



COMMUNITIES FOR COMMUNITIES

Issue 11: November 2009

In this issue:

- The ecological community listing process
- Finalised Priority Assessment List
- New listings
 - Alpine Sphagnum Bogs
 - Weeping Myall Woodlands
 - Lowland Native Grasslands of Tasmania
 - New threatened species listed in 2009
- Technical workshop
 - Cumberland Plains Woodland
- News from Species Profile and Threats (SPRAT) team

- Alpine *Sphagnum* Bogs
- Gippsland Red Gum Grassy Woodland and Associated Grassland
- Lowland Native Grasslands of Tasmania
- Northern and Southern Grasslands of Queensland and New South Wales
- Victorian Grassy Woodlands
- Weeping Myall Woodlands

In this issue you'll find more detail on some of these ecological communities, including what they mean for conservation outcomes. Articles on the others will follow in the next issue. This issue also contains updates on some of our current assessments, where you can go for more information on threatened species and ecological communities, and the names of some of recently listed threatened species.

From the Ecological Communities Section

2009 has been a busy year for the Ecological Communities team!

The culmination of several assessments of prioritised nominations under Australia's national environmental law—the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)—has led to the Environment Minister announcing the listing of seven new ecological communities so far in 2009:

The ecological communities listing process

The list of nationally threatened ecological communities, along with nationally threatened species is updated annually via a public process that begins with a call for nominations. Each year the Environment Minister, with advice from the Threatened Species Scientific Committee (the committee), sets a conservation theme for the annual nomination round to identify those areas of Australia's environment in greatest need of protection.



Once the committee has considered all valid nominations, a Proposed Priority Assessment List (PPAL) of nominated communities is prepared. Assessments are prioritised based on national significance, level of threat, conservation status and efficacy of existing protection measures. Based on this list, the minister establishes the Finalised Priority Assessment List (FPAL) after considering the advice from the committee. Only those ecological communities and species that are prioritised go through to assessment and consideration for the listing under the national environment law.

The listing follows an extensive assessment process. The assessment is a rigorous scientific investigation into the nominated community, which includes consultation with stakeholders and the general public, and often a technical workshop involving experts on the ecological community.

The resulting listing and conservation advice produced by the committee for each specific ecological community try to capture an accurate description of the community, identify its major threats, and suggest priority actions to avoid or minimise threats. These documents aim to help those who may have the ecological community on their land or are otherwise affected by the listing to identify it and manage it appropriately.

Finalised Priority Assessment List for threatened species, ecological communities and key threatening processes

On 27 August 2009, the minister decided on the Finalised Priority Assessment List for species, ecological communities and key threatening processes that were nominated for listing under the national environment law, for the assessment period starting 1 October 2009. This list can be viewed at www.environment.gov.au/biodiversity/threatened/nominations-fpal.html

Where to go for more information

The listing advice for each specific ecological community is the definitive guide to determining whether a patch is part of the listed ecological community.

The listing advice includes a description and species lists, and cross-refers to corresponding state-listed communities and ecological vegetation classes to help identify where the ecological community is present. It also specifies condition thresholds that outline the minimum requirements for when a patch should be considered for referral under the national environment law.

In addition, the conservation advice for the ecological community outlines some priority actions for its future conservation.

Both of these documents, as well as a distribution map for the ecological community can be accessed from: www.environment.gov.au/cgi-bin/sprat/public/publiclookupcommunities.pl

Select the Details link against each ecological community of interest, then select View to download each document.

Ecological community policy statements

Informative brochures (policy statements) about each of the newly listed ecological communities are being developed.

Each policy statement aims to increase awareness, explain the reasons for listing; provides advice on how to identify, assess and manage the ecological community; and highlights the implications of the listing.



These policy statements will be available in electronic downloadable (PDF) at: www.environment.gov.au/cgi-bin/sprat/public/publiclookupcommunities.pl or contact the department to obtain a hard copy booklet.

Alpine *Sphagnum* Bogs and Associated Fens

The Alpine *Sphagnum* Bogs and Associated Fens ecological community was listed as endangered under the national environment law on 7 January 2009.

On the basis of the available scientific evidence, the committee considered that the Alpine *Sphagnum* Bogs and Associated Fens ecological community eligible for listing as endangered, as it met the following criteria:

- 2) It has a restricted geographic distribution that is under threat. The nature of its restricted distribution makes it likely that a threatening process could cause it to be lost in the near future.
- 3) The decline of functionally important species in this ecological community is severe and that the restoration of the community to an intact or near-intact state is not likely to be possible in the near future
- 4) The reduction in integrity of the ecological community is severe across its range.

The Alpine *Sphagnum* Bogs and Associated Fens ecological community is typically found in alpine, subalpine and montane environments. It is often (but not always) above the climatic treeline, which can vary depending on topography and local climate conditions at individual sites. This means that the ecological community also occurs at sites with lower elevations, where local conditions and vegetation are equivalent to those of 'true alpine' sites. 'Frost hollows' and inverted treelines are common.

The ecological community occurs in highly fragmented, isolated pockets, in restricted areas of Tasmania, Victoria, New South Wales, and the Australian Capital Territory. Most (but not all) examples of the listed community are within national parks and other conservation areas.



Bog pools on the northern Bogong High Plains, looking towards Mount Bogong, Victoria. Photo © Arn Tolsma

The Alpine *Sphagnum* Bogs and Associated Fens ecological community can usually be defined by the presence or absence of *Sphagnum spp.*, even though it is not always the dominant genus. The ecological community contains several recognised variants, changing in a predictable progression from the hillsides down to the valley floor. Bogs are found in permanently wet areas, such as along streams, valley edges and valley floors, as well as on slopes where soils are waterlogged. The key to bog formation is a good supply of groundwater, and an impeded drainage system that keeps the water table at or near the surface. Fens are semi-permanent to permanent pools of water, typically found in the wettest areas along watercourses or on valley floors. These conditions generally do not favour the growth of some sphagnum species, so in these locations the listed community tends to be dominated by sedges.



Alpine vegetation is particularly susceptible to change in general, and to more specific adverse impacts. This is partly due to the restricted growing season in the alpine and subalpine regions, but also the very fragile natures of some systems, of which the Alpine *Sphagnum* Bogs and Associated Fens ecological community is just one example. The biggest threats this community faces are fire and climate change. Other significant threats include exotic weed invasions, grazing and trampling by non-native animals, tourism and increased human infrastructure. Harvesting of sphagnum moss for use in the horticultural industry is also an issue in some areas, mainly in Tasmania.

The Alpine *Sphagnum* Bogs and Associated Fens ecological community is home to a rich variety of flora, and provides significant habitat for several threatened fauna species, including the southern corroboree frog (*Pseudophryne corroboree*). The ecological community includes sites like the Ginini Flats Wetland and Blue Lake, which are of international significance through their listing under the Ramsar Convention on Wetlands. Ginini Flats Wetland is also the largest intact bog and fen community in the Australian Alps.



The nationally listed endangered southern corroboree frog (*Pseudophryne corroboree*) Photo © Steve Wilson

Listing the Alpine *Sphagnum* Bogs and Associated Fens ecological community helps protect the critical ecosystem services it provides for major inland water resources. On the mainland, it includes the headwaters of important rivers, such as the Snowy, Murray and Murrumbidgee Rivers, which are vital to many inland cities, towns and industries. Inland-flowing alpine streams provide much of the total stream flow in the Murray-Darling Basin, emphasising that these water resources and the environment where they originate are of regional and national importance. In Tasmania, the alpine and subalpine zones are also the main source for many river systems.

Peat bogs are also highly significant from a historical conservation perspective, as they contain pollen and charcoal deposits that provide a botanical and climatic timeline dating back millions of years. This type of geologic record is of critical importance in providing a picture of past climatic conditions, which in turn greatly helps us understand climate change and its effects.

An information guide has been recently published entitled: Alpine *Sphagnum* Bogs and Associated Fens—A nationally threatened ecological community, EPBC Policy Statement 3.16.

The department is distributing the policy statement widely to enable land managers and other stakeholders to use it as a reference and help ensure sustainable management and protection for this endangered community.

The policy statement and links to the listing and conservation advices can be found on the department's website at: www.environment.gov.au/epbc/publications/alpine-sphagnum-bogs.html

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Weeping Myall Woodlands

The Weeping Myall Woodlands was listed as endangered under the national environment law on 7 January 2009.

The Threatened Species Scientific Committee considered that the Weeping Myall Woodlands ecological community was eligible for listing due to the severe decline in its geographic distribution. Threats to the ecological community include clearing, fragmentation, and degradation associated with cropping, weed invasion, overgrazing by feral and domestic animals, lopping for stock fodder and feeding by caterpillars of the bag-shelter moth (*Ochrogaster lunifer*).

The Weeping Myall Woodlands occurs on the inland alluvial plains west of the Great Dividing Range in New South Wales and Queensland, though it now only exists as small remnants within this broad range. It occurs in the Riverina, New South Wales South Western Slopes, Darling Riverine Plains, Brigalow Belt north and south, Murray-Darling depression, Nandewar and Cobar Penneplain.

The ecological community ranges from open woodlands to woodlands, in which weeping myall (*Acacia pendula*) trees are the dominant overstorey species. Other common names for weeping myall include myall, boree, balaar, nilyah, bastard gidgee, and silver leaf boree. Although weeping myalls are often the only tree species in these woodlands, other trees can occur in the overstorey of the ecological community.



Weeping Myall Woodlands—Chenopod dominated understorey (south of Narromine New South Wales). Photo © R. Armstrong, New South Wales Department of Environment, Climate Change and Water

The understorey of Weeping Myall Woodlands often includes an open layer of shrubs above an open ground layer of grasses and herbs, though the ecological community can exist naturally as either a shrubby, or grassy woodland. In many areas, the shrub layer has disappeared through overgrazing and dieback. The ground layer includes a diversity of grasses and forbs, with species varying depending on grazing regimes and rainfall.

Most areas still in good condition are on lightly-grazed, uncropped sites, such as road reserves and travelling stock routes and reserves. These remaining areas of structurally intact woodland tend to be relatively small and fragmented due to clearing, thinning, cropping, grazing, and associated soil erosion and changes to fire regimes in the surrounding landscape. The increasing trend of converting intermittent grazing to more intense or set stocking regimes of these areas is of particular concern.

Protecting Weeping Myall Woodlands can benefit the long-term protection of native biodiversity. Farmers are encouraged to investigate techniques, such as strategic grazing, which allows regeneration and minimises impacts to biodiversity.



To accompany the listing and conservation advices, an information guide has been recently published entitled: Weeping Myall Woodlands—A nationally threatened ecological community, EPBC Policy Statement 3.17.

The department is distributing the policy statement widely to enable land managers (for example, farmers) and other stakeholders to use it as a reference and help ensure sustainable management and protection for this endangered community.

The policy statement and links to the listing and conservation advices can be found on the department's website at:

www.environment.gov.au/epbc/publications/weeping-myall-woodlands.html.

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Lowland Native Grasslands of Tasmania

The Natural Lowland Native Grasslands of Tasmania ecological community was listed as critically endangered under the national environment law on 25 June 2009.

The Lowland Native Grasslands of Tasmania are a component of the lowland temperate grassland vegetation group that occurs in unconnected areas throughout south-eastern Australia broadly associated with particular Interim Biogeographic Regionalisation for Australia (IBRA) bioregions or subregions. The ecological community generally occurs at elevations up to 600 metres above sea level in the Tasmanian Midlands, Derwent Valley, and on the east coast and south-east of Tasmania. Localised areas also occur in north-west Tasmania and on Flinders and Cape Barren Islands in Bass Strait. Most of the ecological community is on private property, while some very small remnants occur along roadsides and in some cemeteries.

Native grasslands are defined as areas of native vegetation dominated by native grasses with few or no emergent woody species. The vegetation of the Lowland Native Grasslands of Tasmania ecological community is mostly limited to a ground layer of grasses and herbs. Large trees and shrubs are absent to sparse.

The ecological community is made up of two major sub-types differentiated by the dominant native tussock-forming perennial grass species: Lowland *Poa labillardierei* (silver tussock grass) Grassland and Lowland *Themeda triandra* (kangaroo grass) Grassland.

Grasses and other herbs dominate Tasmania's lowland native grasslands, which mostly consist of a single dominant species, such as silver tussock or kangaroo grass. Despite the dominance of these grass species, grasslands can be extremely rich in other plant species. Herbs such as lilies, daisies and orchids often live in between native grass tussocks in both grassland sub-types. However, the silver tussock grass sub-type is generally less floristically diverse than the kangaroo grass sub-type.

More than 100 species of plants can be part of the ecological community, and more than 35 species of animals can be found in or near the grasslands. Many of these species are endemic or listed as threatened at the national and/or state level.

Temperate grasslands are one of the most under-represented ecosystems in Australia's conservation estate, and are recognised as one of the most threatened vegetation types. The remnant Lowland Native Grasslands of Tasmania is one of Tasmania's most threatened and fragmented ecosystems, and the most depleted vegetation formation in Tasmania. More than 83 per cent of the grasslands have disappeared since European settlement.





Kangaroo grass (*Themeda triandra*) grassland. Photo © Tori Wright

The Lowland Native Grasslands of Tasmania ecological community was listed as critically endangered because of its severe decline, and the substantial rate of continuing detrimental change. It also has a very restricted geographic distribution (as indicated by very small patch sizes), and is subject to significant ongoing threat. Fragmentation, weed invasion and loss of species diversity has also led to a severe reduction in the community's integrity, and as a result reduced its capacity to maintain ecosystem functions

The reasons for listing are set out in the listing advice, which is always the definitive guide to determining whether a patch of vegetation is part of the listed ecological community. The listing advice and indicative species lists for the ecological community is at: www.environment.gov.au/cgi-bin/sprat/public/publicshowcommunity.pl?id=74&status=Critically%20Endangered

The Australian Government is aware of concerns about the impact of the listing on some farmers who may have the listed grasslands on their property, and has taken several steps to help these landholders. First, a special hotline number, 1800 704 520 (free call including for mobile phones), is available for potentially affected farmers to discuss their concerns with the department's Environment Liaison Officer, currently stationed with the National Farmers' Federation. Second, departmental officers are available to visit sites and provide information directly to concerned farmers. Officers can help farmers determine whether the ecological community is present on their property, whether a proposed activity is exempt or is likely to have a significant impact and, if so, help with the referral and approval process.

New information sessions on the national environment law are also planned to start in the Midlands region in November.

In addition, the department has produced two information guides to supplement the listing and conservation advices published at the time of listing in June 2009. The guides are being widely distributed via email, post and hand-out. They aim to increase awareness of the grasslands, provide advice on how to identify, assess and manage the ecological community and highlight implications under the national environment law. The first is a question and answer guide specifically for farmers—*Farming and Nationally Protected Lowland Native Grasslands of Tasmania*. The second is a booklet with additional details and photos of the grasslands and key species—*Lowland Native Grasslands of Tasmania, EPBC Policy Statement 3.18*. The booklet is particularly useful for land managers with an active interest in protecting grasslands biodiversity. The guides provide references, weblinks and phone numbers for additional information and answers to further questions.



The guides are available online, including at:

EPBC Act news page:

www.environment.gov.au/epbc/

EPBC Act information specifically for farmers is at:

www.environment.gov.au/epbc/information/farmers.html

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New threatened species listings

The Species Listing Section has also had a very busy year, with 26 species listed since our last edition in October 2008.

Along with the species mentioned below, the Species Listing team has also had decisions on 42 species through Species Information Partnerships with state and territory governments. This included 24 species endemic to Western Australia, 17 species endemic to Tasmania and 1 species endemic to Victoria.

Species	Listed as
<i>Caladenia</i> sp. Brentwood (R.J. Bates 53510) SA herbarium (an orchid)	Critically endangered
<i>Cassinia tegulata</i> (a shrub)	Critically endangered
<i>Conilurus penicillatus</i> (brush-tailed rabbit-rat)	Vulnerable
<i>Dermochelys coriacea</i> (leatherback turtle)	Uplisted from vulnerable to endangered
<i>Galeorhinus galeus</i> (school shark)	Conservation dependant
<i>Hibbertia</i> sp. Bankstown (R.T. Miller & C.P. Gibson s.n. 18/10/06)	Critically endangered
<i>Hoplogonus bornemisszai</i> (Bornemissza's stag beetle)	Critically endangered
<i>Notelaea ipsviciensis</i> (cooneana olive)	Critically endangered
<i>Phebalium distans</i> (a small tree)	Critically endangered
<i>Reedia spathacea</i> (a sedge)	Critically endangered

<i>Rexea solandri</i> (gemfish) (eastern population)	Conservation dependant
<i>Thelymitra cyanapicata</i> (blue-topped (dark-tipped) sun-orchid)	Critically endangered
<i>Thelymitra</i> sp. Kangaloon (D.L. Jones 18108) Vic. herbarium (Kangaloon sun orchid)	Critically endangered
Five Norfolk Island snails: <i>Advena campbellii campbellii</i> , <i>Mathewsoconcha grayi</i> ms, <i>Mathewsoconcha suteri</i> , <i>Mathewsoconcha phillipii</i> , <i>Quintalia stoddartii</i>	Critically endangered
Four Lord Howe Island snails: <i>Gudeoconcha sophiae magnifica</i> ms, <i>Mystivagor mastersi</i> , <i>Pseudocharopa lidgbirdi</i> , <i>Pseudocharopa whiteleggei</i>	Critically endangered
<i>Engaewa pseudoreducta</i> (Margaret River burrowing crayfish)	Critically endangered
<i>Engaewa reducta</i> (Dunsborough burrowing crayfish)	Critically endangered
<i>Engaewa walpolea</i> (Walpole burrowing crayfish)	endangered
<i>Sarcophilus harrisii</i> (Tasmanian devil)	Uplisted from vulnerable to endangered

Listing and conservation advices for the species mentioned above can be downloaded from:

www.environment.gov.au/cgi-bin/sprat/public/sprat.pl

The conservation advice provides guidance on immediate recovery and threat abatement activities that can be undertaken to ensure the conservation of the species.

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Technical workshop for the uplisting of Cumberland Plain Woodlands

Cumberland Plain Woodlands are currently listed as endangered under the national environmental law; however, a nomination was received in 2007 to uplist the ecological community to critically endangered.



Scientists and others with expertise in the Cumberland Plain Woodlands ecological community attended a two-day workshop earlier this year at Mt Annan Botanic Garden, Sydney to discuss the nomination.

Workshops are an important step in the department's assessment of new nominations, and are used to develop a clear national description of the ecological community. This workshop was also an opportunity to update the description and provide more information in the listing advice compared to the current listing.

Workshop participants were asked to identify what contributes to the uniqueness of the nominated ecological community. Questions included where are Cumberland Plain Woodlands found? What are the physical attributes of areas where this vegetation is found: the landscape, geology, soils, rainfall, altitude? What are the biological attributes: the vegetation structure (height and density), floristics of the canopy and understorey layers, as well as the main tree species associations?

Once the key diagnostic features of the ecological community have been identified, condition classes can be determined. Thresholds of condition identify areas of the ecological community that have a similar conservation value, or act as a measure of the extent to which different levels of degradation take the community away from its best quality-defined identity. Factors used in determining condition classes include numbers, types and spread of native plants present; the level of weed invasion; and the size of an area. Significantly degraded areas—that is, areas that don't meet the condition thresholds—will not be part of the ecological community.

During the workshop, participants visited several Cumberland Plain Woodlands remnants near Mt Annan and Camden, viewing the vegetation to help

inform the technical discussions. For example, the Mt Annan Botanic Garden showed good examples of high quality Cumberland Plain Woodlands remnants, as well as those threatened by invasion of African olive. Other sites showed remnants with high plant diversity in areas of potential future urban development.

We were encouraged by the involvement of experts and New South Wales Government officers in the workshop. Their input provided valuable technical knowledge of the ecological community, and will help improve consistency with New South Wales listings and mapping. We thank them for their participation in the workshop and listing process.

The workshop and other consultation helped inform the Threatened Species Scientific Committee's advice to the minister. We should be able to announce the outcome of the minister's decision on the Cumberland Plain Woodlands in our next edition of *Communities for Communities*.

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The Species Profile and Threats website (SPRAT)

The Australian Government's Species Profile and Threats (SPRAT) website is the online tool to use to find all you need to know about listed threatened species and ecological communities.

Ever wondered which weeds are most prevalent in Mabi Forest? Or had questions on the life cycle of the large-fruit fireweed? Or how many endemic invertebrate species are known to occur in Great Artesian Basin discharge spring wetlands?



With profiles for more than 580 plant and animal species and 10 ecological communities you're likely to find what you're looking for on the Australian Government's SPRAT website at www.environment.gov.au/cgi-bin/sprat/public/sprat.pl.

The website provides free, easily accessible information on threatened species and ecological communities listed under the national environment law. The SPRAT website uses information from scientists, universities, conservation organisations, consultants and the public to develop profiles. It aims to maintain profiles with recent information from scientific journals, surveys and management documents.

The website's target is to have up-to-date profiles for all 2200 threatened species and 40 ecological communities in Australia. Profiles that have been recently updated include:

- a text profile covering population, biological and conservation information
- a preview map indication distribution
- links to relevant Australian Government documents.

Some recently updated profiles include:

- The community of native species dependent on natural discharge of groundwater from the Great Artesian Basin
- Mabi Forest
- Natural Temperate Grassland of the Southern Tablelands of New South Wales and the Australian Capital Territory
- Forest red-tailed black-cockatoo (*Calyptorhynchus banksii naso*)
- Southern brown bandicoot (*Isodon obesulus obesulus*)
- Large-fruit fireweed (*Senecio macrocarpus*).

Links to ecological community profiles are at: www.environment.gov.au/cgi-bin/sprat/public/publiclookupcommunities.pl

And species profiles can be searched at: www.environment.gov.au/cgi-bin/sprat/public/sprat.pl

The development of the SPRAT website is ongoing. Some species and ecological communities do not yet have completed profiles. If you have any relevant information that could help improve SPRAT, or any questions or feedback, please email sprat@environment.gov.au.

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To stay informed of decisions, to view listings and conservation advices, we encourage you to check out our website regularly: www.environment.gov.au/biodiversity/threatened/index.html

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