



WILDLIFE AND THREATENED SPECIES BUSHFIRE RECOVERY EXPERT PANEL

Provisional list of animals requiring urgent management intervention

Released on 20 March 2020

This provisional list of 119 animal species is a revised version of the list released on 11 February 2020, which included 113 species as high priority for urgent management intervention. Since that date, improved spatial information and reports from field assessments have led to one fish species and one frog species being removed from the list, and eight bird, mammal and reptile taxa being added to the high priority list. The list will continue to be revised as new information becomes available.

The 2019-20 bushfires in southern and eastern Australia have had severe impacts on many animal species. The fires have covered an unusually large area and, in many places, they have burnt with unusually high intensity. Some species were considered threatened before the fires, and the fires have now likely increased their risk of extinction. Many other fire-affected animal species were considered secure and not threatened before the fires, but have now lost much of their habitat and may be imperiled.

To support protection and recovery of these species, conservation action will be needed for many species, at many sites. Such informed management will need to be supported by a wide range of government agencies, non-government conservation organisations, university researchers, community groups and the public.

However, some species are in need of more urgent help than others. The following 119 animal species have been identified by experts as the highest priorities for urgent management intervention in the coming weeks and months. Most of these animals have had at least 30% of their range burnt, and many have had substantially more.

The priority animals were identified based on the extent to which their range has potentially been burnt, how imperiled they were before the fires (for example, whether they were already listed as vulnerable, endangered or critically endangered), and the physical, behavioural and ecological traits which influence their vulnerability to fire. The framework and methods used to determine the priority species is described in the report available on the [Department's website](#).

The analysis includes animals in bioregions that have been impacted by fires from south-west Western Australia, southern South Australia, Victoria, southern and eastern New South Wales, south-eastern Queensland and Tasmania. A map of this area is available on the [Department's website](#). This preliminary analysis area may be revised in future versions.

This analysis builds on the initial spatial analysis of species listed under the *Environment Protection and Biodiversity Conservation Act 1999* released by the Department of Environment and Energy on 20 Jan 2020 (<http://www.environment.gov.au/biodiversity/bushfire-recovery/research-and-resources>). In addition to listed threatened and migratory species protected under the EPBC Act, this new analysis also includes other mammal, bird, reptile, frog, fish and spiny crayfish species which are not currently listed as threatened under the EPBC Act or by the IUCN but mostly have more than 30% of their range within the burnt areas. The new analysis also incorporates the potential vulnerability of each species to fire, as well as the fire overlap information. A similar analysis is underway for most invertebrates that are not currently listed as threatened under the EPBC Act, and also for plant species.

WHAT IS IN THE LIST?

The provisional list includes 17 bird, 20 mammal, 23 reptile, 16 frog, 5 invertebrate, 22 spiny crayfish and 16 freshwater fish species.

Some of these species, like the Kangaroo Island Dunnart, Pugh's Frog and the Blue Mountains Water Skink, are at imminent risk of extinction because most of their range has been burnt, they were already highly threatened, and they are susceptible to fire and its after effects.

Other species have a substantial portion of their range potentially affected by fires and require emergency intervention and strategic response to support their recovery. These include species like the Smoky Mouse, Koala and Giant Burrowing Frog.

Some species of freshwater fish have been included because they occur downstream of burnt areas, and are vulnerable to large mortality events if heavy rain washes large volumes of ash and sediment down waterways.

The priority list includes animals that are not well known, like the *Banksia brownii* Plant Louse and the Golden-tipped Bat. Some of these animals play important roles in our native ecosystems and their recovery from the fires is important to ecosystem function.

Several listed threatened species that were not included in the analysis published on 20 January have now been identified as priorities, because the more recent data and analysis has shown a greater potential impact on these species.

WHAT IS IN THE TABLE BELOW?

The table groups species by type (birds, mammals, etc) and includes the following columns:

Common Name is the plain language name(s) used for the species.

Scientific Name is the formal name for the species accepted by the Australian Faunal Directory. In some cases, the species is in the process of being formally described.

EPBC Act listed status is the category within the *Environment Protection and Biodiversity Conservation Act 1999* threatened species list that the species is listed in. Categories reflect the risk of extinction, with Critically Endangered species being at greatest risk, then Endangered and Vulnerable species. Criteria for listing in each of these categories are set out in the *Environment Protection and Biodiversity Conservation Regulations 2000* and follow the global IUCN Red List categories and criteria. One species,

the Black-faced Monarch, is listed as Migratory under the EPBC Act because it moves outside of Australia and is subject to international migratory species conservation agreements.

States and territories are the states and territories that the species may occur in. The fires may not have affected each species in all states and territories where it occurs.

NEXT STEPS FOR UNDERSTANDING FIRE IMPACTS

The Expert Panel is working as quickly as it can, in collaboration with experts and state and territory governments, to identify species that may need urgent management intervention. The provisional list is not complete, but is an important step in understanding and responding to the bushfires.

The provisional list does not include plants at this stage. A plant assessment is underway but requires more time because of the large number of species being assessed. Listed threatened plants will be assessed first. Likewise, the impacts of fire on most invertebrate groups have not yet been considered, but such analysis is underway.

The animal species included are initial priorities - many others will also need management intervention to support recovery. Fires are continuing to burn which may cause other species to become priorities for emergency intervention. This assessment will need to be updated as data for new fires become available.

The pattern and intensity of fire will vary within the fire grounds. The fires will not have impacted all areas within the mapped extent equally. Some areas will have burnt at very high intensity whilst other areas may not have burnt at all. Future analyses will incorporate information about fire severity and impacts as it becomes available.

Our understanding of the fire impacts on animal species will improve after information from on-ground surveys is gathered (once the burnt areas are safe to enter). On-ground surveys may tell us that the fire impacts have been more severe, or less severe, than previously thought.

Potential fire impacts for some species, particularly those with small or poorly documented distributions like freshwater crayfish, are estimates only. The distributions of many freshwater fish had already changed before the 2019-20 wildfires due to drought, so ash and sediment in waterways may impact a larger proportion of their populations than this analysis indicates. These species require on ground surveys to confirm the impacts, and some have been included as priorities for emergency intervention as a precaution.

Information on other natural assets (including Threatened Ecological Communities and World Heritage Areas) potentially impacted by the 2019-20 wildfires are available on the [Department's website](#).

WHAT ACTIONS ARE NEEDED FOR HIGH PRIORITY SPECIES?

Two priority actions should be carried out for all high priority species: 1) Rapid on-ground surveys to establish extent of population loss and provide a baseline for ongoing monitoring. 2) Protecting unburnt areas within or adjacent to recently burnt ground that provide refuge, as well as unburnt areas that are not adjacent to burnt areas, especially from extensive, intense fire.

Other interventions required for each species are best informed by species experts, and a detailed suite of actions at local and regional scales should be developed – in many cases, planning and action by state agencies and other land managers is already underway.

However, the trait information collated for each species provides indications of the type of actions likely to be required for any species. For example, if a species is highly susceptible to introduced predators in the post-fire period, then some form of predator control or exclusion is indicated. If a species has a specialised diet, then supplementary feeding may be considered.

FURTHER INFORMATION

Bushfire recovery package for wildlife and their habitat:

<http://www.environment.gov.au/biodiversity/bushfire-recovery>

Species Profile and Threats (SPRAT) Database: <https://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>

GIS data on Species of National Environmental Significance:

<https://www.environment.gov.au/science/erin/databases-maps/snes>

| Common name | Scientific name | EPBC Act listed status | States & Territories |
|---|---|------------------------|----------------------|
| Birds (17 species) | | | |
| Western Ground Parrot | <i>Pezoporus wallicus flaviventris</i> | Critically Endangered | WA |
| Kangaroo Island Glossy Black-Cockatoo | <i>Calyptorhynchus lathami halmaturinus</i> | Endangered | SA |
| Rufous Scrub-bird | <i>Atrichornis rufescens</i> | Endangered | NSW Qld |
| Regent Honeyeater | <i>Anthochaera phrygia</i> | Critically Endangered | ACT NSW Qld SA Vic |
| Eastern Bristlebird | <i>Dasyornis brachypterus</i> | Endangered | NSW Qld Vic |
| Albert's Lyrebird | <i>Menura alberti</i> | - | NSW Qld |
| Mainland Ground Parrot | <i>Pezoporus wallicus wallicus</i> | - | NSW Qld Vic |
| Bassian Thrush (South Australian), Western Bassian Thrush | <i>Zoothera lunulata halmaturina</i> | Vulnerable | SA |
| Black-faced Monarch | <i>Monarcha melanopsis</i> | Migratory | NSW Qld Vic |
| Gang-gang Cockatoo | <i>Callocephalon fimbriatum</i> | - | SA Vic NSW ACT |
| South-eastern Glossy Black-Cockatoo | <i>Calyptorhynchus lathami lathami</i> | - | Vic NSW ACT Qld |
| Kangaroo Island Western Whipbird | <i>Psophodes nigrogularis lashmari</i> | - | SA |
| Kangaroo Island Southern Emu-wren | <i>Stipiturus malachurus halmaturinus</i> | - | SA |
| Species that are provisionally included as high priority whilst more information is gathered | | | |
| Rockwarbler | <i>Origma solitaria</i> | - | NSW |

| Common name | Scientific name | EPBC Act listed status | States & Territories |
|---|---|------------------------|------------------------|
| Pilotbird | <i>Pycnoptilus floccosus</i> | - | ACT NSW Vic |
| Superb Lyrebird | <i>Menura novaehollandiae</i> | - | ACT NSW Qld Vic |
| Red-browed Treecreeper | <i>Climacteris erythrops</i> | - | ACT NSW Qld Vic |
| Mammals (20 species) | | | |
| Kangaroo Island Dunnart | <i>Sminthopsis griseoventer aitkeni</i> | Endangered | SA |
| Hastings River Mouse, Koontoo | <i>Pseudomys oralis</i> | Endangered | NSW Qld |
| Long-footed Potoroo | <i>Potorous longipes</i> | Endangered | NSW Vic |
| Kangaroo Island Echidna | <i>Tachyglossus aculeatus multiaculeatus</i> | Endangered | SA |
| Mountain Pygmy-possum | <i>Burramys parvus</i> | Endangered | NSW Vic |
| Silver-headed Antechinus | <i>Antechinus argentus</i> | Endangered | Qld |
| Broad-toothed Rat (mainland), Tooarrana | <i>Mastacomys fuscus mordicus</i> | Vulnerable | ACT NSW Vic |
| Smoky Mouse, Konoom | <i>Pseudomys fumeus</i> | Endangered | ACT NSW Vic |
| Koala (combined populations of Qld, NSW, ACT) | <i>Phascolarctos cinereus</i> (combined populations of Qld, NSW, ACT) | Vulnerable | ACT NSW Qld |
| Parma Wallaby | <i>Notomacropus parma</i> | - | NSW Qld |
| Yellow-bellied Glider | <i>Petaurus australis</i> | - | NSW Qld SA Vic |
| Greater Glider | <i>Petauroides volans</i> | Vulnerable | ACT NSW Qld Vic |
| Brush-tailed Rock-wallaby | <i>Petrogale penicillata</i> | Vulnerable | NSW Qld Vic |
| Long-nosed Potoroo (SE Mainland) | <i>Potorous tridactylus tridactylus</i> | Vulnerable | NSW Qld SA Vic |
| Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll | <i>Dasyurus maculatus maculatus</i> (South-east mainland population) | Endangered | ACT NSW Qld Vic |
| New Holland Mouse, Pookila | <i>Pseudomys novaehollandiae</i> | Vulnerable | NSW Qld Tas Vic |
| Mainland Dusky Antechinus | <i>Antechinus mimetes</i> | - | Vic NSW ACT |
| Species that are provisionally included as high priority whilst more information is gathered | | | |
| Grey-headed Flying-fox | <i>Pteropus poliocephalus</i> | Vulnerable | ACT NSW Qld SA Vic |
| Golden-tipped Bat | <i>Phoniscus papuensis</i> | - | NSW |
| Platypus | <i>Ornithorhynchus anatinus</i> | - | ACT NSW Qld SA Tas Vic |

| Reptiles (23 species) | | | |
|---|-----------------------------------|-----------------------|--------------------|
| Blue Mountains Water Skink | <i>Eulamprus leuraensis</i> | Endangered | NSW |
| Georges' Snapping Turtle | <i>Wollumbinia georgesi</i> | Critically Endangered | NSW |
| Long Sunskink | <i>Lampropholis elongata</i> | - | NSW |
| Nangur Spiny Skink | <i>Nangura spinosa</i> | Critically Endangered | Qld |
| Bell's Turtle | <i>Wollumbinia belli</i> | Vulnerable | NSW Qld |
| Manning River Helmeted Turtle | <i>Myuchelys purvisi</i> | - | NSW |
| Broad-headed Snake | <i>Hoplocephalus bungaroides</i> | Vulnerable | NSW |
| Kaputar Rock Skink | <i>Egernia roomi</i> | - | NSW |
| Guthega Skink | <i>Liopholis guthega</i> | Endangered | NSW Vic |
| Alpine She-oak Skink | <i>Cyclodomorphus praealtus</i> | Endangered | NSW Vic |
| Three-toed Snake-tooth Skink | <i>Coeranoscincus reticulatus</i> | Vulnerable | NSW Qld |
| Alpine Bog Skink | <i>Pseudemoia cryodroma</i> | - | Vic |
| Oakview Leaf-tailed Gecko | <i>Phyllurus kabikabi</i> | - | Qld |
| Kate's Leaf-tail Gecko | <i>Saltuarius kateae</i> | - | NSW |
| Ringed Thin-tail Gecko | <i>Phyllurus caudiannulatus</i> | - | Qld |
| Species that are provisionally included as high priority whilst more information is gathered | | | |
| Southern Water-skink | <i>Eulamprus tympanum</i> | - | NSW SA Vic |
| Glossy Grass Skink | <i>Pseudemoia rawlinsoni</i> | - | ACT NSW SA Tas Vic |
| Rainforest Cool-skink | <i>Harrisoniascincus zia</i> | - | NSW Qld |
| Moritz's Leaf-tailed Gecko | <i>Saltuarius moritzi</i> | - | NSW |
| Mustard-bellied Snake | <i>Drysdalia rhodogaster</i> | - | NSW |
| Red-tailed Calyptotis | <i>Calyptotis ruficauda</i> | - | NSW |
| Granite Leaf-tailed Gecko | <i>Saltaurius wyberba</i> | - | NSW Qld |
| Broad-tailed Gecko | <i>Phyllurus platurus</i> | - | NSW |
| Frogs (16 species) | | | |
| Northern Corroboree Frog | <i>Pseudophryne pengilleyi</i> | Critically Endangered | ACT NSW |
| Mountain Frog | <i>Philoria kundagungan</i> | - | NSW Qld |
| Pugh's Frog | <i>Philoria pughi</i> | - | NSW |
| Sphagnum Frog | <i>Philoria sphagnicola</i> | - | NSW |
| Peppered Tree Frog | <i>Litoria piperata</i> | Vulnerable | NSW |
| Southern Corroboree Frog | <i>Pseudophryne corroboree</i> | Critically Endangered | NSW |
| Spotted Tree Frog | <i>Litoria spenceri</i> | Endangered | NSW Vic |

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| Kroombit Tinker Frog | <i>Taudactylus pleione</i> | Critically Endangered | Qld |
| Giant Burrowing Frog | <i>Heleioporus australiacus</i> | Vulnerable | NSW Vic |
| New England treefrog, Glandular Frog | <i>Litoria subglandulosa</i> | - | NSW Qld |
| Littlejohn's Tree Frog, Heath Frog | <i>Litoria littlejohni</i> | Vulnerable | NSW Vic |
| Richmond Range Sphagnum Frog | <i>Philoria richmondensis</i> | - | NSW |
| Davies' Tree Frog | <i>Litoria daviesae</i> | - | NSW |
| Stuttering Frog, Southern Barred Frog | <i>Mixophyes balbus</i> | Vulnerable | NSW Qld Vic |
| Giant Barred Frog | <i>Mixophyes iteratus</i> | Endangered | NSW Qld |
| Fleay's Frog | <i>Mixophyes fleayi</i> | Endangered | NSW Qld |
| EPBC Act-listed Invertebrates (5 species) | | | |
| Banksia Montana Mealybug | <i>Pseudococcus markharveyi</i> | Critically Endangered | WA |
| Eastern Stirling Range Pygmy Trapdoor Spider | <i>Bertmainius colonus</i> | Vulnerable | WA |
| Banksia brownii Plant Louse | <i>Trioza barrettiae</i> | Endangered | WA |
| Bathurst Copper Butterfly | <i>Paralucia spinifera</i> | Vulnerable | NSW |
| Alpine Stonefly | <i>Thaumatoperla alpina</i> | Endangered | Vic |
| Spiny Crayfish (22 species) | | | |
| Arte Spiny Crayfish | <i>Euastacus sp. 1</i> | - | Vic |
| Cann Spiny Crayfish | <i>Euastacus sp. 2</i> | - | Vic |
| West Snowy Spiny Crayfish | <i>Euastacus sp. 3</i> | - | Vic |
| Tianjara Crayfish | <i>Euastacus guwinus</i> | - | NSW |
| Small Crayfish | <i>Euastacus spinichelatus</i> | - | NSW |
| Smooth Crayfish | <i>Euastacus girurmula</i> | - | NSW |
| Ellen Clark's Crayfish | <i>Euastacus clarkae</i> | - | NSW |
| Orbost Spiny Crayfish | <i>Euastacus diversus</i> | - | Vic |
| Hairy Cataract Crayfish | <i>Euastacus pilosus</i> | - | NSW |
| East Gippsland Spiny Crayfish | <i>Euastacus bidawalus</i> | - | Vic |
| Gamilaroi Spiny Crayfish | <i>Euastacus gamilaroi</i> | - | NSW |
| Sutton's Crayfish | <i>Euastacus suttoni</i> | - | NSW Qld |
| Clayton's Spiny Crayfish | <i>Euastacus claytoni</i> | - | NSW Vic |
| Bloodclaw Crayfish | <i>Euastacus gumar</i> | - | NSW |
| Jagara Hairy Crayfish | <i>Euastacus jagara</i> | - | NSW |
| Species that are provisionally included as high priority whilst more information is gathered | | | |
| Mud Gully Crayfish | <i>Euastacus dalagarbe</i> | - | NSW |
| Alpine Crayfish | <i>Euastacus crassus</i> | - | ACT NSW Vic |
| Blue-Black Crayfish | <i>Euastacus jagabar</i> | - | NSW |

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| Morgan's Crayfish | <i>Euastacus morgani</i> | - | NSW |
| Many-bristled Crayfish | <i>Euastacus polysetosus</i> | - | NSW |
| Riek's Spiny Crayfish | <i>Euastacus rieki</i> | - | NSW |
| Small Mountain Crayfish | <i>Euastacus simplex</i> | - | NSW |
| Fish (16 species) | | | |
| Yalmy Galaxias | <i>Galaxias sp. nov. 'yalmy'</i> | - | Vic |
| McDowall's Galaxias | <i>Galaxias mcdowalli</i> | - | Vic |
| East Gippsland Galaxias | <i>Galaxias aequipinnis</i> | - | Vic |
| Stocky Galaxias | <i>Galaxias tantangara</i> | - | NSW |
| Dargo Galaxias | <i>Galaxias mungadhan</i> | - | Vic |
| Short-tail Galaxias | <i>Galaxias brevissimus</i> | - | NSW |
| Flathead Galaxias | <i>Galaxias rostratus</i> | Critically Endangered | NSW SA Vic |
| Honey Blue-eye | <i>Pseudomugil mellis</i> | Vulnerable | Qld |
| Roundsnout Galaxias | <i>Galaxias terenus</i> | - | NSW Vic |
| River Blackfish (south western Victoria) | <i>Gadopsis sp. nov. 'Western Victoria'</i> | - | Vic |
| Oxleyan Pygmy Perch | <i>Nannoperca oxleyana</i> | Endangered | NSW Qld |
| Non-parasitic Lamprey | <i>Mordacia praecox</i> | - | NSW Qld Vic |
| Clarence River Cod, Eastern Freshwater Cod | <i>Maccullochella ikei</i> | Endangered | NSW |
| Macquarie Perch 'MDB taxa' | <i>Macquaria australasica 'MDB taxa'</i> | Endangered at the species level | ACT NSW Vic |
| Cann Galaxias | <i>Galaxias sp. 17 'Cann'</i> | - | Vic |
| Blue Mountains Perch, Hawkesbury Perch | <i>Macquaria sp. nov. 'hawkesbury taxon'</i> | Endangered at the species level | NSW |

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