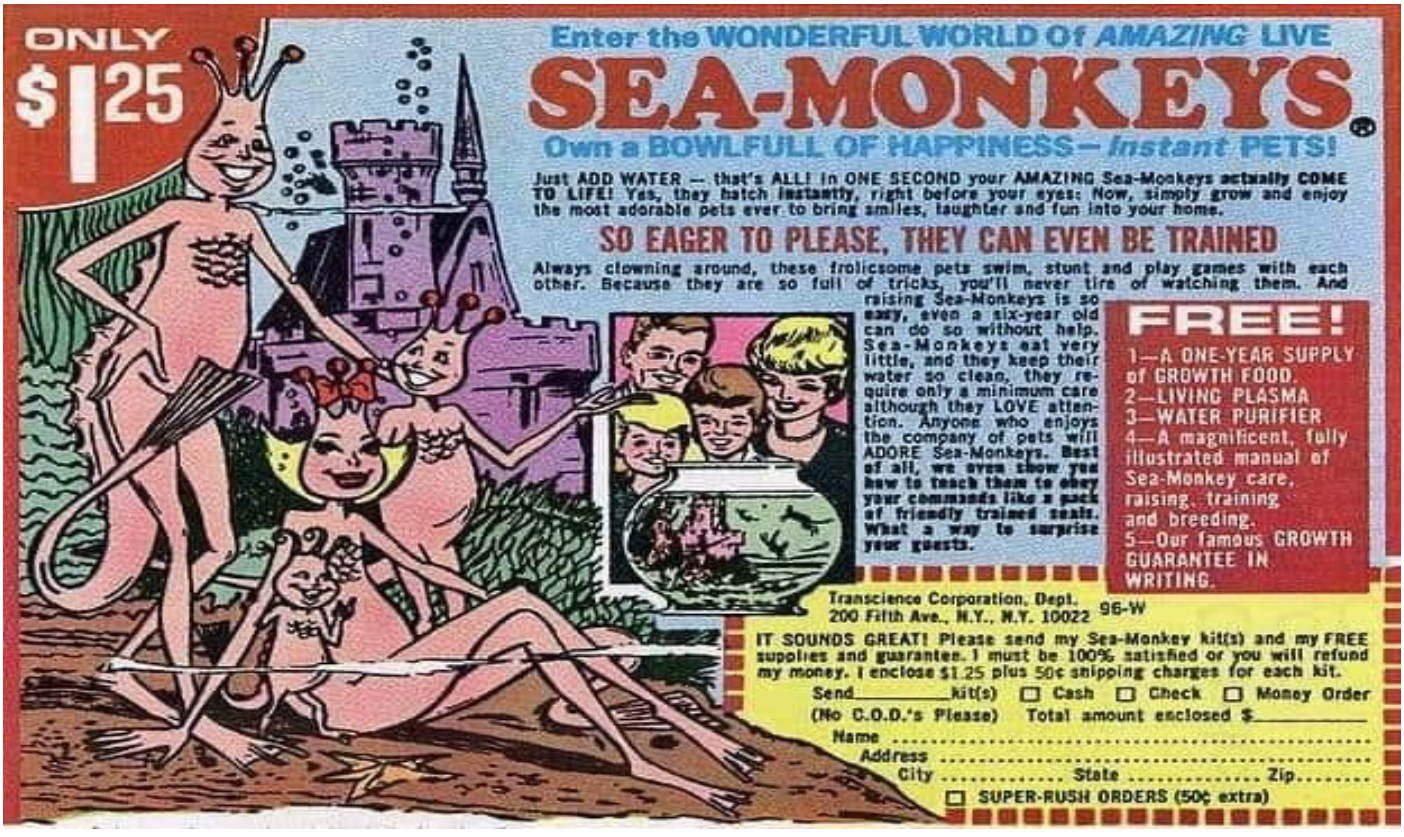
The Treasurer will: Maintain all WAVMA bank accounts and bookkeeping, receive all payments, and pay all approved expenses; Chair the Budget Committee and facilitate the development of an annual budget

Directors will: Represent individual WAVMA member's general interests in their geographical regions.



EXECUTIVE REPORTS





EXECUTIVE REPORTS

WebCEPD Program

Since 2013, WAVMA has produced over 172 Webinars that are available to watch on our website: https://www.wavma.org/WebCEPD, and conference recordings on the Video page: https://www.wavma.org/video-library. You may be able to use these for continuing education credit for veterinary licensing, and you will also sure learn a lot!

Lectures are given by leading experts, and WAVMA's WebCEPD webinars are intended as educational programs on a variety of aquatic health issues and veterinary techniques to hone the knowledge and skills of aquatic veterinarians and veterinary students. To earn Continuing Education and Professional Development (CEPD) credit, you will need to complete a short Knowledge and Skills Assessment (KSA) to ensure you have met the learning objectives. On successful completion, you will receive a CEPD Certificate, which may be useful for licensure/registration to practice veterinary medicine and to earn credit towards becoming a WAVMA Certified Aquatic Veterinarian.

New WebCEPD videos available:



B-1083: Giant Freshwater Stingray: Mystery of the river (WAVMA+TAVA)
Date: June 17, 2024
Presenter: Dr. Nantatrika Chansue
Credits: 1.0 hour
Synopsis:

The natural history and research of Giant Freshwater Stingray (*Urogymnus polylepsis / U. chaophraya*) in Thailand. Prof. Nantarika Chansue's experiences in health problems, diseases, and pathological findings in both captive and wild stingrays will be discussed. Stingray venom characteristic, and treatment in case of human injury will be suggested.

Coming Soon:



B-1084: Providing a fish health service to clients engaged in sea-cage culture
Date: July 25, 2024
Time: 02:00 PM UTC
Presenter:
Prof. Brian Jones
Credits: 1.0 hour

WAVMA's Member Programs and Services

Find a Fish Vet Directory - a directory for the public to find aquatic veterinarians

Member Directory - a members-only tool to locate other members and for vet students to locate mentors

The Aquatic Veterinarian - a quarterly publication with news, peer-reviewed contributions, clinical cases, jobs, meetings and more

Certified Aquatic Veterinarian (CertAqV) Program - a program identifying and certifying veterinarians with competency in core subject matter necessary for practicing aquatic veterinary medicine

WebCEPD Program - live and recorded webinars, courses, and presentations;; many are available for CEPD credit

John L. Pitts Aquatic Veterinary Education Awards Program - an international program that provides financial support for veterinary students and new graduates to increase their experience in aquatic veterinary medicine

Employment Opportunities - a list of available aquatic veterinary jobs, available to members only

Image Library - a collection of images useful for presentations, diagnostic interpretations, and more

Video Library - a collection of videos to help members and others understand aquatic veterinary techniques and issues

WAVMA Student Chapters - WAVMA chapters formed by veterinary students and faculty mentors at veterinary schools and colleges around the world

Members-L - (WAVMA_Members-L@.wavma.org). A members-only listserv for discussions on any topic of interest. To post to it, you must be a current member and ticked the appropriate box in your Member Profile Preferences tab.

Students-L - (WAVMA_Student-L@wavma.org). A discussion listserv for WAVMA student members. you must be a current member and ticked the approrpiate box in your Member Profile Preferences tab.

Leadership Roles - All members (including students) have the opportunity, and are encouraged, to serve on any WAVMA Committee. All full members may also be nominated for a position on the Executive Board. If you are interested in more information, please contact the WAVMA President.

COMMITTEE REPORTS

Credentialing Committee

The WAVMA Aquatic Veterinarian Certification Program identifies the core competency or subject matter areas needed to practice aquatic veterinary medicine, and recognizes those veterinarians who have acquired the necessary knowledge, skills and experience (KSE) from a variety of sources, in the following nine core subject matter areas:

- Aquatic Environment and Life Support Systems
- Taxonomy, Anatomy and Physiology
- Husbandry and Industries
- Pathobiology and Epidemiology of Aquatic Animal Diseases
- Diagnostics and Treatment of Aquatic Animal Diseases
- Clinical Veterinary Experience and Client Communications
- Public Health, Zoonosis and Seafood Safety
- Legislation, Regulations, and Policies
- Principles of Aquatic Animal Welfare

The Process

It is recommended that you initially speak with a mentor prior to applying, this is to ensure that you can complete the CertAqV process within the 12 months allowed. You can identify a mentor by going to the WAVMA Member Directory and click on the green CertAqV box at the bottom of the page. This will bring up a list of all potential mentors. Alternatively, you can email: administrators@wavma.org who will talk you through the process prior to you applying.

For CertAqV Program Description *Click here* to download, or go to WAVMA.org/CertAqV-Pgm.

Individuals who desire to participate in the WAVMA CertAqV Credentialing Program will first need to register and pay the US $250 administrative fee. When registering you will select a mentor to assist and guide you through the requirements. After you have registered, you will receive an e-mail acknowledgement and a new tab will appear in your WAVMA profile “Certification Program”. Here you can record your KSE’s by clicking on the green Add KSE button. When your mentor is satisfied you have sufficient KSE credits, he/she will then request the WAVMA Credentialing Committee to evaluate these. Once the Committee and the WAVMA Executive Board have evaluated these and are satisfied you meet all requirements, you will be notified and mailed a certificate suitable for framing and display.

If you have questions about the Certification process, please send me an email, or refer to the website: How to use the automated CertAqV, CertAqVNT system.

Dr. Matthijs Metselaar DVM PhD CertAqV MRCVS
Credentialing Committee Chair
CertAqV-Admin@wavma.org

Certified Aquatic Veterinarians

Samah Abdelrazek	United States
Ali Anwar Ahmad	Singapore
Jessica Allen	United States
Sara Alves	United States
Chelsea Anderson	United States
June Ang	Singapore
Farah Gonul Aydin	Turkey
Romualdo Balagapo	Philippines
Benjamin Balducchi	Canada
Sarah Balik	United States
Marcello Balzaretti	Italy
Madison Barnes	United States
Christa Barrett	United States
Heather Barron	United States
Julia Bauer	Germany
Trista Becker	United States
Jenice Bell	United States
Heather Bjornebo	United States
James Bogan	United States
Pierre-Marie Boitard	France
Rachel Brown	United Kingdom
Faith Burgos	United States
Shraddha Cantara	United States
Christian Capobianco	United States
Todd Cecil	United States
Ri Chang	United States
Bryony Chetwynd-Glover	United Kingdom
Prakan Chiarahkhongman	Thailand
Annie Clift	United States
Mike Corcoran	United States
Emily Cornwell	United States
David Craton	United States
Rebecca Crawford	United States
Hannah Dadah	United States
Manuel De la Riva Fraga	Spain
Zarah Deutsch	United States
Darren Docherty	United Kingdom
Simon Doherty	United Kingdom
Christina Dover	United States
Devon Dublin	Japan
Freeland Dunker	United States
Michael Dutton	United States
Ashley Emanuele	United States
Maribel Escobedo	Mexico
Antonella Fabrissin	Italy
Mohamed Faisal	United States
Erika First	United States
Julie Fithian	United States
Ari Fustukjian	United States
Danielle Godard	United States
Giana Gomes	Singapore
Emmanuel Gonzalez Rueda	Mexico
Bartolomeo Gorgoglione	United States
Krystan Grant	United States
Michelle Greenfield	United States
Miguel Grilo	Portugal
Stephanie Grimmett	United Kingdom
Katharina Hagen-Frei	Switzerland
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Kelsey Hoag	United States
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Marie Kubiak	United Kingdom
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Laura Martinelli	United States
Robert Martinez	United States
John Mastrobuono	United States
Colin McDermott	Hong Kong
Alicia McLaughlin	United States
Margaret McTighe	United States
Larissa Menke	United States
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Sonya Miles	United Kingdom
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Lily Parkinson	USA
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Jena Questen	USA
Eva Quijano Cardé	USA
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Zachary Ready	USA
Aimee Reed	USA

Stephen Reichley	USA
Nuno Ribeiro	Portugal
Julianne Richard	USA
Camille Richie	USA
Michelle Rivard	USA
Rifky Rizkiantino	Indonesia
Lucy Robson	United Kingdom
Patinan Rookkachard	United Arab Emirates
Justin Rosenberg	United States
Benjamin Rosenbloom	Saint Kitts and Nevis
Daniel Ruvolo	United States
Komsin Sahatrakul	United Arab Emirates
Nick Saint-Erne	USA
Sonja Saksida	Canada
Maria Eugenia Sancho Santos	United States
Sasha Saugh	South Africa
David Scarfe	USA
Neha Shah	India
Khalid Shahin	UK
Galit Sharon	Israel
John Shelley	USA
Chris Shirkey	USA
Constance Silbernagel	USA
Melissa Singletary	USA
Esteban Soto Martinez	USA
Brandon Spolander	South Africa
Heather Srch-Thaden	United States
Elizabeth St. Germaine	USA
Brittany Stevens	USA
Chairat Sumgorthong	Thailand
Win Surachetpong	Thailand
Spencer Ee Joon Tan	Australia
Tanatporn Tantiveerakul	Thailand
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COMMITTEE REPORTS

WAVMA Committees

As a member-driven organization, WAVMA relies on volunteers to help implement programs useful for all members. Any WAVMA member can volunteer on a Committee to help shape the direction of the Association, meet new colleagues, forge valuable and lasting relationships, and help address key issues affecting aquatic veterinary medicine today. To find out more about serving on a Committee, please contact the Committee Chair or the WAVMA Secretary.

Communications Committee
This Committee manages the communications among members and others involved with aquatic veterinary medicine. It oversees the e-News, Facebook, Twitter, LinkedIn and other social media accounts.
Chair: Claudia Venegas, Secretary@wavma.org

Credentialing Committee
This Committee oversees and administers the CertAqV Program for credentialing aquatic veterinary practitioners, and evaluates aquatic veterinary educational programs useful to members.
Chair: Matthijs Metselaar CertAqV-Admin@wavma.org

Education & Students Committee
This Committee facilitates networking between student members and helps development of educational programs and services. It is composed of three subcommittees: WebCEPD, Education Resources, and Student Support.
Chair: Bartolomeo Gorgoglione, BartGorg@msu.edu

Meetings Committee
This Committee oversees and coordinates logistics for WAVMA-organized or sponsored aquatic veterinary educational meetings, including the Annual General Meeting.
Chair: Julius Tepper, cypcarpio@aol.com

Membership Committee
This Committee oversees membership issues to optimally serve members and the organization. It oversees the listservs and membership lists.
Chair: Chris Walster, Administrators@WAVMA.org

Publications Committee
This committee oversees the publication of WAVMA's quarterly journal, *The Aquatic Veterinarian*, and other occasional publications.
Chair: Nick Saint-Erne, TAVeditor@WAVMA.org

A variety of items (mugs, t-shirts, hoodies, bags) are available for purchase at WAVMA's Store.

Items in the Zazzle store can be purchased in a variety of sizes, colors, and can even be customized to include your name, clinic name, or to include WAVMA Student Chapter information. For help with customization, please contact the WAVMA Administrator.

https://www.zazzle.com/store/wavma788

WAVMA Shop

A number of WAVMA branded items (including shirts, mugs, caps) are available at the WAVMA Store. Get yours today!



Go to: http://www.wavma.org/Shop



COMMITTEE REPORTS

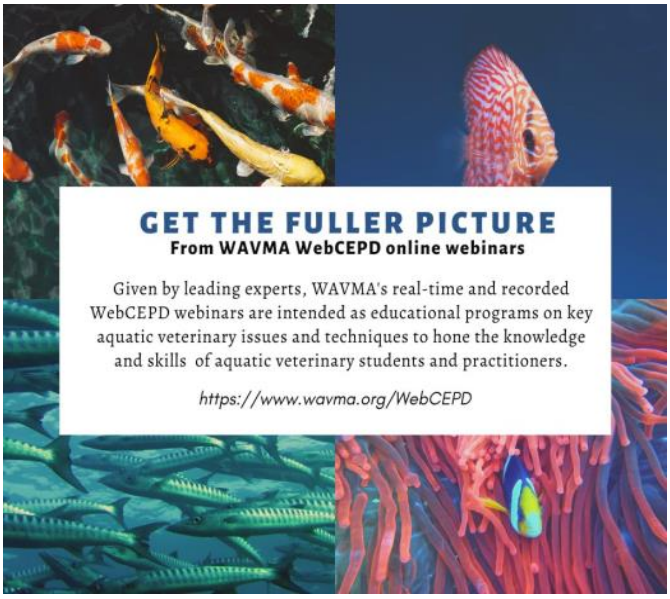
Meetings Committee

The meetings schedule for 2024 is rather limited, due to funding changes implemented by the WAVMA Executive Board and logistical considerations of the worldwide meetings. As of this date, we are helping support Dr. Rob Martinez, AAFV Pres.- Elect for 2024, in attending the AAFV Conference in Seattle, WA from October 17-21, 2024.

In an effort to better publicize the programs and benefits of WAVMA membership, the Executive Board has approved funds for travel expenses to be used by members who are willing to provide short presentations at meetings they are already planning to attend. There are still meetings worldwide that haven't had funding yet committed to them. If you are interested in participating in this program, please contact me as soon as possible at: dvm2468@gmail.com

Julius M. Tepper, DVM, CertAqV
Meetings Committee Chair
dvm2468@gmail.com

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Fellows Advisory Council

A WAVMA Fellow is someone who has conferred on them the honorific: *WAVMA Distinguished Fellow*. The Fellows Advisory Council is composed of WAVMA Distinguished Fellows who are current WAVMA members and who wish to contribute to the development of WAVMA. The Chair of the Fellows Committee will be the Fellows Representative to the Executive Board.

WAVMA Distinguished Fellows are:

Peter Merrill (2012)
Ronald Roberts (2012)
David Scarfe (2012)
Julius Tepper (2012)
Christopher Walster (2012)
Grace Karreman (2013)
Marian McLoughlin (2013)
Dusan Palic (2013)
Mohamed Faisal (2016)
Nicholas Saint-Erne (2017)
Richmond Loh (2018)
Laura Urdes (2019)
Devon Dublin (2020)
Gregory Lewbart (2021)
Matt Metselaar (2022)
Stephen Reichley (2023)

Laura Urdes, PhD DVM CertAqV
Fellows Advisory Council Chair



Use the QR code to link to WhatsApp to get the Zoom link.

COMMITTEE REPORTS

WAVMA Student Chapter Guidelines

To initiate a new Student Chapter, download the *WAVMA Student Chapter Guidelines*
A Spanish version of the Student Chapter Guidelines can be *downloaded from the WAVMA website.*

Examples of available Student Chapters programs:

- Assistance in organizing and promoting Chapter programs and activities.
- MiniGrants of up to $500 USD are available to assist official WAVMA Student Chapters with conducting activities intended to engage students in opportunities related to aquatic veterinary medicine. Download the Flyer here and the application form here.
- Access to recorded webinars and live web-based presentations from experts around the world.
- Low annual WAVMA Student Membership ($25)
- 50% Chapter member's dues may be available to support Chapter-organized activities. Get more information here and a Spanish version here.
- Reduced rate (50% off) WAVMA Full Membership the year after graduation.
- John L. Pitts Aquatic Veterinary Education Awards Program
- Access to the latest editions of WAVMA's quarterly journal, *The Aquatic Veterinarian*.
- Access to WAVMA member-only webpages.
- Aquatic veterinary externship and job listings.
- Participation in the WAVMA Certified Aquatic Veterinarian (CertAqV) Program.
- Access to WAVMA e-mail listservs, including Members-L, and Student-L.

A list of all current WAVMA Student Chapters is available on the website:
https://www.wavma.org/WAVMA-Student-Chapters

Consider joining the ***WAVMA Chapter Facebook Group*** to find out what's happening in other Chapters.



WAVMA Student Chapters

University of Pretoria, Onderstepoort Faculty of Veterinary Science, South Africa (established 2017)

Murdoch University, School of Veterinary & Life Sciences, Australia (established 2014)

University of Sydney, School of Veterinary Science, Australia (established 2014)

Auburn University, College of Veterinary Medicine, USA (established 2013)

Colorado State University, College of Veterinary Medicine & Biomedical Sciences, USA (est. 2019)

Cornell University, College of Veterinary Medicine, USA (established 2019)

Michigan State University, College of veterinary Medicine, USA (established 2021)

Mississippi State University, College of Veterinary Medicine, USA (established 2014)

The Ohio State University, College of Veterinary Medicine, USA (established 2018)

Oregon State University, College of Veterinary Medicine, USA (established 2017)

Ross University, School of Veterinary Medicine, St. Kitts & Nevis, West Indies (established 2015)

St. George's University, School of Veterinary Medicine, Granada, West Indies (established 2018)

University of California, Davis School of Veterinary Medicine, (Established 2020)

University of Florida, College of Veterinary Medicine USA (Established 2013)

University of Georgia, College of Veterinary Medicine, USA (established 2015)

University of Illinois, College of Veterinary Medicine, USA (established 2018)

University of Pennsylvania, School of Veterinary Medicine, USA (established 2020)

Western University of Health Sciences, College of Veterinary Medicine, USA (established 2014)

University of Edinburgh, Royal (Dick) School of Veterinary Studies, Scotland UK (established 2020)

University of London, Royal Veterinary College, England UK (established 2021)

Ankara University, Faculty of Veterinary Medicine, Turkey (established 2022)

Makerere University College of Veterinary Medicine Animal Resources and Biosecurity (established 2022)

St. Matthew's University School of Veterinary Medicine West Bay, Cayman Islands (established 2022)

University of Bristol, Bristol Veterinary School, England (established 2023)

University of Calgary, Canada (established 2023)

COMMITTEE REPORTS

Education and Students Committee

WebCEPD webinars recently completed:
B-1082: "Aquaculture management systems versus quality and safety of farmed fish products in the Blue Economy" by Dr. Rosemary Nalwanga (Uganda) on 25 April 2024. 90 registered, 32 attended.
B-1083: "Giant Freshwater Stingray: Mystery of the river" (joint WAVMA+TAVA WebCEPD) by Prof. Nantarika Chansue (Thailand) on 17 June 2024. 131 registered, 59 attended.

The next upcoming WebCEPD, by Prof. Brian Jones (Australia) on 26 July 2024 at 14:00 UTC. WebCEPD Subcommittee Leader: Claudia Venegas.

The Education Resources Subcommittee completed the screening and evaluation of the Pitts' Awards applicants, although the process has taken about two months due to the high number of applicants (total of 37). Robert Martinez worked with Dave Scarfe to redefine a ranking system.

All eligible applicants were contacted and requested to communicate their intended dates to complete their proposed project, and to agree to submit a final activity report for publication in TAV. Congratulations to the to the following top applicants:
-Katie Broikos (USA): $1,000 (to attend AQUAVET I)
-Kayla Bonadie (USA): $1,000 (to attend 2024 IAAAM Conference)
-Kristina Kaleel (USA): $1,000 (to attend 2024 IAAAM Conference and marine mammals Aquarium Externships)
-Sujan Adhikari (Nepal): $950 (Gastrointestinal Helminth Parasites in Gharial hatchlings)
-Susan Aryal (Nepal): $1,000 (Vibrio & Spiroplasma Pathogen Prevalence in Freshwater Prawns)
-Upendra Chauhan (Nepal): $900 (Argulus Prevalence in Grass Carp)
-Whitney Smith (USA): $1,000 (to attend AQUAVET I)
-Natasha Serrano (USA): $1,000 (to attend 2024 IAAAM Conference)

Spring 2024 WAVMA Student Chapter Mini-Grant applications have been received and the application evaluation is in process.

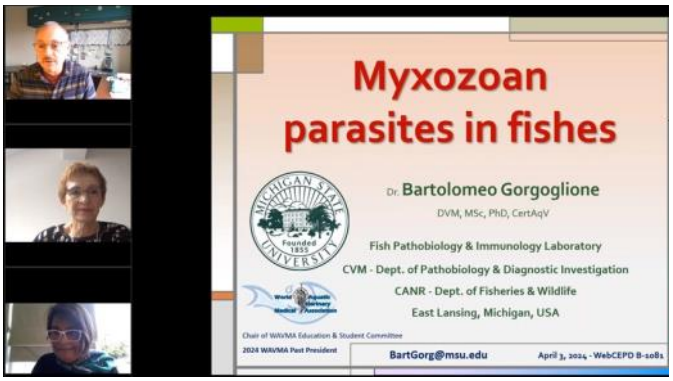
Student Support Subcommittee Leader, Maribel Escobedo Mondragón, is sending a survey to Student Chapters in July to better understand how they function, what programs or activities they have developed, and how ESC SSS might assist them in future programs or activities.

Bartolomeo Gorgoglione, DVM, MSc, PhD, CertAqV
Chair of WAVMA Education and Students Committee

Robert Martinez, DVM CertAqV
Education Resources Subcommittee Leader

Maribel Escobedo Mondragón,
Student Support Subcommittee Leader









Information plaque from the Galway City Museum, Ireland

IRELAND REPORTS



Above: Salmon Weir—Galway, Ireland. When the salmon are swimming up the River Corrib to spawn, the fishermen will get on the platforms to catch them.

Below: Black Bar Silver Dollar (Myleus schomburgkii) and Victoria water lilies from the Botanic Gardens in Belfast, Ireland.

Photographs by Nick Saint-Erne.





COLLEAGUE'S CONNECTION

Meet Dr. Jessie Sanders
Aquatic Veterinary Services
Soquel, California, USA
hospital@cafishvet.com

For an Aquatic Veterinarian, It's Never 'Just a Fish'
Dr. Sanders spoke with *The New York Times* about her life as a fish veterinarian.
Article by Emily Anthes
Edited excerpt below


It's Never 'Just a Fish'

Dr. Jessie Sanders will drive miles to care for the least respected creatures of the pet population.

By EMILY ANTHES and NIC FITURY

Dr. Jessie Sanders attended Tufts University for her DVM degree and holds a B.S. in Marine Biology from the University of Rhode Island. She is a Certified Aquatic Veterinarian through the World Aquatic Veterinary Medical Association. She is one of the first veterinarians Board Certified in fish practice through the American Board of Veterinary Practitioners. In college, Jessie had started volunteering at an aquarium, hoping to work with the whales. Instead, she found herself assigned to the fish team, and falling hard for her finned charges.

"I just love fish," she said. "I love the way they're built. I love the way they interact with the environment. And there's still so much that we just don't know about all their little internal workings."

Today, Dr. Sanders runs Aquatic Veterinary Services (cafishvet.com), a mobile veterinary practice taking care of pet fish in California and Nevada, with patients that include carnival goldfish, pet store bettas and prizewinning koi worth tens of thousands of dollars. Last year, she became one of the first 10 veterinarians to receive a board certification in fish practice, a wholly new accreditation.

"I've done nothing but work with pet fish for 10 years, and it's been awesome and challenging. I like the challenge of setting everything in an underwater environment. And the amount of personalities that you get in fish — they have so many little quirks. Some of them are super chill and nice, and some of them are complete terrors."

Dr. Sanders has a mobile practice that serves the greater San Francisco Bay Area. She may drive from three to eight hours in a day to get to a client.

"When I get there, it's the same as you taking your cat or your dog to the vet. We'll have a discussion: What's been going on? Have they been eating? Is there anything in particular that you want me to take a really close look at?"

The most common "disease" that we see in fish is actually poor water chemistry. Like the air that we breathe, the water that a fish swims in is critical to their overall health. If you're breathing in nothing but pollution, you're going to be prone to more illnesses. So, we check the water chemistry; if it's terrible, the fish are already stressed out. I don't want to put my hands on them because that could make things worse.

Then you have to catch the fish. I have a bunch of different nets. The cute little square aquarium nets for tank fish — I usually use one on each side of the fish and kind of squish 'em together. In bigger ponds, I use seine nets. They have floats on the top and weights on the bottom. I have ponds that are so big that I have to use two nets and get in there with my waders. It's one of those things you've got to practice. No one's good when they start out, but I'm really good at it now.

COLLEAGUE'S CONNECTION

After I catch them, they'll be transferred to the examination tub. I usually have a tub of their tank or their pond water that is ready with some sedatives. For most of my physical exams, I prefer that the fish be lightly anesthetized. It's less stress for them; trying to restrain a wet, slippery torpedo is not really going to be in either of our best interests. We just need them to be handleable. So, they might be wiggling a fin at me, but once they're anesthetized, I can get a really good look all around their body.

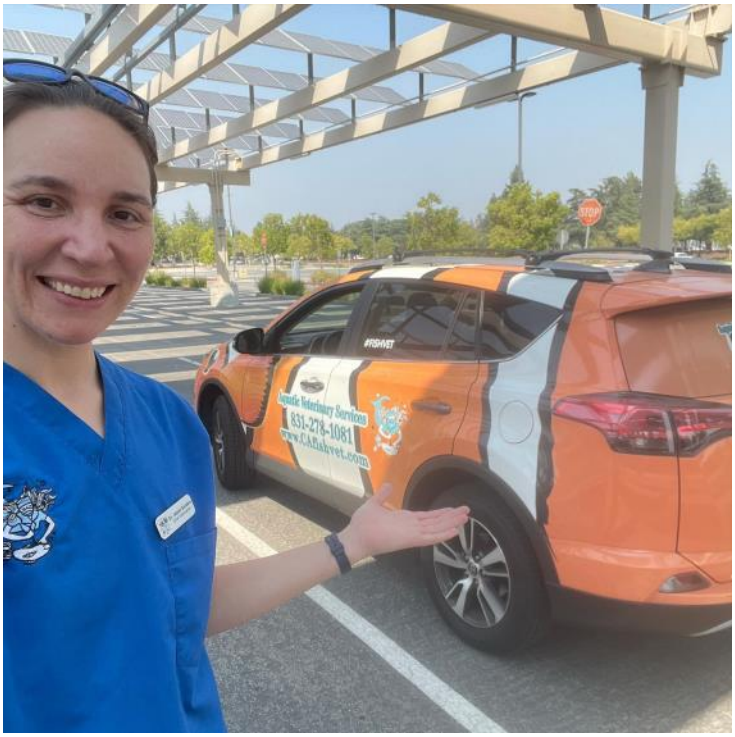
Usually, we're going to do skin mucus and gill biopsies. The skin mucus biopsy is mostly just looking for parasites, which can irritate fish and make them lethargic. The gill biopsies are more important because that can show us what their respiratory system is doing. It provides us with a great diagnostic tool without having to stick a tube down their throat.

If we need to do any more diagnostics, ultrasound or radiographs, we can do that while the fish is asleep. One client has a pond of goldfish, and there's one goldfish that just hasn't been able to get up and swim with everybody; she's kind of stuck on the bottom. We're going to take X-rays of that fish.

A buoyancy disorder is when a fish that should be able to swim in the middle of the water column is either sinking to the bottom or floating to the surface. It's very important for fish with buoyancy disorders that we can evaluate their internal anatomy — specifically their swim bladder, a little air sac that helps them float. It can be diet related, too. This is very common in goldfish ponds, where you have fish that float after eating. If there's a lot of competition and limited food during feeding time, it's madness. They're all just eating, eating, eating; they suck down a little bit too much air.

That can be corrected by spreading out the feeding a little bit more or feeding a sinking diet. A lot of fish diets float because it gives owners the opportunity to evaluate them at the surface, and obviously it's a lot more interactive. Koi and goldfish are naturally bottom-feeding fish. But we have taught them — because they're like golden retrievers, they'll do anything for food — to come to the surface during feeding time.

For fish surgeries, there are many different procedures. I do a lot of enucleations, which is eyeball removals. In fish, these are so easy; they don't have eyelids or need to have any sort of globe in there to look normal. I did one for a little goldfish that actually had an abscess in her eye. The fish was just utterly miserable. We were able to get that out, and the next day the owner is, like, "She's a completely different fish. She's eating, she's zipping around." They heal up just beautifully every single time.



Dr. Sanders and her Fish Mobile

We see ovarian cancer very commonly in koi. If we catch it early enough, we can do surgery to remove it. We use a higher dose of the sedative. We have a specialized trough that the fish lays in with its back down. They are over a reservoir that has the water containing anesthetic. There is an aquarium pump that pumps the anesthesia water through a tube up into the fish's mouth, it goes over their gills, runs down the side of their body and then back to the reservoir.

The biggest challenge is the public not even knowing that fish veterinarians exist. Even within our own veterinary profession, we're ridiculed. Fish aren't respected as pets in general.

Like, "Why are you wasting your time? It's just a fish." For a lot of people, it's not just a fish. It's an actual living and breathing animal that needs to have care and respect. A lot of fish are taken into homes as practice pets and get the really short end of the stick.

A version of this article appears in print on June 30, 2024, Section F, Page 7 of the New York edition with the headline: It's Never 'Just a Fish'.

Read the complete article:
For An Aquatic Veterinarian, It's Never 'Just A Fish' - The New York Times (nytimes.com)

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Esox Biologics *Detect* Diagnostics





Are you faced with the common dilemma where histology indicates pathology, but the causative agent cannot be identified? Do your current diagnostic tools provide targeted detection with little insight?

By omitting total microbiomes, the true cause of disease is ignored. The consequences of these failings lead to misdiagnosis and ineffective treatments.

Our Detect platform is the world's most powerful pathogen detection tool available to aquatic veterinarians. Utilising metagenomics, we can identify every organism within a single sample, without amplification and without bias. Add Detect to your diagnostic toolbox and gain insights into:

Novel pathogens
Secondary infection
Cross-clade interactions

But that's not all – we can also distinguish between benign and pathogenic strains, identify antimicrobial resistance markers, and uncover novel pathogens, allowing you to make informed treatment decisions.

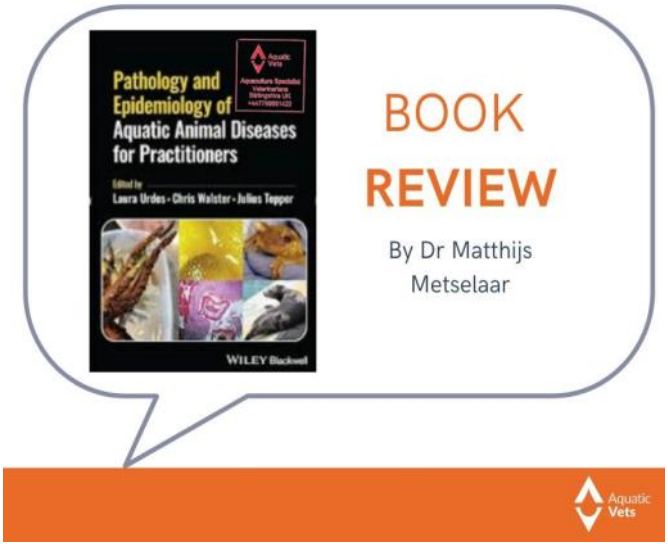
Our platform has two applications: Detect for livestock and Detect for the environment. Choose Detect Livestock for a single use application designed to help identify causative agents of presenting pathologies, or choose Detect Environment for a longitudinal surveillance package that monitors pathogen abundance within the environment, providing unique proactive insights before disease manifests.

With prices starting at just £125, Detect offers unparalleled value, delivering comprehensive pathogen insights that are easy to interpret and accessible from your mobile device. Contact us today and elevate your diagnostic accuracy.

Detect. Predict. Prevent.



Book Review: *Pathology and Epidemiology of Aquatic Animal Diseases for Practitioners* (2023)
By Laura Urdes, Chris Walster and Julius Tepper



In the vast landscape of literature on aquatic animal health, there exists a plethora of books, varying in depth and breadth of coverage. However, it is in the latter part of the title where the true value of this book emerges. The authors have adeptly maintained a practical approach, eschewing convoluted theories in favor of providing veterinarians with actionable information and tools to confront diseases head-on.

Each chapter meticulously dissects the causes, symptoms, diagnosis, and management of specific diseases, addressing the fundamental questions: what is it, what does it look like, what additional considerations should be made, and of course, how can it be cured? This pragmatic approach is not surprising considering the distinguished list of authors and editors, comprised of renowned aquatic veterinarians, many of whom I have had the privilege of collaborating closely with. It is this practicality that truly sets the book apart and has earned it a prized place in my ever-expanding personal library.

A standout feature of the book is its robust emphasis on epidemiology, a reflection of the authors' extensive expertise in the field. By elucidating the dynamics of disease transmission between animals and their environment, veterinarians are empowered to proactively manage outbreaks and maintain the health of aquatic populations. It is noteworthy, however, that these chapters are often not positioned at the outset, despite their significance.

To my knowledge, this book stands as the only comprehensive resource that encompasses all taxa of aquatic animals within a single volume. Consequently, certain subjects had to be prioritized, with a focus on addressing the most common problems and pertinent questions. While specialists may find some sections lighter in detail, as a fish specialist myself, I still found them to contain essential insights. Conversely, as someone less versed in the realm of aquatic mammals, I found the content to be highly informative. This versatility is a key strength of the book, making it a valuable resource for both specialists and generalists alike, particularly when conducting rounds in zoos or other exotic establishments.

The book's accessibility is commendable, catering to both seasoned veterinarians and those new to the field. With its clear language and abundance of visual aids, it serves as an invaluable resource for practitioners at all stages of their careers. In summary, "Pathology and Epidemiology of Aquatic Animal Diseases" is an indispensable companion for veterinarians working with aquatic animals, offering practical guidance that can contribute to the well-being of these populations. Whether embarking on your veterinary journey or seeking to deepen your expertise, this book is sure to be a valuable asset in your professional endeavors.

Review by **Matthijs Metselaar**

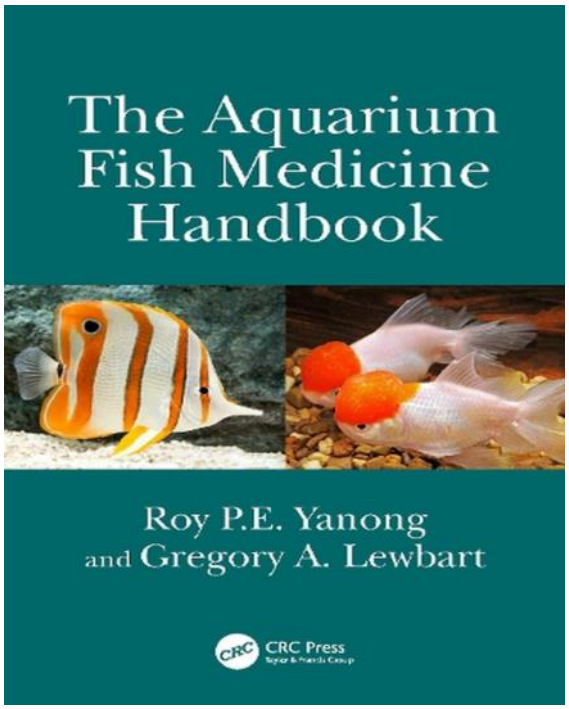
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LITERATURE REVIEW

Book Review:
The Aquarium Fish Medicine Handbook
By Roy P.E. Yanong and Gregory A. Lewbart.
CRC Press, Boca Raton, FL. 2024.



It is always exciting when a new fish book is published, especially when written by two of academia's top Professors and Aquatic Veterinarians: Dr. Roy Yanong from the Tropical Aquaculture Lab at the University of Florida, and Dr. Greg Lewbart from North Carolina State University College of Veterinary Medicine. Both of these veterinarians started their careers in the ornamental fish industry, so they have practical knowledge of aquarium fish health, as well as performing research on fish reproduction and diseases at their respective Universities.

This book will be invaluable to veterinarians who have a clinical practice where clients bring in pet fish, or who perform house calls for aquariums and koi ponds, as well as for those veterinarians working with ornamental fish farms, wholesale facilities, retailer fish stores, or research. It is intended to be a quick reference guide to fish husbandry and medical topics.

The first chapter (35 pages) covers commonly kept aquarium fish families and species. This gives the reader an overview of the most popular fish of over 4000 species kept in aquariums. Included are freshwater and marine tropical fishes, as well as cool water fish such as goldfish and koi.

Chapter 2 covers aquarium systems and water quality (40 pages), including information on the nitrogen cycle, filtration systems, water circulation, mechanical and biological filtration, biofilms, and water quality parameters.

The third chapter (8 pages) is on nutrition and diet, and includes the macronutrients carbohydrates, fat and protein, and the micronutrients of vitamins and minerals. Food types and feeding quantity are discussed, with the general feeding guideline of feeding fish once daily the amount they can eat in 3-5 minutes, or 1-3% of their body weight. Juvenile fish require multiple feedings and have a higher daily percentage body weight feeding requirement.

Chapter 4 (10 pages) is on general reproduction methods of common aquarium fish, including cichlids, livebearers, gouramis, bettas, rainbowfishes, goldfish, koi, and marine species. Egg binding treatments are discussed in the final section of this chapter.

Chapter 5 (7 pages) explains clinical case work ups for site visits to the patient, taking the history, physical examination of the fish, restraint, diagnostics and emergency therapy, including tube feeding.

Chapter 6 (21 pages) discusses antemortem diagnostic methods, including wet mount biopsies, bacterial cultures, blood collection and hematology. Included is a chart of hematology reference ranges for several freshwater and marine fish species.

The short (4 pages) Chapter 7 is on imaging and briefly discusses radiology, ultrasonography and computed tomography.

Chapter 8 is on postmortem evaluation (22 pages), including necessary necropsy and microbiology supplies, performing wet mount and microbiological evaluations, fish anatomy and necropsy techniques. The eleven microphotographs of fish tissues examined under a microscope are very helpful in identifying normal tissue structures.

Euthanasia, anesthesia, and sedation drugs and dosages are listed in Chapter 9 (4 pages). A chart of the stages of anesthesia in fishes is included in this chapter.

Surgery techniques are explained in Chapter 10 (6 pages), including how to make a fish anesthesia delivery system, anesthesia induction, maintenance, monitoring, surgical supplies, and surgical tips.

Chapter 11, infectious diseases (63 pages) may be the most important chapter in this reference, and covers the major parasites, bacteria, viruses, and fungal diseases. The microphotographs are immensely helpful to aid in diagnosing parasites seen on wet mount examinations of fish biopsies. Zoonotic diseases are also listed.

Chapter 12, common medical conditions (8 pages) lists non-infectious diseases such as fatty liver disease, neoplasia, buoyancy problems, lateral line erosion, ocular and nutritional diseases, and behavioral considerations.

Chapter 13 is about health certificates (2 pages), and Chapter 14 is the formulary (30 pages), including drug administration methods, and references to drug dosage sources.

Chapter 15 is a helpful list of equipment and supplies used for fish medicine (5 pages), while Chapter 16 (4 pages) provides sources for those needed supplies, and other resources.

The final sections are references and suggestions for further reeding (4 pages) followed by the index (11 pages). Overall, this is a highly recommended book.

Review by **Nick Saint-Erne,** DVM, CertAqV

LITERATURE REVIEW

Below are books written by veterinarians that cover diseases of fishes from the editor's collection of over 1000 books on tropical fish. The books are placed in chronological order by publication date. See additional book reviews in previous issues of *The Aquatic Veterinarian*.



GRAND ROUNDS CASE

Questions & Answers from the WAVMA Listserv
(WAVMA_Members-L@wavma.org)

Koi Pond Congestion Prevention

Hi everyone,

I'm wondering if anyone has guidelines or suggestions regarding how to work out what is an appropriate stocking density for ornamental koi? The fish we have are living in an outdoor lake within a zoo, and over the years, have bred to the point where we suspect the stocking density is quite high (presenting challenges to water quality management and oxygen saturation).

We are actively managing the water quality and oxygen parameters, but I'm hoping to make an assessment of "how many koi is too many koi for our lake?" from a welfare perspective, so that we can better manage the health of our population.
Kind regards,

Dr. Chris Cheng
BVSc, MMarAntSc, MVSc (Microbiology), MANZCVS (Medicine of Zoo Animals)
Veterinarian—Melbourne Zoo and Healesville Sanctuary (Zoos Victoria)
Melbourne, Victoria, Australia
Loctahedron@gmail.com, CCheng@zoo.org.au

My advice to "casual" koi keepers is not to surpass 2 gms/L body weight to water volume ratio. This translates to no more than 3 adult koi per 1000 gallons (3785 L). With enhanced technology and high tech filter systems, this stocking density can be increased.

I have maintained koi for extended periods of time at up to 9 gms/L in good health, but excellent biological bacterial control and nitrate mitigation methods are needed with higher stocking density.

The biggest problem is "overzealous purchasing" by the owner. There always seems to be a color combo they don't have yet. As far as breeding, very few koi eggs and fry survive due to the adult koi eating them in the pond. Those that do don't usually add up to a significant change in the stocking density

Julius M. Tepper, DVM, CertAqV
WAVMA Distinguished Fellow

And just out of curiosity, and also because I have a client in a similar situation, how do you deal with the excess of fish? What are the current trends to keep koi fish populations under control?
Thanks,

Neus Morera, DVM AcreAVEPA(Exóticos)
Freelance veterinarian
Barcelona, Spain

Hi all,

We actually see this problem in quite a few koi ponds, especially if there are plants / shallow areas, where the fry can hide. Most importantly: no feeding for 1 week once the koi start to spawn. As Julius Tepper says: koi will eat most of their eggs, especially if they are hungry.

Some fish keepers with larger ponds put predatory fish in with the koi, e.g., European perch. Pumpkinseed sunfish (*Lepomis gibbosus)* do a great job (however they are illegal to be sold in Switzerland and as far as I know in many European countries.) Advantage: they will not attack larger Koi but only feed on the fry.

Regarding stocking density: rule of thumb: one adult koi (50 cm+) per 1000 L of water. For specimens 70 cm+ rather calculate 2000 L per koi. Obviously it all depends on the filtration system / water parameters.
Best regards,

Ralph Knüsel, Dr. med. vet.
fishdoc GmbH
Schaubhus 1
CH-6026 Rain
Switzerland
web: www.fishdoc.ch
email: info@fishdoc.ch

Hi Chris,

Stocking density is a very stretchable parameter. Water quality will be your main driver for what is going to be your limit. I would also use that as a welfare indicator. Ammonia and nitrite being the most direct parameters to have at non detectable with normal test methods. Nitrate should also not build up as this will have long term effects such as stunted growth. Space itself is, in my opinion, much less of an issue as you can go up to 100-120 kg no problem in intensive systems. Your water parameters will be way off before you reach that.
Kind regards,

Dr. **Matthijs Metselaar**, DVM PhD CertAqV MRCVS
AQUATIC VETERINARY SURGEON
EMAIL: Matt@fishdoctor.eu

Discover core knowledge, skills & experience needed to become a WAVMA Certified Aquatic Veterinarian *(CertAqV)*

Did you know that WAVMA's ***CertAqV Program*** offers members the opportunity to become recognized and certified as having competency in 9 core areas deemed necessary to practice aquatic veterinary medicine? Find out more information online at: http://www.wavma.org/CertAqV-Pgm.

AQUATIC VETERINARY CE & PD

MEETINGS OF INTEREST TO AQUATIC VETERINARIANS

Veterinarians attending these meetings may be awarded veterinary CEPD credit towards annual re-licensure or re-registration to practice veterinary medicine. Individuals should check with the organizers to see if CEPD certificates are provided.

WAVMA Resources for CertAqV and CertAqVN/T
www.wavma.org/WebCEPD
Resource: one hour Webinars on various topics
Cost: Available for free to WAVMA Members.
KSE Credit: Stated for each webinar. To gain the CEPD certificate you need to complete a short quiz.
Evidence: Submission of Certificate with KSE record.

www.wavma.org/video-library
Resource: Video recordings deemed of good quality but not part of WebCEPD
Cost: Free to WAVMA members
KSE Credit: Variable,
Comments: One of WAVMA's primary aims is to promote aquatic veterinary medicine. There are other resources WAVMA provides such as The Aquatic veterinarian, member listservs, e-news and blog.

Aquadocs
www.aquadocspodcast.com
Resource: Various discussion topics
Cost: Free
KSE Credit: Dependent on time and topic
Evidence: None. Discuss with mentor
Comments: Lots of information on various topics.



Aquaculture Conferences & Exhibitions in 2024

AQUA 2024, the combined European and World Aquaculture Societies' events, will take place from **August 26-30 in Copenhagen**. It will comprise a scientific conference, trade exhibition, industry forums, workshops, student events and receptions. The theme of AQUA 2024 is BLUE FOOD, GREEN SOLUTIONS. More information at www.WAS.org and www.aquaeas.org websites.

LATIN AMERICA & CARIBBEAN AQUACULTURE
Medellin, Colombia – Sept. 24-27, 2024.
Colombia has a wide hydroclimatic diversity and geographical, which has favored the development of the aquaculture, thus counting on production of species both warm waters and cold waters mainly In freshwater, mariculture is still an area for develop and strengthen. The largest species production are both red and Nilotic Tilapia, Cachama, rainbow trout and native species. Aquaculture in Colombia has been growing at a rate of close to 10% per year, this is how it has reached production of about 204,000 tons in the year 2022. The conference will be held in three languages for spoken and written materials. The conference will include all major aquatic species cultured in Colombia and the other LACC countries with a special focus on tilapia, trout, shrimp and marine species. More information on www.was.org.

AQUACULTURE AFRICA 2024 – **AFRAQ24**
Hammamet, Tunisia – November 19-22, 2024.
Tunisia is the second biggest aquaculture producer country in North Africa region, after Egypt, and is looking forward to expanding the sector owing to the competitive advantages on its blue economy domain.
Africa to European aquaculture actors.
Submit your abstract and block you booth at the AFRAQ24 Exhibition.
Email: mario@marevent.com
Web: www.marevent.com

WESTERN FISH DISEASE WORKSHOP 2024
RIVERSIDE HOTEL, BOISE, IDAHO
JULY 30TH – AUGUST 1ST
Hosted by the Idaho Department of Fish and Game
https://units.fisheries.org/fhs/wfdw/

American Association of Fish Veterinarians
12th Annual Conference
Seattle, Washington
OCTOBER 17-21, 2024
https://fishvets.org/aafv-conference/

XI International Symposium on Fish Parasites
Fish Health, Parasites and Biodiversity Conservation
Mérida, Mexico – 20 January to January 24, 2025





Developments in Novel Aquafeed Ingredients

Webinar: On July 16-19 from 1pm-2pm EST, we will be holding our first Developments in Novel Aquafeed Ingredients Webinar Week!

It is a great opportunity to hear from and connect with industry experts during their 20-minute presentations, followed by a 10-minute Q&A at the end of each presentation. Register for free for the whole week and get automated email reminders ahead of each webinar.

Miss a webinar? No problem - so long as you register here, you'll receive a link to the recording to watch at your convenience. Register now and enjoy Developments in Novel Aquafeed Ingredients Webinar Week 2024!
https://us02web.zoom.us/webinar/register/WN_99Dl7hYURwWZSpphZlYpuQ#/registration





AQUATIC VETERINARY CE & PD



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