

QUARANTINE AND CONTROL STRATEGIES FOR DISEASES IN WILD AND CAPTIVE AMPHIBIANS

EMERGENCY DISEASE STRATEGY: CHYTRIDIOMYCOSIS

This disease strategy was prepared as an AquaVet Plan to inform an outbreak response to chytridiomycosis. It is one of 68 actions in a national plan to abate this disease (Australian Government 2012).

<http://www.environment.gov.au/biodiversity/invasive/publications/pubs/chytrid-fungus-manual.pdf>

CHYTRIDIOMYCOSIS: KEY THREATENING PROCESS AND THREAT ABATEMENT PLAN

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) provides for the identification and listing of key threatening processes.

A threatening process is defined as a key threatening process if it threatens or may threaten the survival, abundance or evolutionary development of a native species or ecological community. For example, invasive species listed as key threatening processes are predation by the European red fox, feral rabbits or unmanaged goats.

A process can be listed as a key threatening process if it could:

- cause a native species or ecological community to become eligible for inclusion in a threatened list (other than the conservation dependent category); or
- cause an already listed threatened species or threatened ecological community to become more endangered; or
- adversely affect two or more listed threatened species or threatened ecological communities.

The assessment of a threatening process as a key threatening process is the first step to addressing the impact of a particular threat under Commonwealth law.

Extracted from: <http://www.environment.gov.au/biodiversity/threatened/ktp.html>

Chytridiomycosis was nominated as a key threatening process for Australia in 2001 – see original nomination at:

<http://www.jcu.edu.au/school/phtm/PHTM/frogs/adms/attach7.pdf>

On 23 July 2002 the Minister for the Environment and Heritage accepted that infection with the amphibian chytrid resulting in chytridiomycosis was a key threatening process. The conclusions of the advice given to the Minister by the Threatened Species Scientific Committee were that:

"The threatening process meets s188(4)(a), s188(4)(b) and s188(4)(c) of the EPBC Act. The threatening process could cause native amphibian species to become listed as threatened, could cause listed threatened species to become listed in another category representing a high degree of endangerment, and adversely affects at least 5 listed threatened amphibian species."

"A Threat Abatement Plan is considered to be a feasible, effective and efficient way to abate the process."

The 2006 Chytrid TAP is currently under review but has not yet been replaced. Please see Attachments 4a and 4b for the 2006 Chytrid TAP.

HYGIENE AND QUARANTINE PROTOCOLS

QUARANTINE GUIDELINES AND PROTOCOLS FOR AMPHIBIANS

Daszak P, Cunningham AA, Hyatt AD. 2001. Draft guidelines for international translocation of amphibians with respect to infectious diseases. In: Speare R and Steering Committee of Getting the Jump on Amphibian Disease. Developing management strategies to control amphibian diseases: Decreasing the risks due to communicable diseases. School of Public Health and Tropical Medicine, James Cook University: Townsville. Pp 150-156. (See Attachment 5a)

Lynch M. 2001. Amphibian quarantine protocols Melbourne Zoo. In: Speare R and Steering Committee of Getting the Jump on Amphibian Disease. Developing management strategies to control amphibian diseases: Decreasing the risks due to communicable diseases. School of Public Health and Tropical Medicine, James Cook University: Townsville. Pp 157-161. (See Attachment 5b)

Cunningham A, Daszak P, Hyatt A. 2000. Amphibia. In: Quarantine and Health Screening Protocols for Wildlife prior to Translocation and Release into the Wild. M. H. Woodford, (Ed.) Office International des Epizooties (OIE), Paris, France & IUCN Species Survival Commission's Veterinary Specialist Group, Gland, Switzerland. Pp. 67–71 http://www.ccwhc.ca/wildlife_health_topics/risk_analysis/Quarantine.pdf

Allan K, Gartenstein S. 2010. Keeping it clean: A Tasmanian field hygiene manual to prevent the spread of freshwater pests and pathogens. Natural Resource

Management South, Hobart. Available at:

<http://www.dpiw.tas.gov.au/inter.nsf/Attachments/LBUN-86X7YY?open>

This manual is supported by YouTube videos on field hygiene for the Tasmanian World Heritage area

<http://www.youtube.com/watch?v=wpdf1XtMjKo> – Keeping it Clean

<http://www.youtube.com/watch?v=2Ed7iU0zdnI> - Impacts on Rivers

<http://www.youtube.com/watch?v=Fi3v1FJuBO0> - Quarantine

<http://www.youtube.com/watch?v=U4kQ-OZrvNs> - Impacts on Frogs

<http://www.youtube.com/watch?v=gF21vznsRuE> - Boats & Fishing

http://www.youtube.com/watch?v=j_2NxLOQgpY - Heavy Machinery

<http://www.youtube.com/watch?v=vPEyLipWv2c> - Vehicles

Phillott AD, Speare R, Hines HB, Meyer E, Skerratt LF, McDonald KR, Cashins SD, Mendez D, Berger L. 2010. Minimising exposure of amphibians to pathogens during field studies. *Dis Aquat Org* 92:175-185.

Murray KA, Skerratt LF, Marantelli G, Berger L, Hunter D, Mahony M, Hines H. 2011b. Guidelines for minimising disease risks associated with captive breeding, raising and restocking programs for Australian frogs.

<http://www.environment.gov.au/biodiversity/invasive/publications/pubs/frogs-captive-breeding.pdf>.

Murray KA, Skerratt LF, Marantelli G, Berger L, Hunter D, Mahony M, Hines H. 2011c. Hygiene protocols for the control of diseases in Australian frogs.

<http://www.environment.gov.au/biodiversity/invasive/publications/pubs/frogs-hygiene-protocols.pdf>.

Pessier AP, Mendelson JR. 2010. A manual for control of infectious diseases in amphibian survival assurance colonies and reintroduction programs, IUCN/SSC Conservation Breeding Specialists Group: Apple Valley, MN, USA. Available at http://amphibianark.org/pdf/Amphibian_Disease_Manual.pdf

ARG-UK. 2008. Advice Note 4 Amphibian disease precautions: a guide for UK field workers: <http://static.zsl.org/files/biosecurity-arguk4-511.PDF>

RACE: Risk Assessment of Chytridiomycosis to European Amphibian Biodiversity <http://www.bd-maps.eu/>

IMPORTATION OF AMPHIBIANS AND THEIR EGGS INTO AUSTRALIA

Amphibians may be imported into Australia into zoos or for laboratory purposes. The importation has to comply with the conditions set out in the Animal Biosecurity Policy Memorandum (ABPM) 2003/26. This ABPM comes into effect on 17 November 2003.

ABPM 2003/26 consists of two documents; one for importation into zoos and another for importation into laboratories.

Quarantine requirements for the importation of amphibians or their eggs into zoological facilities - <http://www.jcu.edu.au/school/phtm/PHTM/frogs/aqis/2003-26a.pdf>

Quarantine requirements for the importation of amphibians or their eggs for laboratory purposes – <http://www.jcu.edu.au/school/phtm/PHTM/frogs/aqis/2003-26b.pdf>

Importation has to meet the requirements of two Commonwealth departments, 1) Department of Agriculture, Fisheries and Forestry and 2) Department of the Environment and Heritage (DEH). The two documents above detail the requirements of the former. For requirements of DEH go to <http://www.deh.gov.au/biodiversity/trade-use>. The DEH site also has the requirements for export of amphibians from Australia.