

Approved Conservation Advice
(s266B of the *Environment Protection and Biodiversity Conservation Act 1999*)

**Approved Conservation Advice for
Upland Wetlands of New England Tablelands and Monaro Plateau**

This Conservation Advice has been developed based on the best available information at the time this Conservation Advice was approved; this includes existing plans, records or management prescriptions for this species.

Description

The Upland Wetlands of New England Tablelands and Monaro Plateau ecological community occurs in closed, high altitude topographic depressions that are not connected to rivers or streams. These wetlands occur on undulating, mostly basalt plateau with organic soils, forming in the lagoons, over dark chocolate loam (DECC, 2005). This ecological community can be distinguished from other wetlands in similar bioregions (and similar ecological gradients) by the absence or near absence of peat underlying the vegetation, and the absence of heath through the wetland floor (DEH, 2005).

The ecological community consists of near-permanent, intermittent or ephemeral wetlands (Keith, 2004). Near-permanent and intermittent wetlands support an average of 15 and 24 native flora species, respectively. Ephemeral wetlands have less diverse native flora (11 species) and are often degraded owing to livestock grazing disturbance (Keith, 2004; TSSC, 2005). Ephemeral wetlands are recognised as exotic-dominated pasture when degradation is severe, native flora diversity declines, and invasive flora is the predominant ground cover (DEH, 2005; TSSC, 2005).

Associated vegetation of this ecological community includes closed to mid-dense sedgeland and grassland. Deep lagoons tend to have vegetation on shores and shallow reaches whereas shallow wetlands have vegetation across the depression. Associated species include water plants, grasses, sedges and forbs such as *Potamogeton tricarinatus*, *Myriophyllum variifolium*, *Nymphoides geminata*, *Eleocharis acuta*, *E. pusilla*, *Stellaria angustifolia*, *Pratia surrepens*, *Hydrocotyle tripartita*, *Juncus fockei*, *Epilobium billardierianum* subsp. *cinereum*, *Brachyscome radicans*, *Agrostis avenacea* var. *avenacea*, *Glyceria australis*, *Cardamine tenuifolia*, *Crassula helmsii*, *Limosella australis*, *Ranunculus diminutus*, *Persicaria prostrata*, and *Chara* spp. (Benson & Jacobs, 1994; Benson & Ashby, 2000). Trees and shrubs do not naturally occur in the wetlands, but stands fringing wetlands regulate run-off and act as a buffer.

Conservation Status

The Upland Wetlands of New England Tablelands and Monaro Plateau ecological community is listed as **endangered**. This ecological community is eligible for listing as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as, in 2005, the Minister considered the Threatened Species Scientific Committee's (TSSC) advice under section 189 of the EPBC Act and amended the list under section 184 to include the "Upland Wetlands of New England Tablelands and Monaro Plateau". The TSSC determined that the ecological community met Criterion 2 of their eligibility criteria (TSSC, 2005). The ecological community is also listed as endangered as "Upland Wetlands of the Drainage Divide of the New England Tablelands Bioregion" under the *Threatened Species Conservation Act 1995* (NSW). The Monaro component is not listed in NSW. Components of this system, such as Little Llangothlin Lagoon, are Ramsar-listed wetlands (Ramsar, 2004). Little Llangothlin Nature Reserve, Mother of Duck's Nature Reserve, and Dangers Lagoon

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are protected areas (ANCA, 1996; DECC, 2008). Llangothlin Lagoon is a game reserve (ANCA, 1996).

Distribution

The Upland Wetlands of New England Tablelands and Monaro Plateau are known from two areas in north-east and south-east NSW. In the north-east, 55 wetlands occur in New England, covering 1630 ha around Armidale, and between Glen Innes and Walcha; and in the south-east, 215 wetlands occur between Cooma and Bombala on the Monaro Plateau, covering 1565 ha (DEH, 2005). Most of these wetlands are small with 81 per cent less than 10 ha in size and less than 15 per cent are protected (TSSC, 2005).

The Upland Wetlands of New England Tablelands and Monaro Plateau occur 700–1400 m above sea level. Substrate is generally basalt but occasionally silcrete or granite. Climate is temperate with annual rainfall less than 1000 mm annually.

This ecological community occurs within the Border Rivers–Gwydir, Northern Rivers, Southern Rivers, and Murrumbidgee (NSW) Natural Resource Management Regions.

Threats

The main identified threats to the Upland Wetlands of New England Tablelands and Monaro Plateau are alteration of water regimes through draining or damming of wetlands; grazing and trampling of wetlands by stock; pollution from agricultural chemicals, such as fertiliser and herbicides; climate change; and weed invasion, which is facilitated through a combination of the aforementioned threats (DECC, 2005; TSSC, 2005). Little Llangothlin Lagoon is threatened by Blackberry (*Rubus fruticosus*) and Nodding Thistle (*Carduus nutins*). Over 70 per cent of these wetlands have been lost through engineering works, such as draining and damming (Brock et al., 1999).

The main potential threats to fauna reliant on the Upland Wetlands of New England Tablelands and Monaro Plateau include predation and competition from feral rabbits (*Oryctolagus cuniculus*), European Red Fox (*Vulpes vulpes*) and feral cats (*Felis catus*).

Research Priorities

Research priorities that would inform future regional and local priority actions include:

- Design and implement a monitoring program or, if appropriate, support and enhance existing programs.
- Undertake survey work in suitable habitat and potential habitat to locate any additional occurrences especially on Monaro Plateau.

Regional Priority Actions

The following regional priority recovery and threat abatement actions can be done to support the recovery of the Upland Wetlands of New England Tablelands and Monaro Plateau ecological community.

Habitat Loss, Disturbance and Modification

- Monitor known occurrences to identify key threats.
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Identify occurrences of high conservation priority.
- Ensure fertilisers and chemicals used to eradicate weeds do not have a significant adverse impact on this ecological community.
- Manage any changes to hydrology which may result in changes to the water table levels, increased run off, eutrophication, or sedimentation.

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- Prevent draining, damming, excavation and clearing of wetlands in this ecological community (DECC, 2005; TSSC, 2005).
- Manage any disruptions to water flows.
- Investigate further formal conservation arrangements such as the use of covenants, conservation agreements or inclusion in reserve tenure (DECC, 2005).

Invasive Weeds

- Develop and implement a management plan for the control of exotic pasture species in regions where this ecological community occurs.

Fire

- Incorporate the ecological community into existing fire management plans (DECC, 2005).
- Provide maps of known occurrences to local and state Rural Fire Services and seek inclusion of mitigative measures in bush fire risk management plans, risk register and/or operation maps.

Conservation Information

- Raise awareness of this ecological community within the local community especially with private landholders, Landcare groups and catchment management authorities (DECC, 2005).
- Develop sustainable management guidelines and technical material to assist landowners (DECC, 2005).

Local Priority Actions

The local priority recovery and threat abatement actions can be done to support the recovery of the Upland Wetlands of New England Tablelands and Monaro Plateau ecological community.

Habitat Loss, Disturbance and Modification

- Create and revegetate buffer zones around wetlands to control and filter run-off and erosion (TSSC, 2005).
- Investigate options for enhancing and rehabilitating degraded wetlands (DECC, 2005).

Invasive Weeds

- Identify, remove and prevent introduction of weeds in the local area, which could become a threat to this ecological community, using appropriate methods (DECC, 2005; TSSC, 2005).
- Implement the Blackberry management plan (Bruzzese et al., 2000).

Trampling, Browsing or Grazing

- Avoid grazing wetlands straight after flood, after fire, when plants are flowering, seeding and establishing, during waterbird breeding season and when the wetland is drying (TSSC, 2005).
- Prevent grazing pressure at known sites through exclusion fencing or other barriers (DECC, 2005; TSSC, 2005).
- Provide alternative watering points for stock (DECC, 2005; TSSC, 2005).
- Implement management plans for the control and eradication of cats, foxes and rabbits in the region.
- Incorporate the ecological community into existing pest management plans (DECC, 2005).

This list does not necessarily encompass all actions that may be of benefit to this ecological community but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

Existing Plans/Management Prescriptions that are Relevant to the Ecological Community

- Blackberry, *Rubus fruticosus*: Best Practice Management Guide: #5, (Bruzzese et al., 2000),
- Little Llangothlin Nature Reserve Plan of Management and Fire Management Strategy (NSW NPWS, 1998, 2006a),
- Mother of Duck's Lagoon Fire Management Strategy (NSW NPWS, 2006b),
- Threat Abatement Plan for Competition and Land Degradation by Feral Rabbits (EA, 1999),
- Threat Abatement Plan for Predation by European Red Fox (EA, 1999), and
- Threat Abatement Plan for Predation by Feral Cats (EA, 1999).

These prescriptions were current at the time of publishing; please refer to the relevant agency's website for any updated versions.

Information Sources:

Australian Nature Conservation Agency (ANCA) 1996, *A Directory of Important Wetland in Australia Second Edition*, ANCA, Canberra.

Benson, JS & Ashby, EM 2000, 'The natural vegetation of the Guyra 1:100 000 map sheet, New England Bioregion of New South Wales', *Cunninghamia*, vol. 6, pp. 747–872.

Benson, JS & Jacobs, SWL 1994, 'Plant communities of the Monaro Lakes', *Cunninghamia*, vol. 3, pp. 123–46.

Brock, MA, Smith, RGB & Jarman, PJ 1999, 'Drain it, dam it: alteration of water regime in shallow wetlands on the New England Tableland of NSW', *Wetlands Ecology and Management*, vol. 7, pp. 37–46.

Bruzzese, E, Mahr, F, & Faithful, I 2000, *Blackberry, Rubus fruticosus: Best Practice Management Guide: #5*, CRC for Weed Management Systems, Adelaide.

Department of Environment and Climate Change (DECC) 2008, *Little Llangothlin Nature Reserve*, viewed 6 May 2008, <<http://www2.nationalparks.nsw.gov.au/parks/nsf/ParkContent/N0531?OpenDocument&ParkKey=N0531&Type=NATURE>>.

Department of Environment and Climate Change (DECC) 2005, *Upland Wetlands of the Drainage Divide of New England Tablelands – profile*, viewed 6 May 2008, <<http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/profile.aspx?id=10824>>.

Department of the Environment and Heritage (DEH) 2005, *Commonwealth Information Sheet on Upland Wetlands of the New England Tablelands and Monaro Plateau*, viewed 6 May 2008, <<http://www.environment.gov.au/biodiversity/threatened/publications/upland-wetlands.html>>.

Environment Australia (EA) 1999a, *Threat Abatement Plan for Competition and Land Degradation by Feral Rabbits*, Biodiversity Group, Environment Australia, viewed 6 May 2008, <<http://www.environment.gov.au/biodiversity/threatened/publications/tap/rabbits/index.html>>.

Environment Australia (EA) 1999b, *Threat Abatement Plan for Predation by European Red Fox*, Biodiversity Group, Environment Australia, viewed 6 May 2008, <<http://www.environment.gov.au/biodiversity/threatened/publications/tap/foxes/index.html>>.

Environment Australia (EA) 1999c, *Threat Abatement Plan for Predation by Feral Cats*, Biodiversity Group, Environment Australia, viewed 6 May 2008, <<http://www.environment.gov.au/biodiversity/threatened/publications/tap/cats/index.html>>.

Keith, D 2004, *Ocean Shores to Desert Dunes: the Native Vegetation of New South Wales and the ACT*, NSW National Parks and Wildlife Service, Department of Infrastructure, Planning and Natural Resources.

NSW National Parks and Wildlife Services (NPWS) 1998, *Little Llangothlin Nature Reserve Plan of Management*, viewed 6 May 2008, <<http://www.environment.nsw.gov.au/resources/parks/pomFinalLittlellangothlin.pdf>>.

NSW National Parks and Wildlife Services (NPWS) 2006a, *Little Llangothlin Nature Reserve Fire Management Strategy*, viewed 6 May 2008, <<http://www.environment.nsw.gov.au/resources/parks/LittleLlangothlinFMS.pdf>>.

NSW National Parks and Wildlife Services (NPWS) 2006b, *Mother of Duck's Nature Reserve Fire Management Strategy*, viewed 6 May 2008, <<http://www.environment.nsw.gov.au/resources/parks/MotherOfDucksNRFMS.pdf>>.

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Ramsar 2004, 'The Annotated Ramsar List of Wetlands of International Importance: Australia', *Ramsar Secretariat*, viewed 6 May 2008, <http://www.ramsar.org/profile/profiles_australia.htm>.

Threatened Species Scientific Committee (TSSC) 2005, *Commonwealth Listing Advice on Upland Wetlands of the New England Tablelands and the Monaro Plateau*, viewed 6 May 2008, <<http://www.environment.gov.au/biodiversity/threatened/communities/upland-wetlands.html#conservation>>.