



The Minister approved this conservation advice on 25/06/2015 and included this species in the Vulnerable category, effective from 08/07/2015

Conservation Advice

Grantiella picta

Painted honeyeater

Taxonomy

Generally accepted as *Grantiella picta* (Painted honeyeater), Gould, 1838. The species is endemic to mainland Australia. Taxonomic uniqueness is high; the species is the only one in its genus and there are no subspecies.

Summary of assessment

Conservation status

Vulnerable: Criterion 3 C2a(ii)

Grantiella picta has been found to be eligible for listing under criterion 3 only.

Species/subspecies can be listed as threatened under state and territory legislation. For information on the listing status of this species under relevant state or territory legislation, see <http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>

Reason for conservation assessment by the Threatened Species Scientific Committee

This advice follows assessment of new information provided to the Committee to list *Grantiella picta*.

Public Consultation

Notice of the proposed amendment and a consultation document was made available for public comment for > 30 business days between 30 October 2014 and 21 December 2014. Any comments received that were relevant to the survival of the species were considered by the Committee as part of the assessment process.

Species Information

Description

The painted honeyeater has black upperparts, white underparts, black spots on its flanks and yellow edges to the flight and tail feathers. The bill is a deep pink and the eye red. The females are smaller and browner on the back than the male, frequently with fewer streaks or spots on their breast and flanks (Higgins et al., 2001).

The painted honeyeater is the only small to medium honeyeater with a wholly or mostly pink bill, and the only yellow-winged honeyeater with almost wholly white underparts (marked only with sparse, fine and short black streaks) (Higgins et al., 2001).

Distribution

The species is sparsely distributed from south-eastern Australia to north-western Queensland and eastern Northern Territory. The greatest concentrations and almost all records of breeding come from south of 26°S, on inland slopes of the Great Dividing Range between the Grampians, Victoria and Roma, Queensland (Higgins et al., 2001).

The species exhibits seasonal north-south movements governed principally by the fruiting of mistletoe, with which its breeding season is closely matched (Barea and Watson, 2007). Many birds move after breeding to semi-arid regions such as north-eastern South Australia, central and western Queensland, and central Northern Territory. Considering its dispersive habits, the species is considered to have a single population (Garnett et al., 2011).

Cultural Significance

Mistletoe fruit was consumed as a food source by many Aboriginal nations. The spreading of mistletoe by the painted honeyeater may have contributed to the availability of mistletoe fruit for indigenous peoples throughout the painted honeyeater's distribution (Lindsay, pers. comm., 2014).

Relevant Biology/Ecology

The painted honeyeater is the most specialised of Australia's honeyeaters. Its diet mainly consists of mistletoe fruits, but also includes nectar (from flowering mistletoe, eucalypts and possibly banksias) and arthropods, especially in the non-breeding season (Garnett et al., 2011; Higgins et al., 2001; BirdLife International, n.d.). Arthropods are an important dietary item provided to nestlings (Barea, 2008a) and for adults during the breeding season (Barea and Herrera, 2009).

The species inhabits mistletoes in eucalypt forests/woodlands, riparian woodlands of black box and river red gum, box-ironbark-yellow gum woodlands, acacia-dominated woodlands, paperbarks, casuarinas, callitris, and trees on farmland or gardens. The species prefers woodlands which contain a higher number of mature trees, as these host more mistletoes. It is more common in wider blocks of remnant woodland than in narrower strips (Garnett et al., 2011), although it breeds in quite narrow roadside strips if ample mistletoe fruit is available (BirdLife International, n.d.).

The species often occurs singly or in pairs, and less often in small flocks. Breeding occurs from October to March when mistletoe fruits are most available. The species builds a flimsy cup nest made of plant-fibre, spiders' webs and rootlets in the outer foliage of trees anywhere from 3 m to 20 m above the ground. Usually 2-3 eggs are laid and both parents incubate the nest, brood and feed young (Barea, 2008b; Higgins et al., 2001; Garnett et al., 2011, Barea, 2012).

The species appears to prefer mistletoe as a nest substrate and selects nest sites in habitats where mistletoe prevalence and parasitism rates are high (Barea, 2008b). Nesting success is relatively low; in the foliage of trees it is approximately 43% and within mistletoe clumps it is only 17%, with 83% of nest failures caused by predation (Barea and Watson, 2013). Generation time is estimated at 5.8 years, with a maximum longevity in the wild estimated at 10.1 years (Garnett et al., 2011).

Threats

Habitat loss is a key threat to this species. Much of its breeding habitat has been cleared or has been reduced to ageing, widely-spaced trees, particularly in box-ironbark and boree woodlands. Its non-breeding habitat is also still being cleared for agriculture (Barea, 2008a). Some acacia and casuarina woodlands (e.g. brigalow and buloke), in which the species occurs, have been heavily cleared and degraded to the extent that they are now nationally endangered ecological communities (DotE, 2015; Garnett et al., 2011). In the breeding strongholds of south-eastern Australia, woodlands are being cleared at a greater rate than they are being restored. In particular, regrowth woodland, which contains similar or higher densities of mistletoe than remnant woodland, is viewed as having little conservation value and is being cleared at an unsustainable rate (Lindsay, pers. comm., 2014).

Most of the painted honeyeater's remaining habitat is on private land which continues to be degraded by grazing by livestock, native macropods and rabbits (*Oryctolagus cuniculus*) (Garnett et al., 2011). Grazing inhibits tree recruitment through the consumption of seedlings

and suckers, and as mature trees die there is insufficient recruitment to replace them (Lindsay, pers. comm., 2014). Grazing results in an uneven age structure of mistletoe host trees and promotion of future collapse of mistletoe resources. Grazing thresholds supporting non-significant effects to mistletoe resources are unknown, but may be very low (Barea, pers. comm., 2014). Additionally, many landholders remove mistletoes from trees as they view it as a pest. Mistletoe becomes more abundant on trees that have become isolated as a result of land disturbance or clearing (Lindsay, pers. comm., 2014).

Even with no further loss or degradation of habitat, the species is likely to continue to decline at some of the edges of its distribution (Ford et al., 2009). It is likely that numbers of painted honeyeaters breeding in southern and central Queensland are already extremely low, and the use of habitat by painted honeyeaters in north-west Queensland is becoming increasingly uncommon. Under current trends, the painted honeyeater may become extinct or absent from the extremes of its northern distribution (Lindsay, pers. comm., 2014).

Other threats to the painted honeyeater include: competition with the aggressive noisy miner (*Manorina melanocephala*); predation by invasive species (e.g. black rats *Rattus rattus*); deliberate destruction of mistletoe in production forests; exacerbation of tree decline through pasture improvement activities; collision with road vehicles; and nest predation by over-abundant pied currawongs (*Strepera graculina*), pied and grey butcherbirds (*Cracticus nigrogularis* and *Cracticus torquatus*), and crows and ravens (Corvidae) (Lindsay, pers. comm. 2014; DEPI, 2014).

How judged by the Committee in relation to the EPBC Act Criteria and Regulations

Criterion 1. Population size reduction (reduction in total numbers)			
Population reduction (measured over the longer of 10 years or 3 generations) based on any of A1 to A4			
	Critically Endangered Very severe reduction	Endangered Severe reduction	Vulnerable Substantial reduction
A1	≥ 90%	≥ 70%	≥ 50%
A2, A3, A4	≥ 80%	≥ 50%	≥ 30%
<p>A1 Population reduction observed, estimated, inferred or suspected in the past and the causes of the reduction are clearly reversible AND understood AND ceased.</p> <p>A2 Population reduction observed, estimated, inferred or suspected in the past where the causes of the reduction may not have ceased OR may not be understood OR may not be reversible.</p> <p>A3 Population reduction, projected or suspected to be met in the future (up to a maximum of 100 years) [(a) cannot be used for A3]</p> <p>A4 An observed, estimated, inferred, projected or suspected population reduction where the time period must include both the past and the future (up to a max. of 100 years in future), and where the causes of reduction may not have ceased OR may not be understood OR may not be reversible.</p>	<p>based on any of the following:</p> <ul style="list-style-type: none"> (a) direct observation [except A3] (b) an index of abundance appropriate to the taxon (c) a decline in area of occupancy, extent of occurrence and/or quality of habitat (d) actual or potential levels of exploitation (e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites 		

Evidence:

Not eligible

It is thought that the population has undergone long-term decline, likely to have been accelerated by clearance of trees for agriculture, and lack of regeneration resulting from grazing by introduced herbivores. Much of its breeding habitat has become degraded, although it may

have benefited from an increase in abundance of mistletoe in some degraded woodlands (Higgins et al., 2001). The population decline is suspected to be 20-29% over the last three generations (17 years), based on monitoring, a reduced area of occupancy and deteriorating habitat quality (Garnett et al., 2011).

Following assessment of the data the Committee has determined that the species is not eligible for listing in any category under this criterion as the past, current or future population declines are thought unlikely to exceed 30% in any three-generation period.

Criterion 2. Geographic distribution is precarious for either extent of occurrence AND/OR area of occupancy			
	Critically Endangered Very restricted	Endangered Restricted	Vulnerable Limited
B1. Extent of occurrence (EOO)	< 100 km ²	< 5,000 km ²	< 20,000 km ²
B2. Area of occupancy (AOO)	< 10 km ²	< 500 km ²	< 2,000 km ²
AND at least 2 of the following 3 conditions:			
(a) Severely fragmented OR Number of locations	= 1	≤ 5	≤ 10
(b) Continuing decline observed, estimated, inferred or projected in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) area, extent and/or quality of habitat; (iv) number of locations or subpopulations; (v) number of mature individuals			
(c) Extreme fluctuations in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) number of locations or subpopulations; (number of mature individuals)			

Evidence:

Not eligible

The extent of occurrence is estimated to be 2 800 000 km² and the area of occupancy estimated to be 1000 km² (Garnett et al., 2011). Its distribution may have contracted, with the species likely to be disappearing or have already disappeared from most of its north-west Queensland and Northern Territory range (Lindsay, pers. comm., 2014). Its abundance has declined in western New South Wales and Victoria, and there is an inferred continuing decline in the number of mature individuals and area of occupancy. However, the species distribution is not severely fragmented and population fluctuations have not been extreme (Garnett et al., 2011).

Following assessment of the data the Committee has determined that the geographic distribution is limited, however there are insufficient data available to judge whether there are threats operating that would make the species' geographic distribution precarious for its survival. Therefore, the species has not been demonstrated to have met this required element of this criterion.

Criterion 3. Small population size and decline			
	Critically Endangered Very low	Endangered Low	Vulnerable Limited
Estimated number of mature individuals	< 250	< 2,500	< 10,000
AND either (C1) or (C2) is true			
C1 An observed, estimated or projected continuing decline of at least (up to a max. of 100 years in future	Very high rate 25% in 3 years or 1 generation (whichever is longer)	High rate 20% in 5 years or 2 generation (whichever is longer)	Substantial rate 10% in 10 years or 3 generations (whichever is longer)

C2 An observed, estimated, projected or inferred continuing decline AND its geographic distribution is precarious for its survival based on at least 1 of the following 3 conditions:				
(a)	(i) Number of mature individuals in each subpopulation	≤ 50	≤ 250	≤ 1,000
	(ii) % of mature individuals in one subpopulation =	90 – 100%	95 – 100%	100%
(b)	Extreme fluctuations in the number of mature individuals			

Evidence:

Eligible under Criterion 3C2a(ii) for listing as Vulnerable

Garnett et al. (2011) estimate the total number of individuals at <10 000, based on an extrapolation of counts undertaken in areas of NSW and Victoria. The population is suspected to have declined by 20-29% over the last three generations based on monitoring, a reduced area of occupancy and deteriorating habitat quality (Garnett et al., 2011). Threats to the species' already fragmented habitat are ongoing, with habitat continuing to be cleared for agriculture and degraded by over-grazing (BirdLife International, n.d.). This suggests that the population is likely to continue to decline at a substantial rate. Its geographic distribution is precarious for its survival as 100% of mature individuals exist in one subpopulation (Garnett et al., 2011).

The Committee considers that the estimated total number of mature individuals of this species is limited, the geographic distribution is precarious for the survival of the species because 100% of mature individuals exist in one subpopulation, and a decline in extent of occurrence, area of occupancy, habitat, number of individuals and number of locations may be inferred or projected.

Criterion 4. Very small population			
	Critically Endangered Extremely low	Endangered Very Low	Vulnerable Low
Number of mature individuals	< 50	< 250	< 1,000

Evidence:

Not eligible

Estimating population size is difficult given the species' rarity in most of its range. However, the total number of mature individuals is likely to be <10 000 (Garnett et al., 2011).

The total number of mature individuals is not considered extremely low, very low or low. Therefore, the species has not been demonstrated to have met this required element of this criterion.

Criterion 5. Quantitative Analysis			
	Critically Endangered Immediate future	Endangered Near future	Vulnerable Medium-term future
Indicating the probability of extinction in the wild to be:	≥ 50% in 10 years or 3 generations, whichever is longer (100 years max.)	≥ 20% in 20 years or 5 generations, whichever is longer (100 years max.)	≥ 10% in 100 years

Evidence:

Insufficient data to determine eligibility

Population viability analysis has not been undertaken for this species, therefore there is insufficient information to assess against this criterion

Conservation Actions

Recovery Plan

There should be a recovery plan for *Grantiella picta* (painted honeyeater) as existing mechanisms are not adequate to stop its decline and support recovery. The species has a widespread scattered distribution that spans five states and occurs on public and private land held across multiple land holders and land tenures. Threats to the species are ongoing, particularly to its woodland habitat which continues to be cleared and degraded across its range. Only two state governments, Victoria and New South Wales, have identified management actions for the species. All of these factors make planning recovery for this species complicated, and best managed through a nationally coordinated recovery plan.

Primary Conservation Objectives

1. Stable population at key sites
2. No further clearance of suitable habitat
3. Adequate numbers of mature trees and mistletoe populations across its distribution

Conservation and Management Actions

1. Protect all woodland from clearing in which painted honeyeaters have been regularly sighted, including remnant roadside vegetation and regrowth
2. Place all areas of public land that contain the species under secure conservation management, particularly those in timber reserves, transport corridors and areas owned by local government
3. Promote ecological management of woodland remnants and regrowth on public or private land, including maintaining adequate populations of mature trees and trees that host the species' preferred mistletoe species
4. Promote revegetation and land reclamation that recreates woodland habitat with a full complement of biodiversity, including the painted honeyeater
5. Control firewood collection from areas occupied by painted honeyeaters, and reduce grazing densities to a level where mistletoe host population dynamics are secured over the long term

Monitoring priorities

1. Population trends at key sites
2. Health of key sites, particularly where there are management interventions

Information and research priorities

1. Ecology and locations during the non-breeding season, including foraging resources in the northern parts of the species' distribution
2. Improved understanding of reproductive success and causes of nest failure across a range of habitats, and influence on the species' population viability
3. Improved estimates of population size and distribution

Recommendations

- (i) The Committee recommends that the list referred to in section 178 of the EPBC Act be amended by **including** in the list in the Vulnerable category:

Grantiella picta

- (ii) The Committee recommends that there should be a recovery plan for this species.

Threatened Species Scientific Committee

04/03/2015

References cited in the advice

- Barea LP (2008a). *Interactions Between Frugivores and their Resources: Case Studies with the Painted Honeyeater Grantiella picta*. PhD Thesis, Charles Sturt University.
- Barea LP (2008b). Nest-site selection by the Painted Honeyeater (*Grantiella picta*), a mistletoe specialist. *Emu* 108: 213-220.
- Barea LP (2012) Habitat influences on nest-site selection by the Painted Honeyeater (*Grantiella picta*): do food resources matter? *Emu* 112: 39–45.
- Barea LP (2014). Personal communication by email, 17 December 2014. New Zealand Department of Conservation.
- Barea LP and Herrera MLG (2009). Sources of protein in two semi-arid zone mistletoe specialists: Insights from stable isotopes. *Austral Ecology* 34: 821–828.
- Barea LP and Watson DM (2007). Temporal variation in food resources determines onset of breeding in an Australian mistletoe specialist. *Emu* 107: 203–209.
- Barea LP and Watson DM (2013). Trapped between popular fruit and preferred nest location – cafeterias are poor places to raise a family. *Functional Ecology* 27(3): 766-774.
- BirdLife International (n.d.). 'Species factsheet: *Grantiella picta*'. Retrieved 24 June, 2014 from <http://www.BirdLife.org/datazone/species>
- Department of Environment and Primary Industries (DEPI) (2014). Submission in response to the listing nomination for the painted honeyeater. Flora and Fauna Guarantee Scientific Advisory Committee, Department of Environment and Primary Industries, Victoria.
- Department of the Environment (DotE) (2015). 'Species Profile and Threats Database: EPBC Act List of Threatened Ecological Communities'. Available on the internet at: <http://www.environment.gov.au/cgi-bin/sprat/public/publiclookupcommunities.pl>
- Ford HA, Walters JR, Cooper CB, Debus SJS and Doerr VAJ (2009). Extinction debt or habitat change? - Ongoing losses of woodland birds in north-eastern New South Wales. *Biological Conservation* 142: 3182-3190.

Garnett ST, Szabo JK and Dutson G (2011). *The Action Plan for Australian Birds 2010*. Birds Australia, CSIRO Publishing, Melbourne.

Higgins PJ, Peter JM, Steele WK, eds. (2001) *Handbook of Australian, New Zealand and Antarctic Birds. Volume 5: Tyrant-flycatchers to Chats*. Oxford University Press, Melbourne.

Lindsay K (2014). Personal communication by email, 17 December 2014. BirdLife Southern NSW.