

## E-Aquarium Conference 2020



With the cancellation of most aquatic conferences globally, The Aquarium Vet and Dr Tim Miller-Morgan (Sea Grant Oregon Aquatic Animal Health) produced an E-conference for the aquarium community. The **E-Aquarium Conference** was held online over 4 days in May 2020, with almost 4 hours of live content per day. The course consisted of detailed lectures with Q & A. It was so successful that it will become an annual event.

Whether you are a breeder, importer or exporter, wholesaler or retailer, fish hobbyist or someone who just enjoys having fish at home, this is THE conference for you.

The E-Aquarium Conference recordings (except for one talk on Day 3) are available to listen to for the small price of AUD \$62.50 (approximately USD \$40.00) and access is for 2 months. If you wish to purchase a ticket for The Aquarium Vet E-Aquarium Conference 2020, please go to our store.

The table over the page details the complete E-Aquarium Conference Agenda and the Speaker Biographies are below that:

<b>Day One</b>	<b>Welcome. Sustainability in the Aquarium Industry. Water Quality 101 and How to maintain it</b>
<b>Day Two</b>	<b>Anatomy and Physiology</b>
<b>Day Three</b>	<b>Nutrition and Reproduction</b>
<b>Day Four</b>	<b>Biosecurity, Diseases and their Control</b>



## Day 1

	Time	Topic	Speaker
	0.00	Welcome and Introduction	Dr Rob Jones
Welcome. Sustainability. Fish Welfare.	0.05	Overview of Ornamental Industry	Shane Willis (President OFI)
	0.35	Project Piaba and Sustainability	Dr Tim Miller-Morgan
	1.05	Fish Welfare	Dr Rob Jones
	1.25	Conservation of Corals at The Florida Aquarium	Rachel Serafin (The Florida Aquarium)
	1.45	Q & A	Panel
	2.00	<b>BREAK</b>	
Water Quality 101 and How to Maintain It	2.15	Nitrogen Cycle	Dr Luke Ross
	2.45	Foam Fractionators and UV	Dr Rob Jones
	3.15	pH, Hardness and Alkalinity	Dr Brett De Poister
	3.45	Q & A	Panel

## Day 2

	Time	Topic	Speaker
Anatomy and Physiology	0.00	Welcome and Introduction	Dr Rob Jones
	0.05	The Ins and Outs of Fish Anatomy	Dr Tim Miller-Morgan
	0.55	Osmoregulation or Why fish do not get wrinkly skin ?	Dr Luke Ross
	1.25	Microscopes Don't Bite	Dr Brett De Poister
	1.45	Q & A	Panel
	2.00	<b>BREAK</b>	
Anatomy and Physiology (cont).	2.15	Gills the Powerhouse of Fish	Dr Rob Jones
	3.05	Wet Preparations 101	Dr Luke Ross
	3.35	Q & A	Panel



## Day 3

	Time	Topic	Speaker
Nutrition	0.00	Welcome and Introduction	Dr Rob Jones
	0.05	You are What you Eat (Principles of Aquarium Fish Nutrition) <b>Recording not available</b>	George Blasiola
	0.55	Live Food Production (Artemia / Algae)	Dr Andy Rhyne
	1.45	Q & A	Panel
	2.00	<b>BREAK</b>	
Reproduction	2.15	Reproductive Anatomy / Physiology	Dr Rob Jones
	2.45	Fish Breeding and Larval Rearing	Dr Andy Rhyne
	3.35	Cyanide Testing Update in Marine Fish	Dr Andy Rhyne
	3.45	Q & A	Panel

## Day 4

	Time	Topic	Speaker
	0.00	Welcome and Introduction	Dr Rob Jones
Biosecurity, Diseases and Management	0.05	Biosecurity - Protecting your Fish from a Dangerous World	Dr Tim Miller-Morgan
	0.55	Common Parasites of Tropical Fish	Dr Nick Saint-Erne
	1.45	Q & A	Panel
	2.00	<b>BREAK</b>	
Biosecurity, Diseases and Management (cont)	2.15	Fish Health Management and Biosecurity in a Wholesaler / Importer Setting	Dr Nick Saint-Erne
	3.00	Fish Health Management and Biosecurity in a Retail Setting	Patrick Donston
	3.45	Q & A	Panel



## **SPEAKERS BIOGRAPHIES**



**Shane Willis MSc. (Aquaculture)**

Managing Director – National Aquaculture Training Institute Pty Ltd

President – Ornamental Fish International

Visiting Professor - Shanghai Ocean University

Since graduating from the University of Tasmania with a Master Degree in Aquaculture, Shane has worked for nearly 30 years in the aquaculture industry. While he has worked with a number of food fish species, his main experience lies in the ornamental fish industry including: farming, importing/exporting, wholesaling and retailing sectors. His work history also includes teaching at the Australian Maritime College and University of Tasmania, and he has worked on a range of consultancy projects for various industry, NGO and government groups within Australia, the Caribbean and SE Asia. Shane has experience working at Senior Management level in several companies within the ornamental fish industry.

While Shane's experience covers most aspects of the industry, he has developed particular interest in biosecurity and intensive aquaculture production technology and has presented at national and international conferences in the areas of intensive production, quarantine and Biosecurity for aquaculture and ornamental fish.

Shane is currently Managing Director of National Aquaculture Training Institute Pty Ltd (NATI) which provides vocational training and consulting options for the aquaculture and the ornamental fish industry within Australia and internationally. He was also elected in May 2016 to President of Ornamental Fish



International in – the peak international association that represents the industry around the world and hopes to continue working towards a sustainable and vibrant ornamental fish industry.

His also employed as a Visiting Professor at Shanghai Ocean University where he provides teaching on ornamental fish production.



**Dr Rob Jones, B.V.Sc (Hons), M.A.C.V.Sc (Aquatic Animal Health), M. Aquaculture (Deakin)**

After more than 20 years as a veterinarian and looking for a career change, I undertook a Masters in Aquaculture commencing in 1999. Later that year I commenced at the Melbourne Aquarium. The Aquarium Vet team (3 full-time and 2 part-time veterinarians) now consult to all the Australian and New Zealand's public aquaria, as well as seven aquaria in Asia. Most weeks one of us is going somewhere. We also consult to the largest importer of ornamental fish in Australia (Aquarium Industries), several breeders and hobbyists, as well as several large zebrafish houses. I was a major contributor to the elasmobranch artificial reproduction research that commenced at Melbourne Aquarium in 2004.

During these years, I realized that there was no shortcut to gaining knowledge in the aquarium field and so I developed the world's first online course for people working in the aquarium industry - the E-quarist course™. Initially released in May 2010 it is now an internationally recognized course. The Association of Zoos and Aquariums (AZA) has recognized the course and we are an AZA Learning Partner.





**Dr Timothy J. Miller-Morgan, DVM, CertAqV**

Dr. Miller-Morgan is an aquatic veterinarian, biologist and educator. He directs the Oregon Sea Grant - Aquatic Animal Health Program at Oregon State University. He has over 30 years of experience in aquatic animal medicine, husbandry and education. The last 20 years have been primarily focused on fish and aquatic invertebrates. He currently provides outreach, education and clinical consulting to the aquarium fish industry and public aquariums. He has consulted and taught extensively on fish and invertebrate health issues, primarily related to aquarium fish, throughout the North and South America, Asia, the Middle East and Europe. Some of his current work focuses on the development of industry best health practices including: prevention of bacterial disease and antibiotic resistance, mitigation of post shipment morbidity and mortality among wild-caught marine and freshwater ornamental fish, and the development of standardized health management protocols and training throughout the aquarium fish chain of custody.

Dr. Miller-Morgan is also an assistant professor of aquatic animal health at the Oregon State University, Carlson College of Veterinary Medicine (CCVM). He is the co-creator of the Aquarium Science Program at Oregon Coast Community College in Newport where he is currently an instructor of aquatic animal health management. This successful and unique program trains husbandry professionals for work in public aquaria, research laboratories, aquaculture facilities and the aquarium fish industry.

Dr. Miller-Morgan is a Certified Aquatic Veterinarian with the World Aquatic Veterinary Medical Association and a Professional Fellow of the Association of Zoos and Aquariums. He also serves on the Executive Board of Ornamental Fish International and is an advisor to the IUCN – Freshwater Fish Specialist Group, Home Aquarium Fish Sub-Group.





**Rachel Serafin**

Rachel Serafin is currently the Senior Coral Biologist at The Florida Aquarium's Center for Conservation in Apollo Beach, Florida. Originally from Tampa, she went to Marist College and returned to work at The Florida Aquarium at the downtown Tampa campus. While there, she was able to work with various aquatic and avian species, specializing in syngnathids, elasmobranchs, and pacific corals.

In 2017 an opportunity to work with corals at the newly formed Center for Conservation arose. Working with endangered and threatened species of Caribbean corals has had its own challenges but the success with breeding, rearing, and out-planting has been overwhelmingly rewarding. Her most memorial moments as a biologist include producing her first larvae from pillar coral (successfully reared and currently thriving) and diving with Pang Quong videoing pregnant male weedy dragons in southern Australia.





**Dr Brett De Poister, BSc., BVMS**

I am originally from Reading, Pennsylvania in the USA, but now call Australia home. Like many of us that care for animals, my fascination with animals started as a young child. I was particularly drawn towards ectotherms and looked after a large breeding collection of fish, amphibians, and reptiles.

By the age of 15 my passion for herpetology took me to Australia, where I studied with frog expert Michael J. Tyler at the University of Adelaide (eighteen years later, he is the namesake of my son, Tyler). Under the supervision of Michael, I developed a research project that showed various pollutants interfered with normal frog development. My research received local, national, and international coverage and helped spread the message that frogs are bio-indicators, which means that whatever was causing abnormalities in frogs was also hurting our environment.

My studies with animals continued at Stony Brook University in New York, where I developed a special interest in zebra fish research and investigated nerve regeneration. This research resulted in a co-authorship in *Science*.

In addition to my studies and research, my interest in science education lead to my involvement with a start-up company that created customized educational software for university level science courses. After several years in the education industry, I missed being involved with animal work, so a career change was in order.

In 2007 I received the Dr. Jerry Thornton Academic Scholarship and moved to Grand Cayman, Cayman Islands to attend St. Matthew's School of Veterinary Medicine. After a year of study and lots of SCUBA



diving the opportunity to move to Australia arose and in 2008 I returned to Australia to study veterinary medicine at Murdoch University in Western Australia.

During my final year of veterinary school, I undertook a placement with The Aquarium Vet which transitioned to joining the TAV team as a consulting veterinarian following graduation. In 2012 I moved to Victoria and practised at Dandenong Veterinary Hospital as a companion animal doctor and surgeon and part time work with The Aquarium Vet under the guidance of Dr. Rob Jones. In 2015 I started fulltime with The Aquarium Vet. Most of my time is looking after the animals at Sea Life Melbourne Aquarium including all of the fish sharks, amphibians, reptiles and penguins. However, I keep busy with overseas animal movements, sea turtle rehabilitation, zebra fish facilities, and the E-quarist course...just to name a few projects!



**Dr Luke Ross B.S(Hons), B.V.Sc.**

Last year I celebrated my 20th year of working in the public aquarium industry. With a background that started as an aquarium hobbyist as a child, it grew. I completed a Bachelor of Science majoring in Marine Biology and then completed an Honours year studying Abalone aquaculture. I then worked in several aquaculture farms before accepting a role as an aquarist at the then new Melbourne Aquarium which was just a construction site at this stage.

After some 6 years with the last few as a Senior Aquarist I started a new endeavour of studying a Bachelor of Veterinary Science. Whilst completing this degree I worked part time as a Senior Aquarist at UnderWater World (now SEA LIFE Sunshine coast). As a veterinarian for over 10 years now, I have worked with all species of animals including wildlife, zoo animals, fish and aquatic animals.



I now am very happy to be part of The Aquarium Vet team and work full time as an aquarium and zoo vet. I am the local vet for SEA LIFE Sunshine Coast and the Regional Vet for seven public aquariums within SEA LIFE Asia.



**George Blasiola B.S., M.A.**

George Blasiola is a specialist in fish biology. He was formerly associated with the Steinhart Aquarium, California Academy of Sciences, San Francisco as an aquatic biologist. He was associated with Kordon, Hayward, CA as manager of the AquaVet Division; the past Director of Research and Development for the Wardley Corporation, Secaucus, N.J.; Executive Operations Manager for O.S.I., Hayward, CA. , and VP of AquaDine Inc. He is currently the owner/consultant of Aqua-Sphere Research.

A prolific writer, he has published more than 100 articles on fish health, pond management, parasitology, fish biology and related topics in scientific journals and popular magazines in the USA and Europe. His research has focused on the identification and control of diseases of pond and marine fish, and on the role of nutrition in preventing the development of such diseases.

Blasiola was a frequent lecturer at the University of Georgia's Fish Health Workshop since 1982 and lecturer at the North Carolina State University's Annual Fish Management Course. He has lectured worldwide at various professional meetings including the American Fisheries Society; the International Association of Aquatic Animal Medicine; the University of California, Davis; Hayward State University;



CA; Musee Oceanographique, Monaco; the Australian Rainbow Fish Association, Sidney; Texas A&M University (AquaMed) ; Oregon State University, and the D.C. Association of Veterinary Medicine.

He has been a contributing editor to *Freshwater and Marine Aquarium Magazine*, contributor to *Pet Age Magazine*, and a review board member for the *Journal of Aquariculture and Aquatic Sciences*. He is the author of Barron's *New Marine Aquarium Handbook*; and *Koi: A Complete Pet Owner's Manual*. He was also a co-contributor to the book, *Aquariology: The Science of Fish Health Management*.



**Dr Andy Rhyne B.S., M.S., PhD**

Dr. Andrew L. Rhyne has invested his career in understanding marine ornamental aquaria: the biology of aquarium fishes, as well as the industry driven by human fascination for these creatures. He has worked to advance the field of marine ornamental aquaculture, developing methods for breeding and rearing popular species in aquaria. Andy's body of work illuminates life histories, husbandry and larval rearing requirements of aquarium fishes. He has pioneered methods for culturing calanoid copepods and this has greatly increased the success of hobbyists and researchers with small tropical marine fish larvae. He has reared dozens of marine fishes, many for the first time. Notably, his lab reared the first triggerfish (the Queen Triggerfish) as part of a joint program with the New England Aquarium as part of a program aimed at expanding the number of captive bred species on display in public aquaria. Through this innovative program, Dr. Rhyne and colleagues developed a larval rearing system specifically designed public aquariums, supplying systems and training to over 20 institutions. These systems have produced 1000's



of fishes for display, reared onsite at public aquariums. Andy proactively teaches others the skills that he has developed to support the development of marine ornamental aquaculture.

He is currently an Associate Professor of Marine Biology at Roger Williams University in Bristol, RI where he has helped to develop an undergraduate major/minor in aquaculture and aquarium science. At Roger Williams University, he manages an active undergraduate research laboratory focused on the aquarium trade and aquaculture, oversees the husbandry and life-support systems at the Environmental Education Center of the Audubon Society of Rhode Island, a small public aquarium, and also maintains a partnership with the New England Aquarium to develop rearing methods for aquarium species. Dr. Rhyne has published over 50 peer-reviewed articles and book chapters and is the recipient of numerous awards. Most recently he won a Grand Prize in the Wildlife Crime Technology Challenge.

Dr. Rhyne received his B.S. from the University of North Carolina Wilmington, and his M.S. and Ph.D. from the Florida Institute of Technology in Melbourne, FL, working with his mentor the late Dr. Junda Lin. He and his wife Libby along with their twins Darwin and Amelia live in Rhode Island.



**Dr Nick Saint-Erne, DVM, CertAqV**

Dr. Nick Saint-Erne is passionate about pets, exotic animals, and aquatic veterinary medicine. He has over 35 years of experience in treating dogs, cats, rabbits, rodents, ferrets, birds, reptiles, amphibians, fish, and other exotic animals.

Dr. Nick attended the AQUAVET Program at the Marine Biological Laboratory in Woods Hole, MA in 1982. In 1984 he received his Doctor of Veterinary Medicine degree from Kansas State University.

Dr. Nick has worked in veterinary hospitals treating a variety of animals, including zoo animals and exotic



pets. He was one of the first group of veterinarians certified as an Aquatic Veterinarian by the World Aquatic Veterinary Medical Association, and in 2017 was designated as a Distinguished Fellow of WAVMA.

In addition to Dr. Nick's veterinary work, he has been involved in the pet industry as a technical writer for the training materials and customer pet care handouts for a major pet store chain. He has worked with the Pet Industry Joint Advisory Council (PIJAC) and the Centers for Disease Control and Prevention (CDC) in drafting programs to improve the care of pets in pet stores and to reduce the risk of spreading zoonotic diseases that people could catch from their pets.

Dr. Nick lectures worldwide on animal care topics for veterinarians, the aquaculture industry, and pet owners. He also teaches classes on Exotic Pet and Aquatic Animal Medicine to veterinary students at Midwestern University College of Veterinary Medicine.



**Patrick Donston, B.S.(Zoology)**

With 30 years' experience as a retailer and AZA accredited public aquarium work, Patrick holds degrees in Zoology (Ohio State U). Noted for numerous articles on aquarium keeping and business best practices, he is a frequent speaker at industry events and aquarium societies around the US.

He operates Absolutely Fish Inc; a MAC certified facility, retailer of the year PPN, retailer excellence award Global Pet Expo, and currently awarded one of "Americas Coolest Pet Stores" by Pets +. You can find his blogs on Pet Product News--Fish Absolutely.

