

FINAL REPORT CSIRO AAHTS 2017.05

AWARD RECIPIENT: Robert Jones

ADDRESS: PO Box 2327, Moorabbin Victoria 3189

HOST ORGANISATION: Aquavet Pty Ltd ATF The Aquarium Vet Trust

DATE: August 30th 2018

ACTIVITY UNDERTAKEN

CSIRO AAHTS 2017.05 Provision of training: Biosecurity and Disease Prevention in the Home Aquarium Industry. This was delivered as a “Virtual Conference” open to all stakeholders in the Australian ornamental aquarium industry to provide specialist information on biosecurity and disease prevention.

OUTCOMES ACHIEVED TO DATE

Provided a forum, utilizing a Virtual Conference, that delivered an improved understanding of biosecurity and aquarium fish diseases to the Australian home aquarium industry.

Acknowledgments

Aquarium Industries (largest importer and wholesaler of home aquarium fish in Australia) assisted by printing a brochure (see Appendix One). This brochure was added to each fish delivery in the months leading up to the Virtual Conference. Aquarium Industries used their large social media presence to also advertise the conference.

Pet Industry Association of Australia (PIAA) assisted by advertising the Virtual Conference in their regular email Newsletter that goes to all their members.

Background

The applicant for this training is Australia’s most qualified aquarium fish veterinarian (Dr. Robert Jones) and is the developer and author of a world renown online “E-quarist” course, that is currently being delivered to over 600 participants in the home and public aquarium industry, both within Australia and internationally. For more details, please see:

<https://www.theaquariumvet.com/education/>

Other session speakers were leaders in their field and represent both industry and universities. Because of the nature of the conference, it was possible to have international speakers deliver content.

Need

The general knowledge and understanding of biosecurity and disease issues in fish and aquatic invertebrates in the home aquarium (ornamental) industry is generally considered to be quite low. There are currently limited opportunities to increase this level of skill and knowledge within Australia.

Objectives

To provide a forum aimed at improving the understanding of biosecurity and aquarium fish diseases to the Australian home aquarium industry. The specific outcomes include:

- To improve the understanding of biosecurity principles for the industry
- To improve disease identification and treatment for industry people

By providing the information as a Virtual Conference, this reduced any costs associated with travel for the stakeholder attendees. It also reduced the time they were away from their business (in many cases aquarium retail outlets).

Methods

This project consisted of a “Virtual Conference” open to all stakeholders in the ornamental aquarium industry to provide specialist information on biosecurity and disease prevention. It was conducted over two days and was delivered via interactive webinars with the ability to have 100 ‘sites’ online at the same time. Each site (defined as an IP address) could have 1 or 50 attendees depending on the capability of the site. The sites could have been a home, a retail shop, a wholesaler, a breeder or a university to name a few. This allowed a significant number of industry participants. See Appendix Two for the Conference Agenda.

The course was delivered by eight experts in the field of biosecurity, fish and invertebrate diseases and treatments, stress in fish and fish care. Registered participants were required to attend both days (10 am-4 pm each day). See Appendix Three for the speaker biographies.

The course included lectures and some pre-recorded ‘How to Guides’. These guides were made available to the participants prior to the course. The two days of webinars were recorded and using The Aquarium Vet’s Learning Management System these were available for a month after the Conference for review and to assist with the examination.

An online examination (thirty questions) at the end of the two days was available for three weeks after the Virtual Conference for attendees to complete. The pass mark was 80% and upon achieving this pass mark, each attendee received a Certificate of Completion (see Appendix Four). A certificate was not issued simply for attendance. Overall 59 people (including the speakers) registered and attended the conference with 22 completing the examination and certificate afterwards.

Results/Discussion

Currently in Australia there are limited educational and training opportunities within the Australian home aquarium industry.

While it was encouraging to have this number of attendees participate in a Virtual Conference, it was hoped that the number would have been higher. It is interesting to note that this training was free and the only cost involved was the participant's time and yet the attendance rate was still quite low.

However, the success of the delivery method and feedback from the attendees has certainly shown that there is a need for ongoing education in the Australian home aquarium industry at all levels, and that providing it in a non-traditional conference setting can work.

Benefits and Adoption

A major limiting factor in acquiring training for personnel in the aquarium industry, is finding time to step away from their businesses. Aside from a couple of large retailers and wholesalers, many aquarium industry businesses (producers, wholesalers and retailers) are small, often family run organisations. The benefit of this project was that the training was done onsite with no need to travel, which not only limits the time away from business, but significantly reduces the costs.

It is hoped that the knowledge and skills learned will be applied on a daily basis.

Further Development

Several emails afterwards requested a follow up event on an annual basis.

Aquarium Industries are considering hosting the webinar recordings on their website for their customers as an ongoing tool.

FREE ORNAMENTAL FISH BIOSECURITY AND DISEASE

TRAINING WORKSHOP 2018



One of the most limiting factors in acquiring training for personnel in the aquarium industry is finding time for you or your staff to step away from your businesses.

WE HAVE A SOLUTION!!!

On April 30th and May 1st 2018 Aquarium Industries in association with The Aquarium Vet will be delivering a FREE "Virtual Conference" on Biosecurity principles and Diseases. This is open to all stakeholders in the ornamental aquarium industry. The course will be delivered via interactive webinars with the ability to have 100 'sites'. The sites can be a home, a retail shop, a wholesaler, a breeder or a university to name a few. This will allow a significant number of industry participants. The benefit of this delivery method is that the training can be done onsite with no need to travel, which not only limits the time away from business, but significantly reduces the costs.

THE COURSE

This FREE course will be delivered by up to eight experts in the field of biosecurity, fish and invertebrate diseases and treatments, stress in fish and fish care. Each registered participant will be required to attend both days (10am-4pm each day). The course will include lectures (with notes) and pre-recorded 'how to guides'. These guides will all be made available to the participants prior to the course. An online examination at the end of the two days will be available for one week after the Virtual Conference for attendees to complete. The pass mark will be 80% and upon achieving this pass mark, each attendee will receive a Certificate of Completion.



TOPICS WILL INCLUDE:-

- Biosecurity & disease surveillance in the aquarium industry
- Importance of quarantine for new and/or diseased fish
- Stress in aquarium fish and susceptibility to disease
- Aquarium fish & invertebrate pathogens
- Aquarium fish & invertebrate disease treatments
- Microscope techniques
- Advanced aquarium fish care (water quality and chemistry; fish compatibility)
- Euthanasia of aquarium fish
- Public health concerns – retailer and customer



Further details will be provided closer to the date, but to save your place please register your interest at:
education@aquariumindustries.com.au

Appendix Two

AGENDA : Biosecurity and Disease Prevention in the Home Aquarium Industry

DAY ONE Monday APRIL 30th

Session 1	9.45 am	Introduction to the Course	Dr Rob Jones
	10.00 am	Biosecurity in Australia	David Crass
	10.30 am	The Principles of Biosecurity	Dr Tim Miller-Morgan
	11.30 am	Surveillance and quarantine: necessities or luxuries?"	Dr Leo Foyle
	12.15 am	LUNCH	
Session 2	12.45 pm	Stress and the Disease Process	Dr Rob Jones
	1.30 pm	Water Chemistry and Quality	Dr Brett DePoister
	2.30 pm	BREAK	
Session 3	2.45 pm	Fish Compatibility	Dr Josiah Pit
	3.15 pm	Introduction to Pathogen Types and Life Cycles	Dr Rob Jones
	4.00 pm	FINISH	

DAY TWO Tuesday MAY 1st

Session 4	9:45 am	Review of Day 1	Dr Rob Jones
	10.00 am	Parasites of Ornamental Invertebrates and Fishes	Dr Kate Hutson
	11.45 am	Simple Diagnostic Procedures for Fish and Microscope Use	Dr Rob Jones
	12.15 am	LUNCH	
Session 5	12.45 pm	Viruses, Bacteria and Fungus of Ornamental Fish	Dr Steve Pyecroft
	1.45 pm	Principles of Disease Treatments	Dr Josiah Pit
	2.15 pm	BREAK	
Session 6	2.30 pm	Zoonoses	Dr Brett DePoister
	3.00 pm	Humane Euthanasia of Fish	Dr Rob Jones
	3.30 pm	Retail Education - Don't Dump your fish etc.	Dr Josiah Pit
	4.00 pm	FINISH	

Appendix Three

Biographies for the FRDC Conference - Biosecurity and Disease Prevention in the Home Aquarium Industry

Dr Robert Jones has worked as a veterinarian in the aquarium industry for the past 18 years. Initially at the Melbourne Aquarium, he now consults to all the public aquaria in Australia and New Zealand and increasingly in Asia. He provides veterinary services to the largest importer and wholesaler of home aquarium fish in Australia. Dr Rob developed the world's first online course for aquarists and others working in the aquarium industry. In May 2011, the e-quarist course™ was launched. It is increasingly becoming an internationally recognized course, recently being recognized as an AZA Learning Partner.

David Crass is currently the Science Officer for Aquatics, within the Animal Biosecurity division of the Department of Agriculture and Water Resources. He has been keeping live fish in aquaria since he was 8 years old and was always looking in puddles or rivers with a bucket and a net, travelling Australia snorkelling and scuba diving in freshwater streams and lakes looking for fish, reptiles & amphibians. He studied Environmental science & Food technology & Aquaculture at university and has undertaken catchment rehabilitation/recovery projects for the past 10 years. He has worked in public aquariums, State Fisheries Departments for over 20 years and now for the Federal Government on Biosecurity of Aquatic Commodities.

Dr. Tim Miller-Morgan is an aquatic veterinarian, educator and biologist. He directs the Oregon Sea Grant, Aquatic Animal Health Program at Oregon State University (OSU), Corvallis, OR, USA. He has nearly 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. 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.

Dr. Leo Foyle graduated as a veterinarian from University College Dublin having already completed a two year certificate in aquaculture. After a few years in practice, he obtained his Master's degree in Aquatic Veterinary Studies and then spent six years in aquaculture veterinary practice and was Ireland's only government aquaculture veterinarian and aquatic veterinary pathologist. This led to an appointment in the UK government's Veterinary Laboratory Agency working with production animal pathology and public health. He then accepted the challenge of designing from scratch the core course of veterinary public health in James Cook University's new Discipline of Veterinary Science and is now designing the new aquatic veterinary studies course in the vet school. Since arriving in Australia, he has gained two Memberships of the Australian and New Zealand College of Veterinary Scientists in epidemiology and veterinary public health.

Dr. Brett DePoister has been a consulting veterinarian with The Aquarium Vet team since 2012. Most of his time is spent looking after the animals at Sea Life Melbourne Aquarium. However, he also keeps busy in lots of other exciting areas such as elasmobranch artificial reproduction research, sea turtle rehabilitation, zebra fish facilities, and The Aquarium Vet's e-quarist course™ just to name a few. He is has always been a fish hobbyist and has kept and bred a variety of freshwater and marine fish over the years.

Dr. Josiah Pit works at Aquarium Industries and has oversight of the operations and supply chain functions, in particular the fish health, purchasing and logistics departments. He holds a PhD in Aquaculture and has been in leadership positions in commercial aquaculture organisations for the past 15 years. Josiah is the current President of the Pet Industry Association of Australia that represents the ornamental fish sector and sits on a variety of government working groups and committees as a stakeholder. He is also currently a member of the Fisheries Research & Development Corporations 'Victorian Research Advisory Committee' that is tasked with assigning funding for Fisheries and Aquaculture projects in Victoria.

Dr. Kate Hutson is a Senior Lecturer at James Cook University where she is the undergraduate course coordinator for the *Aquaculture Science and Technology Major*. Kate has 11 years of postdoctoral research experience in aquatic animal health, and leads the *Marine Parasitology Laboratory* where she currently supervises 8 PhD students. She is an active member of the national aquatic animal health community and serves on the Scientific Advisory Committee of the Fisheries Research and Development Corporation's Aquatic Animal Health and Biosecurity Subcommittee.

Dr. Stephen Pyecroft gained his Bachelors in Veterinary Science from the University of Queensland in 1984. After working in general mixed veterinary practice for five years he returned to the University of Queensland to further his studies and gained an Honours then PhD in topics related to parasites of fish. After these studies he consulted to government, aquaculture and the ornamental fish industries whilst operating an aquarium retail business. After 2 years he then began a fish only veterinary service which he operated from Brisbane servicing the east coast of Australia and the NT. In 2002 he moved to Tasmania to take up a position as a fish pathologist in the state veterinary laboratories servicing the salmon, abalone and oyster industries as well as undertaking diagnostics and emergency animal disease responses. He left the Tasmanian state vet labs as Principle veterinary pathologist to take up a position as senior lecturer in veterinary pathology at the School of Animal and Veterinary Sciences, University of Adelaide. He currently supervises honours, Doctor of Veterinary Science and PhD research students undertaking fish health projects and has 3 main research projects himself focusing on oyster health, post capture survival of Southern Rock lobsters and is reviewing the work undertaken by the National Carp Control Program. He has a keen interest in all things fish and remains a keen hobbyist of Australian Native fish.

Appendix Four

Certificate of Completion

in May 2018 has completed the

Biosecurity and Disease Prevention in the Aquarium Industry Workshop

