

DAY 1 - Paper presentations for current husbandry, captive breeding, reintroduction and cryopreservation
Saturday, December 10

8:30 Registration

Captive breeding - Chairperson: Gerry Marantelli

8:45 Conference opening and house keeping

- 9:00** Gerry Marantelli - Around the world in 18 days - a whirlwind tour of husbandry and reintroduction programs
9:30 Peter West - Archey's Frog program at Auckland Zoo
9:45 Glen Gaikhorst - Captive breeding of the Slender Tree Frog (*Litoria adelaidensis*) at Perth Zoo
10:00 Bruce Waldman - Protecting NZ Native Frogs – Captive Facilities as a Safe Harbour

10:20 Morning tea break

Late morning session - Chairperson: Peter Harlow

10:50 Rotating presentations / tour

- 0.25hr** Murray Evans - Captive Husbandry of Northern Corroboree frogs
0.25hr Russell Traher - Breeding and management of *Mixophyes balbus* at Melbourne Zoo
- 0.5hrs** Robert Browne - The captive breeding of anurans in the USA for release
0.5hrs Gerry Marantelli - A tour of husbandry programs for threatened frogs at the ARC
- 12:20** Peter Harlow - Tadpole Captive Husbandry Techniques for Re-Introduction Projects
12:35 Chris Banks - Captive breeding and reintroduction of Romer's Tree Frog, *Philautus romeri*, in Hong Kong

12:50 Lunch break

Assisted reproduction / genome banking - Chairperson: John Clulow

- 1:35** Michael Mahony - Session introduction - Reproductive sciences and genome banking: providing an insurance against the extinction of species and populations and managing genetic diversity
1:50 John Clulow - Cryopreservation for Amphibian Genome Banking – Sperm banking is ready to go, but a way around the egg and embryo cryopreservation block is needed.
2:20 Robert Browne - Artificial reproduction of the Wyoming Toad (*Bufo baxteri*) using hormonal induction and in-vitro fertilisation
2:35 Jill Shaw - Egg freezing: what we can learn from mammals
2:50 Steve Donellan - Experience with a long-term tissue collection – The Australian Biological Tissue Collection
3:05 Natasha Czarny - Experience with a genome resource bank
3:20 Michael Mahony - Conservation genetics, captive breeding and genome banks.

3:35 Afternoon break

Reintroduction - Chairperson: Chris Banks

- 4:05** Deborah McDonald - Nutritional management of Amphibians
4:20 Michael Mahony - Reintroduction of the Sharp-snouted Day Frog (*Taudactylus acutirostris*): An example of experimental reintroduction to uncover the cause of decline
4:35 Simon Clulow - Re-introduction of the Green and Golden Bell Frog (*Litoria aurea*) to the Shortland Wetlands Centre, Hunter Region, New South Wales
4:50 Peter Harlow - Green and Golden Bell Frogs down the drain? Results of tadpole releases and re-introductions in the Sydney area
5:05 Dave Hunter - Application of reintroduction experiments to the Southern Corroboree Frog Recovery Program

Finish time 5:20

**Day 2 - Workshop on current husbandry, captive breeding, reintroduction and cryopreservation
Sunday, December 11**

8:30 Current ex-situ techniques and technologies

- * What technologies are available
- * Advantages and limitations of each
- * Ecological costs of each
- * Financial costs of each
- * Security of material housed
- * Ownership of material housed
- * Who has access to materials housed
- * Likelihood of techniques contributing to conservation outcomes

10:30 Morning break

11:00 Decisions

- * When do we intervene with ex-situ conservation: devising a ranking system for techniques that will allow their future use to be better directed
- * How do we intervene with ex-situ conservation: devising decision trees that allow for determination of husbandry actions to be taken under various scenarios
- * Currently available species priority listings: are they suitable for use in prioritising species for husbandry actions

12:00 Lunch break

12:45 Reintroductions

- * Current state of reintroduction procedures and results
 - * How do we monitor reintroductions?
 - * Are we selling reintroductions effectively to government, public and funding agencies?
- Priorities for future research, monitoring and reintroduction attempts

2:15 Afternoon break

2:45 Reintroductions continued

3:15 Policy

- * Would an accreditation system for ex-situ conservation facilities be useful? If so, how could it be developed and implemented?
- * What limitations do current borders, policy and legislation (conservation and welfare) place on effective ex-situ conservation? How could these issues be overcome or improved?

4:30 Knowledge gaps

- * Developing priority lists for further research and actions relating to husbandry
- * Developing priority lists for further research and actions relating to reintroduction

Finish time: 5:15

DAY 3 - Paper presentations for current amphibian disease, quarantine and hygiene protocols and developments
Monday, December 13

Current amphibian disease - Chairperson: Rick Speare

8:30 Conference opening and house keeping

- 8:45** Rick Speare - Threat Abatement Plan for infection of amphibians with chytrid fungus resulting in chytridiomycosis.
- 9:00** Katie Ardipradja - Not all frogs are the same - investigations into resistance to *Batrachochytrium dendrobatidis*
- 9:15** Lee Berger - Update on the biology of chytridiomycosis and disinfection

Diagnostics / treatment

- 9:40** Emma Symonds - Amphibian Histology - the wonderful world of cells
- 9:55** Kerry Kriger - Comparing histological with real-time Taqman PCR techniques for detecting Chytridiomycosis in wild frogs.
- 10:10** Alex Hyatt - Diagnostic assays and sampling for *Batrachochytrium*

10:25 Morning tea break

Late morning session - Chairperson: Lee Berger

- 10:55** Ermin Sadic - Rapid detection of amphibian chytrid fungus by PCR assay
- 11:10** Deborah Perglotti - Keeping chytrid controlled in captivity
Reducing the impacts of chytrid in the suburbs
- 11:25** Lee B & Gerry M - Treatment
- 11:55** Ed Meyer - Disease management and recovery of the critically endangered Kooroobit tinkerfrog
- 12:10** Lee Skerratt - Development of a mapping protocol for chytridiomycosis in Australian frog populations

12:30 Lunch break

Current quarantine and hygiene protocols - Chairperson: Lee Skerratt

- 1:15** Jill Millan - Australia's quarantine requirements for the importation of live amphibians and their eggs
- 1:30** Richard Speare - Hygiene protocol for handling amphibians in field studies
- 1:45** Harry Hines - Quarantine at field sites
- 2:00** Richard Speare - Hygiene protocols to prevent amphibian disease: from theory to evidence

2:15 Afternoon break

- 2:45** Lee Skerratt - Future work to obtain a better understanding of the epidemiology, transmission and dispersal of amphibian chytrid fungus in Australian ecosystems (reintroduction)

3:00 Rotating presentations

- 0.25hr** Dave Black - Facilities, personalities, processes, and literature - maintaining an internet-based husbandry and hygiene database (and your role in it)
- 0.25hr** Deborah Perglotti - Chytrid as the 'tip of the iceberg'? Get used to it
- 0.5hr** Claire Steel - Quarantine protocols during experiments
- 0.5hr** Gerry Marantelli - Designing facilities to minimise disease movement

4:30 Practical workshop to be confirmed

Current finish time 5:00

Day 4 - Workshop for current amphibian disease, quarantine and hygiene protocols and developments
Tuesday, December 14

8:30 Boundaries to pathogen movement

- * Detection and diagnostics: advantages, limitations and costs of each
- * What techniques and technologies are available to mitigate pathogen movement, identification of advantages, limitations and costs of each?
- * What biological boundaries exist (ie islands and geographical obstacles to pathogen spread) and are there security measures that may be unique to such situations?

9:30 Uses of hygiene

- * When do we employ hygiene measures: discussion of currently available hygiene technologies to determine their suitability for use in various situations
- * How do we balance rigor of hygiene protocols and the need to monitor and research frog populations?
- How can disease be prevented or controlled in amphibian husbandry facilities?

10:30 Morning break

11:00 Uses of hygiene continued

11:30 Policy

- * Planning for new diseases: can we reduce the risk and be better prepared?
- * Are current controls of vectors (eg exotic amphibian importation, produce etc) adequate to prevent new disease and how can they be improved?
- * Can an accreditation system (with respect to disease) for ex-situ conservation and commercial facilities be developed and implemented

12:30 Lunch break

1:15 Decisions

- * How do we employ hygiene measures: Devising decision trees that allow for determination of hygiene precautions to be taken under various scenarios
 1. Quarantine of amphibians entering facilities or management units (eg field sites)
 2. Prevention of transmission between tanks or management units
 3. Isolation and management of ill animals
 4. Disinfection of water and other materials prior to entry and discharge or disposal
 5. Disinfection methods for reusable tanks and equipment
 6. Post-mortem examination of dead amphibians
 7. Monitoring of animals for diseases such as chytridiomycosis
 8. Treatment protocol for amphibians prior to release or dispatch from the facility or management u

2:30 Afternoon break

3:30 Decisions continued

4:15 Knowledge gaps

- * Developing priority lists for further research and actions relating to hygiene

Finish time: 5:15