Australian Government
Department of Agriculture, Water and the Environment

Consultation Document on Listing Eligibility and Conservation Actions

Aphelocephala leucopsis (Southern Whiteface)

You are invited to provide your views and supporting reasons related to:

1) the eligibility of *Aphelocephala leucopsis* (Southern Whiteface) for inclusion on the EPBC Act threatened species list in the Vulnerable category; and

2) the necessary conservation actions for the above species.

Evidence provided by experts, stakeholders and the general public are welcome. Responses can be provided by any interested person.

Anyone may nominate a native species, ecological community or threatening process for listing under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) or for a transfer of an item already on the list to a new listing category. The Threatened Species Scientific Committee (the Committee) undertakes the assessment of species to determine eligibility for inclusion in the list of threatened species and provides its recommendation to the Australian Government Minister for the Environment.

Responses are to be provided in writing either by email to:
species.consultation@environment.gov.au

or by mail to:

The Director
Migratory Species Section
Biodiversity Conservation Division
Department of Agriculture, Water and the Environment
PO Box 858
Canberra ACT 2601

Responses are required to be submitted by 18 March 2022.

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General background information about listing threatened species

The Australian Government helps protect species at risk of extinction by listing them as threatened under Part 13 of the EPBC Act. Once listed under the EPBC Act, the species becomes a Matter of National Environmental Significance (MNES) and must be protected from significant impacts through the assessment and approval provisions of the EPBC Act. More information about threatened species is available on the department's website at: http://www.environment.gov.au/biodiversity/threatened/index.html.

Public nominations to list threatened species under the EPBC Act are received annually by the Department. In order to determine if a species is eligible for listing as threatened under the EPBC Act, the Threatened Species Scientific Committee (the Committee) undertakes a rigorous scientific assessment of its status to determine if the species is eligible for listing against a set of criteria. These criteria are available on the Department's website at: http://www.environment.gov.au/system/files/pages/d72dfd1a-f0d8-4699-8d43-5d95bbb02428/files/tssc-guidelines-assessing-species-2018.pdf.

As part of the assessment process, the Committee consults with the public and stakeholders to obtain specific details about the species, as well as advice on what conservation actions might be appropriate. Information provided through the consultation process is considered by the Committee in its assessment. The Committee provides its advice on the assessment (together with comments received) to the Minister regarding the eligibility of the species for listing under a particular category and what conservation actions might be appropriate. The Minister decides to add, or not to add, the species to the list of threatened species under the EPBC Act. More detailed information about the listing process is at: http://www.environment.gov.au/biodiversity/threatened/nominations.html.

To promote the recovery of listed threatened species and ecological communities, conservation advices and where required, recovery plans are made or adopted in accordance with Part 13 of the EPBC Act. Conservation advices provide guidance at the time of listing on known threats and priority recovery actions that can be undertaken at a local and regional level. Recovery plans describe key threats and identify specific recovery actions that can be undertaken to enable recovery activities to occur within a planned and logical national framework. Information about recovery plans is available on the department's website at: http://www.environment.gov.au/biodiversity/threatened/recovery.html.

Privacy notice

The Department will collect, use, store and disclose the personal information you provide in a manner consistent with the Department's obligations under the *Privacy Act 1988* (Cwth) and the Department's Privacy Policy.

Any personal information that you provide within, or in addition to, your comments in the threatened species assessment process may be used by the Department for the purposes of its functions relating to threatened species assessments, including contacting you if we have any questions about your comments in the future.

Further, the Commonwealth, State and Territory governments have agreed to share threatened species assessment documentation (including comments) to ensure that all States and Territories have access to the same documentation when making a decision on

the status of a potentially threatened species. This is also known as the 'common assessment method'. As a result, any personal information that you have provided in connection with your comments may be shared between Commonwealth, State or Territory government entities to assist with their assessment processes.

The Department's Privacy Policy contains details about how respondents may access and make corrections to personal information that the Department holds about the respondent, how respondents may make a complaint about a breach of an Australian Privacy Principle, and how the Department will deal with that complaint. A copy of the Department's Privacy Policy is available at: http://environment.gov.au/privacy-policy .

Information about this consultation process

Responses to this consultation can be provided electronically or in hard copy to the contact addresses provided on Page 1. All responses received will be provided in full to the Committee and then to the Australian Government Minister for the Environment.

In providing comments, please provide references to published data where possible. Should the Committee use the information you provide in formulating its advice, the information will be attributed to you and referenced as a 'personal communication' unless you provide references or otherwise attribute this information (please specify if your organisation requires that this information is attributed to your organisation instead of yourself). The final advice by the Committee will be published on the department's website following the listing decision by the Minister.

Information provided through consultation may be subject to freedom of information legislation and court processes. It is also important to note that under the EPBC Act, the deliberations and recommendations of the Committee are confidential until the Minister has made a final decision on the nomination, unless otherwise determined by the Minister.

Consultation Document for *Aphelocephala leucopsis* (Southern Whiteface)

Aphelocephala leucopsis (Southern Whiteface) © Copyright, Imogen Warren

Conservation status

Aphelocephala leucopsis (Southern Whiteface) is being assessed by the Threatened Species Scientific Committee to be eligible for listing under the EPBC Act. The Committee's preliminary assessment is at Attachment A. The Committee's preliminary assessment of the species' eligibility against each of the listing criteria is:

- Criterion 1: A2bc+3c+4bc: Vulnerable
- Criterion 2: Not eligible
- Criterion 3: Not eligible
- Criterion 4: Not eligible
- Criterion 5: Insufficient data

The main factor that appears to make the species eligible for listing in the Vulnerable category is that the population has declined substantially by an estimated 30 to 50% every ten years (one generation 2.9 years) since 1999, with no indication that the declines are slowing (Ehmke et al. 2021). Evidence for loss is now strong and is based largely on reporting rate data (Ehmke et al.

2021). There are currently estimated to be 477,000 (range 236,000–954,000) mature individuals in the wild (S Garnett pers. comm. 9 Nov 2021). This estimate includes 67,000 (range 36,000–134,000) *A. l. castaneiventris* individuals and 410,000 (range 200,000–820,000) *A. l. leucopsis* individuals (S Garnett pers. comm. 9 Nov 2021). The extent of occurrence (EOO) for the species is estimated to be 4,910,000 km2 (Australian Government) with a stable trend (Ehmke et al. 2021), however the area of occupancy (AOO) is contracting and is estimated to be 70,000 km^2 (range 34,400–140,000 km^2) (Ehmke et al. 2021). Habitat loss and fragmentation is likely the cause of the species decline, especially in the parts of the species' range where there has been complete removal of habitat for intensive agriculture (Ehmke et al. 2021)

Species can also be listed as threatened under state and territory legislation. For information on the current listing status of this species under relevant state or territory legislation, see the Species Profile and Threat Database.

Species information

Taxonomy

Conventionally accepted as *Aphelocephala leucopsis* (Gould 1841).

Two subspecies are recognised: *A. l. leucopsis* (South-east Southern Whiteface),the nominate subspecies found throughout south-eastern and central Australia; and *A. l. castaneiventris* (South-west Southern Whiteface) found in central and southern of Western Australia.

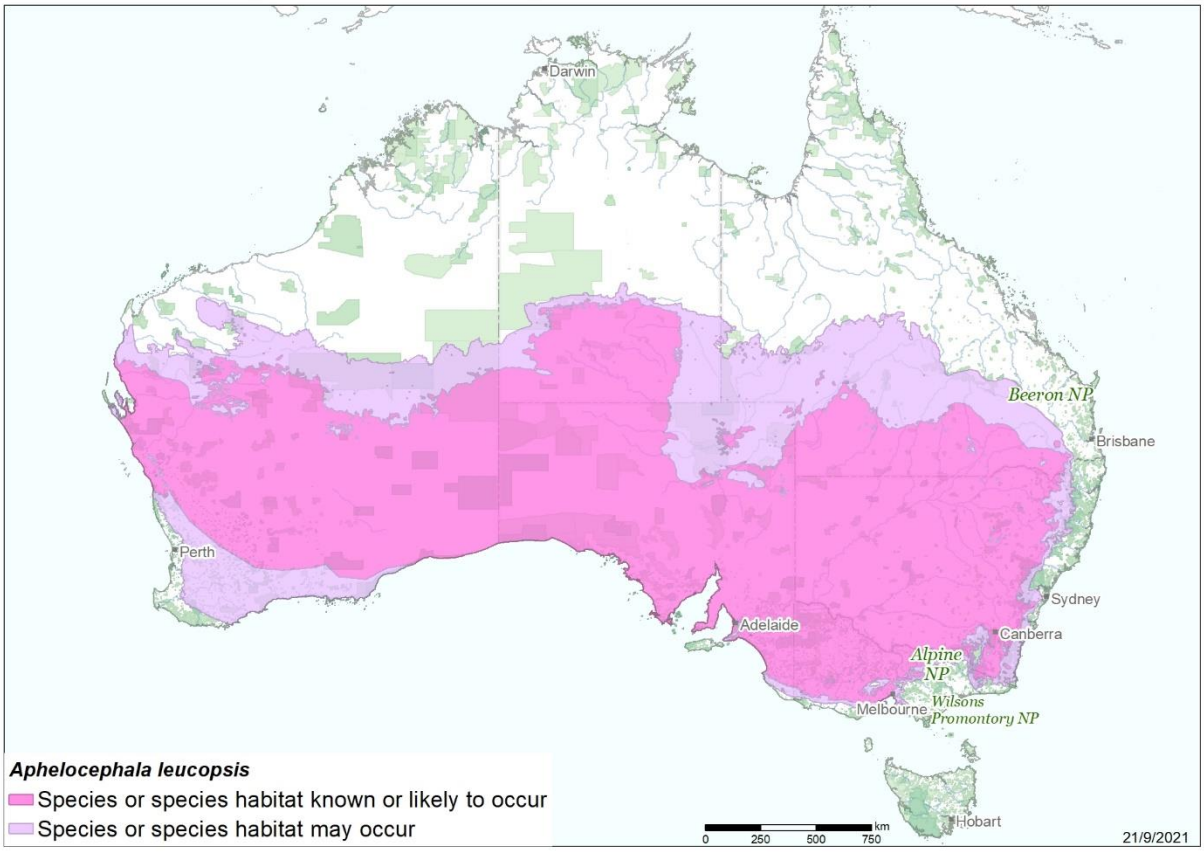
Description

The Southern Whiteface is a small stocky thornbill-like bird with a brown dorsum, white belly, dark brown wings and a black tail with narrow white tip (Schodde & Mason 1999). A grey wash on the belly is sometimes present, along with a grey or rufous tinge to the flanks. The species displays the characteristic facial markings of the genus: a white band across the forehead, with a darker streak along the top edge. Adult birds are approximately 11.5 cm in length with a cream coloured eye, grey legs and a stubby dark grey bill of finch-like appearance (Schodde & Mason 1999). Adults are sexually monomorphic, while juveniles are distinguishable due to a lack of black rear band on the face.

Distribution

Southern Whiteface occur across most of mainland Australia south of the tropics, from the north-eastern edge of the Western Australian wheatbelt, east to the Great Dividing Range (Schodde & Mason 1999) (Map 1). There is a broad hybrid zone between the two subspecies extending north from the western edge of the Nullarbor Plain. The northern boundary extends to about Carnarvon in the west, to the southern Northern Territory in central Australia, but is slightly further south in Queensland where the species is largely confined to the south-west of the Mitchell Grass Downs and along the southern state border (Schodde & Mason 1999).

Map 1 Modelled distribution of Southern Whiteface



Source: Base map Geoscience Australia; species distribution data Species of National Environmental Significance database.

Cultural and community significance

Southern Whiteface are known to occur on the lands of over 100 Indigenous Peoples across southern mainland Australia (Ehmke et al. 2021). The cultural and community significance of the species is not known. Further research into the subject area may benefit the conservation of the species by providing insights into traditional land management.

Relevant biology and ecology

Southern Whitefaces live in a wide range of open woodlands and shrublands where there is an understorey of grasses or shrubs, or both. These areas are usually in habitats dominated by acacias or eucalypts on ranges, foothills and lowlands, and plains (Higgins & Peter 2002). Southern Whitefaces are considered sedentary; however, atlas records indicate that individuals may move into wetter areas outside of their normal range during drought years (Higgins & Peter 2002).

Southern Whiteface forage almost exclusively on the ground, favouring habitat with low tree densities and an herbaceous understory litter cover. Birds mainly feed on insects, spiders, and seeds, largely gleaned from the bare ground or leaf litter (Higgins & Peter 2002; Antos & Bennett 2006; Antos et al. 2008). Although the species typically forages in small groups of 2–8 individuals, birds may congregate in larger flocks during the non-breeding season, with as many as 70 birds recorded in foraging parties in winter (Higgins & Peter 2002). The species often participates in mixed species feeding flocks, particularly with other whiteface and thornbill species.

Breeding takes place from July to October throughout most of the species' range, however, the timing of breeding can be affected by rainfall in arid regions (Higgins & Peter 2002). Birds may breed outside of their usual season following sufficient rainfall, or may not breed at all during drought. Birds build large bulky domed nest of grass, bark and roots, usually in a hollow or crevice, although sometimes in low bushes (Higgins & Peter 2002). Little is known about the species' social organisation. Nesting is often observed to involve pairs, but there have also been multiple occurrences of co-operative breeding recorded, with up to four adults participating in chick rearing (Higgins & Peter 2002). A clutch size of 3–4 eggs is typical. The length of the incubation period is unknown, but young fledge between 14–19 days after hatching (Higgins & Peter 2002). The generation length is estimated at 2.8 years (Bird et al. 2020).

Habitat critical to the survival

Habitat critical to the survival or important habitats of a species or ecological community refers to areas that are necessary:

- for activities such as foraging, breeding, roosting, or dispersal;
- for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators);
- to maintain genetic diversity and long-term evolutionary development; or
- for the reintroduction of populations or recovery of the species or ecological community.

Habitat critical to the survival of the Southern Whiteface includes areas of:

- relatively undisturbed open woodlands and shrublands with an understorey of grasses or shrubs, or both;
- habitat with low tree densities and an herbaceous understory litter cover which provides essential foraging habitat;
- living and dead trees with hollows and crevices which are essential for roosting and nesting.

Any known or likely habitat (Map 1) should be considered as habitat critical to the survival of the species. Additionally, areas that are not currently occupied by the species due to recent disturbance (e.g. fire, grazing or human activity), but should became suitable again in the future, should also be considered habitat critical to the survival of the species.

No Critical Habitat as defined under section 207A of the EPBC Act has been identified or included in the Register of Critical Habitat.

Southern Whiteface habitat occurs in a wide range of land ownership arrangements, including on private land, Indigenous Protected Areas, travelling stock routes and reserves, state forests and state reserves, and National Parks. It is essential that the highest level of protection is provided to these areas and that enhancement and protection measures target these productive sites.

Habitat critical to the survival should not be cleared, fragmented or degraded. If removal of habitat critical to the survival cannot be avoided or mitigated, then an offset should be provided. Actions identified in this document may form suitable offsets.

Threats

Habitat loss and fragmentation is likely the cause of the species decline, especially in the parts of the species' range where there has been complete removal of habitat for intensive agriculture (Ehmke et al. 2021). Droughts may have local impacts (Ellis & Taylor 2014) and are likely to become more frequent and severe (Evans et al. 2017). Modelling suggests optimal climatic conditions for the species will retract to the south (Garnett & Franklin 2014) because of rainfall reductions (Garnett et al. 2013). However, whitefaces live in some of the driest and hottest parts of the country, yet they have declined in places that are generally far wetter (Ehmke et al. 2021).

Table 1 Threats impacting Southern Whiteface

Threat	Status and severity [a]	Evidence
Habitat loss, degradation, and fragmentation		
Habitat loss caused by clearing for large scale agriculture	• Status: current & future • Confidence: known • Consequence: moderate • Trend: increasing • Extent: across part of its range	The main threats to bird survival in agricultural areas is habitat loss caused by over-clearing of native vegetation, and subsequent degradation of the remnant vegetation (Stevens 2001). Since European settlement, over 80% of woodlands in south-east Australia have been cleared (Bradshaw 2012). Remaining remnants are generally isolated, small, and are often below the critical size needed to sustain healthy populations of many bird species (Olsen et al. 2005). As habitats become increasingly fragmented due to clearing, native birds become more vulnerable to other threats such as predation by feral species and destructive fires. Highly fragmented habitats also have reduced immigration rates, limiting the ability of source populations to recolonise once suitable habitat (Olsen et al. 2005). Habitat loss is a significant threat affecting some Southern Whiteface populations. For instance, the south-western subspecies is largely absent from areas with intensive agriculture. However, a study by Maron and Lill (2005) in Victoria found no effect of habitat fragment area, isolation, fragmentation, quality or vegetation complexity. Further research is needed to understand population dynamics in these areas. The precautionary principle should be applied to safeguard all known and potential suitable habitats.

Threat	**Status and severity** [a]	**Evidence**
Habitat degradation caused by domestic livestock grazing	• Status: historical, current & future • Confidence: known • Consequence: moderate • Trend: increasing • Extent: across part of its range	Native tree and shrub seedlings and grassy woodland groundcover species are highly susceptible to domestic livestock grazing. Unlike native herbivores, most domestic stock are hard-hoofed and cause significantly more damage to soil structure from compaction, and damage to native plants by trampling (Willson & Bignall 2009). This can lead to a reduction or removal of understorey habitat (e.g., native shrubs, herbs and grasses) which can reduce foraging and nesting sites, reduce shelter, and consequently increase the risk of predation for birds (Olsen et al. 2005). The other major influence of livestock grazing is its interaction with weed invasion (Martine & Alan 2005). Livestock grazing can exacerbate the spread of weeds through seed dispersal, soil and vegetation disturbance, and nutrient enrichment (Martine & Lill 2005).
Climate change		
Increased frequency or length of droughts	• Status: current & future • Confidence: known • Consequence: unknown • Trend: increasing • Extent: across the entire range	Parts of south-west, south-east, and eastern Australia–including parts of south-east Queensland and southern and eastern New South Wales–have seen substantial declines in cool-season rainfall in recent decades (BOM & CSIRO 2020). It is predicted that Australia will spend more time under drought conditions, with longer drought duration and more intense drought, particularly across southern and eastern Australia (Evans et al. 2017; Kirono et al. 2020). Droughts impact food resources (e.g., native grasses, nectar and arthropods) for a range of woodland birds in Australia, which, in turn, decreases bird abundance. Ellis and Taylor (2014) found that reporting rates for Southern Whiteface declined during the millennium drought; however, longer monitoring is needed to determine if these declines are short-term responses due to drought conditions or are responses to other long-term impacts (e.g., environmental deterioration). Modelling suggests optimal climatic conditions for the species will retract to the south (Garnett & Franklin 2014) because of rainfall reductions (Garnett et al. 2013).

Threat	Status and severity [a]	Evidence
		However, whitefaces live in some of the driest and hottest parts of the country, yet they have declined in places that are generally far wetter. Further studies are needed to better understand the impact of drought on the species.
Increased likelihood of extreme events (i.e., wildfire, drought and heatwaves)	• Status: current & future • Confidence: known • Consequence: unknown • Trend: increasing • Extent: across the entire range	Since 1950, the number of record hot days (above 35°C) across Australia has more than doubled and the mean temperature has increased by about 1.4°C since 1910 (BOM & CSIRO 2020; IPCC 2021). Heatwaves are also lasting longer, reaching more extreme maximum temperatures, and are occurring more frequently over many regions of Australia, including south-eastern Australia (Perkins-Kirkpatrick et al. 2016; Evans et al. 2017; Herold et al. 2018; BOM & CSIRO 2020). Heatwaves also exacerbate drought, which in turn can also increase bushfire risk (Climate Council 2014) and adversely impact resource availability (BOM & CSIRO 2020). Birds are also vulnerable to extreme heatwaves that overwhelm their physiological limits (McKechnie et al 2012). It is not fully known how these weather events, or the cumulative effect of these weather events, affect Southern Whiteface survival and reproduction and its habitat. The precautionary principle should be applied to ensure suitable quality and quantity of habitat needed by the species is conserved across its known and suspected range.

Status—identify the temporal nature of the threat;

Confidence—identify the extent to which we have confidence about the impact of the threat on the species;

Consequence—identify the severity of the threat;

Trend—identify the extent to which it will continue to operate on the species;

Extent—identify its spatial content in terms of the range of the species.

Each threat has been described in Table 1 in terms of the extent that it is operating on the species. The risk matrix (Table 3) provides a visual depiction of the level of risk being imposed by a threat and supports the prioritisation of subsequent management and conservation actions. In preparing a risk matrix, several factors have been taken into consideration, they are: the life stage they affect; the duration of the impact; and the efficacy of current management regimes, assuming that management will continue to be applied appropriately (Table 2). The risk matrix (Table 3) and ranking of threats has been developed in consultation with experts, community consultation and by using available literature.

Table 2 Risk prioritisation

Likelihood	Consequences				
	Not significant	**Minor**	**Moderate**	**Major**	**Catastrophic**
Almost certain	Low risk	Moderate risk	Very high risk	Very high risk	Very high risk
Likely	Low risk	Moderate risk	High risk	Very high risk	Very high risk
Possible	Low risk	Moderate risk	High risk	Very high risk	Very high risk
Unlikely	Low risk	Low risk	Moderate risk	High risk	Very high risk
Unknown	Low risk	Low risk	Moderate risk	High risk	Very high risk

Categories for likelihood are defined as follows:
Almost certain – expected to occur every year
Likely – expected to occur at least once every five years
Possible – might occur at some time
Unlikely – such events are known to have occurred on a worldwide basis but only a few times
Rare or Unknown – may occur only in exceptional circumstances; OR it is currently unknown how often the incident will occur
Categories for consequences are defined as follows:
Not significant – no long-term effect on individuals or populations
Minor – individuals are adversely affected but no effect at population level
Moderate – population recovery stalls or reduces
Major – population decreases
Catastrophic – population extinction

Table 3 Southern Whiteface risk matrix

Likelihood	Consequences				
	Not significant	**Minor**	**Moderate**	**Major**	**Catastrophic**
Almost certain			• Habitat degradation caused by domestic livestock grazing	• Habitat loss caused by clearing for large-scale agriculture	
Likely		• Increased frequency or length of droughts	• Increased likelihood of extreme events (i.e., wildfire and heatwaves)		
Possible					
Unlikely					
Unknown					

Priority actions have been developed to manage the threat particularly where the risk was deemed to be 'very high' or 'high'. For those threats with an unknown or low risk outcome it may be more appropriate to identify further research or maintain a watching brief.

Conservation and recovery actions

Primary conservation outcome

- Stable population trends in both subspecies.
- The causes of current population declines are understood.

Conservation and management priorities

Habitat loss caused by clearing for large-scale agriculture

- Cease all land clearing of habitat critical to the survival of Southern Whiteface.
- Secure occupied habitat patches in areas with a patchy distribution from further degradation and loss.
- Undertake revegetation, using a diverse mix of locally appropriate native species, focussing on expanding and connecting areas of existing habitat or widening wildlife corridors wherever possible. Where appropriate:
  - Establish new habitat patches in areas where native vegetation cover is lacking.
  - Target the productive lower parts of the landscape which may provide important drought refuges. To maximise these benefits, riparian plantings should be at least 50 m wide.
- Promote ecological management and connectivity of woodland remnants on public and private land.
- Promote the uptake of agriculture and biodiversity stewardship programs to retain Southern Whiteface habitat.

Habitat degradation caused by domestic livestock grazing

- Prevent intensive grazing in high value habitats.
- Modify grazing management practices that will maintain or improve habitat values and still allow some grazing to occur at strategic times of the year.

Stakeholder engagement/community engagement

- Raise awareness among landholders in areas known to be important for the species, to engage them in proactive management and monitoring of the species' population on their land.
- Promote ecological management and connectivity of woodland remnants on public and private land.
- Coordinate recovery efforts among different jurisdictions and stakeholders.
- Target in-perpetuity covenants or stewardship agreements to landholders with high quality remnant woodland habitat.
- Support community education programs to achieve regional conservation outcomes.
- Engage landholders to adopt appropriate grazing regimes.

Survey and monitoring priorities

- Monitor long term trends and status of the species.
- Use climate modelling techniques to investigate the potential impacts of climate change (e.g., increased likelihood of extreme events or increased frequency and length of drought) on the species and their habitat critical for survival.

Information and research priorities

- Determine reasons for population declines.
- Understand demography, breeding success and movement ecology with respect to climate variables.
- Develop appropriate management interventions for each subspecies.

Recovery plan decision

A decision about whether there should be a recovery plan for this species has not yet been determined. The purpose of this consultation document is to elicit additional information to help inform this decision.

Conservation Advice and Listing Assessment references

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Attachment A: Listing Assessment for *Aphelocephala leucopsis*

Reason for assessment

Prioritisation of a nomination from the TSSC.

Assessment of eligibility for listing

This assessment uses the criteria set out in the EPBC Regulations. The thresholds used correspond with those in the IUCN Red List criteria except where noted in criterion 4, sub-criterion D2. The IUCN criteria are used by Australian jurisdictions to achieve consistent listing assessments through the Common Assessment Method (CAM).

Key assessment parameters

Table 4 includes the key assessment parameters used in the assessment of eligibility for listing against the criteria.

Table 4 Key assessment parameters

Metric	Estimate used in the assessment	Minimum plausible value	Maximum plausible value	Justification
Number of mature individuals	477,000	236,000	954,000	The population estimates of the two Southern Whiteface subspecies (67,000 (36,000-134,000) *A. l. castaneiventris,* and 410,000 (200,000-820,000) *A. l. leucopsis*) are the product of the three measures of AOO and the density recorded in 2 ha 20 min surveys (*A. l. castaneiventris* 3.36±SD 2.50; *A. l. leucopsis* 3.42± SD 2.75; Birdata cited in Ehmke et al. 2021). Each 2x2 km square contributing to the AOO is assumed to indicate 16 ha of suitable habitat (S Garnett pers. comm. 9 Nov 2021). The following assumptions are made in the estimates of the population size: • The AOO, which attributes 2x2 km of habitat to any point at which the species is recorded, is based only on sightings of birds that have been entered into the BirdLife Australia database (S Garnett pers. comm. 9 Nov 2021). Many areas occupied by the species are likely to be unrecorded. From some, however, the birds may have disappeared since the record was made. For this reason, the AOO has wide error margins (S Garnett pers. comm. 9 Nov 2021). • The area surveyed within any part of the AOO is likely to be small

Metric	Estimate used in the assessment	Minimum plausible value	Maximum plausible value	Justification
				relative to the total 2x2 km assumed to be occupied (S Garnett pers. comm. 9 Nov 2021). In some 2x2 km AOO squares, the entire area will be suitable habitat and occupied. In others, only a fragment of occupied habitat may remain. For there to be a record at all must mean there is 2 ha of habitat in which the species was present in at least part at the time of the survey (S Garnett pers. comm. 9 Nov 2021). The population estimates assume that double that area is available within every 2x2 km, which is deliberately highly conservative (S Garnett pers. comm. 9 Nov 2021). • The density is based on surveys in which observers have noted the number of individuals they have seen during a survey. The number of individuals recorded during surveys is highly variable (S Garnett pers. comm. 9 Nov 2021). The reliability of this population estimate is low (S Garnett pers. comm. 9 Nov 2021).
Trend	Declining			The species has been long marked as declining, the evidence for loss is now strong and based largely on reporting rates (Ehmke et al. 2021).
Generation time (years)	2.8	2.1	3.5	Bird et al. (2020). The reliability of this estimate is low.
Extent of occurrence	4,910,000 km^2			The EOO was calculated using occurrence records from 2000–2021 (Australia Government 2021).
Trend	Stable			The EOO trends for both subspecies is estimated to be stable (Ehmke et al. 2021). The reliability of this estimate is low.
Area of Occupancy	80,000 km^2	65,000 km^2	140,000 km^2	The minimum AOO is the number of 2x2 km squares within which they have been recorded since 1990 but, given the remoteness of much of the distribution, the real AOO is assumed to be at least twice that and probably twice that again (Ehmke et al. 2021). The reliability of this estimate is low.
Trend	Contracting			Trends in range-wide reporting rates for both subspecies since 2000 have been strongly negative with a high level of significance (Ehmke et al. 2021). The reliability of this estimate is high.
Number of subpopulations	1	1	1	Ehmke et al. (2021). The reliability of this estimate is low.

Metric	Estimate used in the assessment	Minimum plausible value	Maximum plausible value	Justification
Trend	Stable			Ehmke et al. (2021). The reliability of this estimate is high.
Basis of assessment of subpopulation number	There are no impediments to dispersion across the large ranges of either subspecies, so both are assumed to be panmictic (Ehmke et al. 2021).			
No. locations	>10			Ehmke et al. (2021)
Trend	Not calculated			Ehmke et al. (2021)
Basis of assessment of location number	The spatial nature of the threats, even though stochastic in space and time, is such that there are >10 geographically or ecologically distinct areas where a single threatening event could affect all individuals of either taxon present within a period of three years (Ehmke et al. 2021).			
Fragmentation	Not severely fragmented (Ehmke et al. 2021).			
Fluctuations	Not subject to extreme fluctuations in EOO, AOO, number of subpopulations, locations or mature individuals (Ehmke et al. 2021).			

Criterion 1 Population size reduction

Reduction in total numbers (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%

A1 Population reduction observed, estimated, inferred or suspected in the past and the causes of the reduction are clearly reversible AND understood AND ceased.

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.

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*]

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.

Based on any of the following

(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

Criterion 1 evidence

Eligible under Criterion 1 A2bc+3c+4bc **for listing as** Vulnerable

Southern Whitefaces occur across most of mainland Australia south of the tropics from the north-eastern edge of the Western Australian wheatbelt east to the Great Dividing Range. There

is a broad hybrid zone between the two subspecies extending north from the western edge of the Nullarbor Plain. The northern boundary extends to about Carnarvon in the west, to the southern Northern Territory in central Australia, but is slightly further south in Queensland, where the species is largely confined to the south-west of the Mitchell Grass Downs and along the southern state border (Schodde & Mason 1999).

Reporting rate data can be used to determine bird species abundance. Data used in trend analyses are limited to standardised bird surveys drawn from discrete (spatially separated) sites which have multiple repeat observations over time. Trends in range-wide reporting rates for both subspecies since 2000 have been strongly and significantly negative (Ehmke et al. 2021). For South-west Southern Whitefaces, reporting rates in 2 ha 20 min counts and 500 m radius area searches from 2000–2020 declined by 86% and 46%, respectively (2000–2009: -35% and -35%; 2010–2019: -49%, +3%). For South-east Southern Whitefaces, the equivalent figures were 64% and 72% from 1999–2000 (2000–2009: -49% and -20%; 2010–2019: -57% and -65%). South-east Southern Whitefaces are one of a suite of taxa often considered to be declining at a local level, including around Adelaide, western New South Wales and northern Victoria (Paton et al. 1994; Reid 1999; Olsen et al. 2005) and they disappeared after the millennium drought in central New South Wales (Ellis & Taylor 2014). There are no comparable regional data for South-west Southern Whitefaces.

However, reporting rates for some periods, and from some localities, have not been negative. Reporting rates were stable between the first Australian Bird Atlas (1977–1981) and the second (1998–2001) for the whole species (Barrett et al. 2002); in New South Wales reporting rates in less wooded bioregions increased between Atlases (Barrett et al. 2007); there was no significant change in reporting rates from 2 ha 20 min surveys for 1999–2013 for the Arid Zone and Mallee regions (BirdLife Australia 2015); or in surveys during 2000–2015 at over 165 sites in southern New South Wales (Lindenmayer et al. 2018). Reporting rates in the Australian Capital Territory show a four-fold fluctuation, with peaks around 1989 and 2009 and troughs in 2000 and 2017 (Canberra Ornithologists Group 2019).

Overall, declines across the range of both subspecies are 30–50% every ten years (one generation 2.9 years) since 1999, with no suggestion that the declines are slowing (Ehmke et al. 2021). There is no clear reason for declines in either Southern Whiteface subspecies, except in that part of the range where there has been complete removal of habitat for intensive agriculture (Ehmke et al. 2021).

The data presented above appear to demonstrate that the species is **eligible for listing as Vulnerable** under this criterion. However, the purpose of this consultation document is to elicit additional information to better understand the species' status. This conclusion should therefore be considered to be tentative at this stage, as it may be changed as a result of responses to this consultation process.

Criterion 2 Geographic distribution as indicators for either extent of occurrence AND/OR area of occupancy

		Critically Endangered Very restricted	Endangered Restricted	Vulnerable Limited
B1.	Extent of occurrence (EOO)	**< 100 km²**	**< 5,000 km²**	**< 20,000 km²**
B2.	Area of occupancy (AOO)	**< 10 km²**	**< 500 km²**	**< 2,000 km²**
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; (iv) number of mature individuals			

Criterion 2 evidence

Not eligible

Southern Whiteface extent of occurrence (EOO) is estimated to be 4,910,000 km² (Australian Government 2021) with a stable trend (Ehmke et al. 2021), however the area of occupancy (AOO) is contracting and is estimated at 70,000 km² (range 34,400–140,000 km²) (Ehmke et al. 2021). The population is not considered severely fragmented and there are no impediments to dispersion across the large range of the species (Ehmke et al. 2021). The number of locations has not been calculated but is assumed to be greater than 10 (Ehmke et al. 2021). The spatial nature of the threats, even though stochastic in space and time, is such that there are thought to be more than 10 geographically or ecologically distinct areas were a single threatening event could affect all individuals of either taxon present within a period of 10 years (Ehmke et al. 2021). The species is not subject to extreme fluctuations in EOO, AOO, number of subpopulations, locations or mature individuals (Ehmke et al. 2021).

The data presented above appear to demonstrate that the species is not eligible for listing under this criterion. However, the purpose of this consultation document is to elicit additional information to better understand the species' status. This conclusion should therefore be considered to be tentative at this stage, as it may be changed as a result of responses to this consultation process.

Criterion 3 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				

Criterion 3 evidence

Not eligible

There are currently estimated to be 477,000 (range 236,000–954,000) mature individuals in the wild (S Garnett pers. comm. 9 Nov 2021) with a declining trend (Ehmke et al. 2021). This estimate includes 67,000 (range 36,000–134,000) *A. l. castaneiventris* individuals and 410,000 (range 200,000–820,000) *A. l. leucopsis* individuals. The reliability of all population estimates is very low (S Garnett pers. comm. 9 Nov 2021). The population estimates of the two subspecies are the product of the three measures of AOO and the density recorded in 2 ha 20 min surveys (*A. l. castaneiventris* 3.36±SD 2.50; *A. l. leucopsis* 3.42± SD 2.75; Birdata cited in Ehmke et al. 2021). The species is not subject to extreme fluctuations in EOO, AOO, number of subpopulations, locations or mature individuals (Ehmke et al. 2021).

The data presented above appear to demonstrate that the species is not eligible for listing under this criterion. However, the purpose of this consultation document is to elicit additional information to better understand the species' status. This conclusion should therefore be considered to be tentative at this stage, as it may be changed as a result of responses to this consultation process.

Criterion 4 Number of mature individuals

	Critically Endangered Extremely low	Endangered Very Low	Vulnerable Low
D. Number of mature individuals	< 50	< 250	< 1,000
D2.[1] *Only applies to the Vulnerable category* Restricted area of occupancy or number of locations with a plausible future threat that could drive the species to critically endangered or Extinct in a very short time			D2. Typically: area of occupancy < 20 km² or number of locations ≤ 5

[1] The IUCN Red List Criterion D allows for species to be listed as Vulnerable under Criterion D2. The corresponding Criterion 4 in the EPBC Regulations does not currently include the provision for listing a species under D2. As such, a species cannot currently be listed under the EPBC Act under Criterion D2 only. However, assessments may include information relevant to D2. This information will not be considered by the Committee in making its recommendation of the species' eligibility for listing under the EPBC Act, but may assist other jurisdictions to adopt the assessment outcome under the *common assessment method*.

Criterion 4 evidence

Not eligible

There are currently estimated to be 477,000 (range 236,000–954,000) mature individuals in the wild (S Garnett pers. comm. 9 Nov 2021) with a declining trend (Ehmke et al. 2021). This estimate includes 67,000 (range 36,000–134,000) *A. l. castaneiventris* individuals and 410,000 (range 200,000–820,000) *A. l. leucopsis* individuals. The reliability of all population estimates is very low (S Garnett pers. comm. 9 Nov 2021). The population estimates of the two subspecies are the product of the three measures of AOO and the density recorded in 2 ha 20 min surveys (*A. l. castaneiventris* 3.36±SD 2.50; *A. l. leucopsis* 3.42± SD 2.75; Birdata cited in Ehmke et al. 2021).

The data presented above appear to demonstrate that the species is not eligible for listing under this criterion. However, the purpose of this consultation document is to elicit additional information to better understand the species' status. This conclusion should therefore be considered to be tentative at this stage, as it may be changed as a result of responses to this consultation process.

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,	≥ 20% in 20 years or 5 generations,	≥ 10% in 100 years

	whichever is longer (100 years max.)	whichever is longer (100 years max.)	

Criterion 5 evidence

Insufficient data to determine eligibility

Population viability analysis appears not to have been undertaken, and therefore there is insufficient data to demonstrate if the species is eligible for listing under this criterion. However, the purpose of this consultation document is to elicit additional information to better understand the species' status. This conclusion should therefore be considered to be tentative at this stage, as it may be changed as a result of responses to this consultation process.

Adequacy of survey

The survey effort has been considered adequate and there is sufficient scientific evidence to support the assessment.

CONSULTATION QUESTIONS FOR *Aphelocephala leucopsis* (Southern Whiteface)

SECTION A - GENERAL

1. Is the information used to assess the nationally threatened status of the species/subspecies robust? Have all the underlying assumptions been made explicit? Please provide justification for your response.

2. Can you provide additional data or information relevant to this assessment?

3. Have you been involved in previous state, territory or national assessments of this species/subspecies? If so, in what capacity?

PART 1 – INFORMATION TO ASSIST LISTING ASSESSMENT

SECTION B DO YOU HAVE ADDITIONAL INFORMATION ON THE ECOLOGY OR BIOLOGY OF THE SPECIES/SUBSPECIES? (If no, skip to section C)

Biological information

4. Can you provide any additional or alternative references, information or estimates on longevity, average life span and generation length?

5. Do you have any additional information on the ecology or biology of the species/subspecies not in the current advice?

SECTION C ARE YOU AWARE OF THE STATUS OF THE TOTAL NATIONAL POPULATION OF THE SPECIES/SUBSPECIES? (If no, skip to section D)

Population size

6. Has the survey effort for this taxon been adequate to determine its national adult population size? If not, please provide justification for your response.

7. Do you consider the way the population size has been derived to be appropriate? Are there any assumptions and unquantified biases in the estimates? Did the estimates measure relative or absolute abundance? Do you accept the estimate of the total population size of the species/subspecies? If not, please provide justification for your response.

8. If not, can you provide a further estimate of the current population size of mature adults of the species/subspecies (national extent)? Please provide supporting justification or other information.

   If, because of uncertainty, you are unable to provide a single number, you may wish to provide an estimated range. If so, please choose one of the ranges suggested in the table below of possible species/subspecies numbers, and also choose the level of confidence you have in this estimate:

   Number of mature individuals is estimated to be in the range of:

   ☐ <100,000 ☐ 100,001-200,000 ☐ 200,001-300,000 ☐ 300,001-400,000

☐ 400,001-500,000 ☐ >500,001-600,000 ☐ 600,001-700,000 ☐ >700,001

Level of your confidence in this estimate:

☐ 0–30% - low level of certainty/ a bit of a guess/ not much information to go on

☐ 31–50% - more than a guess, some level of supporting evidence

☐ 51–95% - reasonably certain, information suggests this range

☐ 95–100% - high level of certainty, information indicates quantity within this range

☐ 99–100% - very high level of certainty, data are accurate within this range

SECTION D ARE YOU AWARE OF TRENDS IN THE OVERALL POPULATION OF THE SPECIES/SUBSPECIES? (If no, skip to section E)

9. Does the current and predicted rate of decline used in the assessment seem reasonable? Do you consider that the way this estimate has been derived is appropriate? If not, please provide justification of your response.

Evidence of total population size change

10. Are you able to provide an estimate of the total population size during the late 2000s *(at or soon after the start of the most recent three generation period)*? Please provide justification for your response.

    If, because of uncertainty, you are unable to provide a single number, you may wish to provide an estimated range. If so, please choose one of the ranges suggested in the table below of possible species/subspecies numbers, and also choose the level of confidence you have in this estimate.

    Number of mature individuals is estimated to be in the range of:

    ☐ <100,000 ☐ 100,001-200,000 ☐ 200,001-300,000 ☐ 300,001-400,000

    ☐ 400,001-500,000 ☐ >500,001-600,000 ☐ 600,001-700,000 ☐ >700,001

    Level of your confidence in this estimate:

    ☐ 0–30% - low level of certainty/ a bit of a guess/ not much information to go on

    ☐ 31–50% - more than a guess, some level of supporting evidence

    ☐ 51–95% - reasonably certain, information suggests this range

    ☐ 95–100% - high level of certainty, information indicates quantity within this range

    ☐ 99–100% - very high level of certainty, data are accurate within this range

11. Are you able to comment on the extent of decline in the species/subspecies' total population size over the last approximately 13 years (i.e., three generations)? Please provide justification for your response.

If, because of uncertainty, you are unable to provide an estimate of decline, you may wish to provide an estimated range. If so, please choose one of the ranges suggested in the table below of ranges of decline, and also choose the level of confidence you have in this estimated range.

Decline estimated to be in the range of:

☐ 1–30% ☐31–50% ☐51–80% ☐81–100% ☐90–100%

Level of your confidence in this estimated decline:

☐ 0–30% - low level of certainty/ a bit of a guess/ not much information to go on

☐ 31–50% - more than a guess, some level of supporting evidence

☐ 51–95% - reasonably certain, suggests this range of decline

☐ 95–100% - high level of certainty, information indicates a decline within this range

☐ 99–100% - very high level of certainty, data are accurate within this range

12. Please provide (if known) any additional evidence which shows the population is stable, increasing or declining.

SECTION E ARE YOU AWARE OF INFORMATION ON THE TOTAL RANGE OF THE SPECIES/SUBSPECIES? (If no, skip to section F)

Current Distribution/range/extent of occurrence, area of occupancy

13. Does the assessment consider the entire geographic extent and national extent of the species/subspecies? If not, please provide justification for your response.

14. Has the survey effort for this species/subspecies been adequate to determine its national distribution? If not, please provide justification for your response.

15. Is the distribution described in the assessment accurate? If not, please provide justification for your response and provide alternate information.

16. Do you agree that the way the current extent of occurrence and/or area of occupancy have been estimated is appropriate? Please provide justification for your response.

17. Can you provide estimates (or if you disagree with the estimates provided, alternative estimates) of the extent of occurrence and/or area of occupancy.

    If, because of uncertainty, you are unable to provide an estimate of extent of occurrence, you may wish to provide an estimated range. If so, please choose one of the ranges suggested in the table below of ranges of extent of occurrence, and also choose the level of confidence you have in this estimated range.

    Current extent of occurrence is estimated to be in the range of:

    ☐ <1,000,000 km^2 ☐ 1,000,001-2,000,000 km^2 ☐ 2,000,001-3,000,000 km^2

    ☐ 3,000,001-4,000,000 km^2 ☐ 4,000,001-5,000,000 km^2 ☐ >5,000,001 km^2

Level of your confidence in this estimated extent of occurrence

☐ 0–30% - low level of certainty/ a bit of a guess/ not much data to go on

☐ 31–50% - more than a guess, some level of supporting evidence

☐ 51–95% - reasonably certain, data suggests this range of decline

☐ 95–100% - high level of certainty, data indicates a decline within this range

☐ 99–100% - very high level of certainty, data is accurate within this range

If, because of uncertainty, you are unable to provide an estimate of area of occupancy, you may wish to provide an estimated range. If so, please choose one of the ranges suggested in the table below of ranges of area of occupancy, and also choose the level of confidence you have in this estimated range.

Current area of occupancy is estimated to be in the range of:

☐ <50,000 km^2 ☐ 50,001-100,000 km^2 ☐ 100,001-150,000 km^2 ☐ >150,001 km^2

Level of your confidence in this estimated extent of occurrence:

☐ 0–30% - low level of certainty/ a bit of a guess/ not much data to go on

☐ 31–50% - more than a guess, some level of supporting evidence

☐ 51–95% - reasonably certain, data suggests this range of decline

☐ 95–100% - high level of certainty, data indicates a decline within this range

☐ 99–100% - very high level of certainty, data is accurate within this range

SECTION F ARE YOU AWARE OF TRENDS IN THE TOTAL RANGE OF THE SPECIES/SUBSPECIES? (If no, skip to section G)

Past Distribution/range/extent of occurrence, area of occupancy

18. Do you consider that the way the historic distribution has been estimated is appropriate? Please provide justification for your response.

19. Can you provide estimates (or if you disagree with the estimates provided, alternative estimates) of the former extent of occurrence and/or area of occupancy.

    If, because of uncertainty, you are unable to provide an estimate of past extent of occurrence, you may wish to provide an estimated range. If so, please choose one of the ranges suggested in the table below of ranges of past extent of occurrence, and also choose the level of confidence you have in this estimated range.

    Past extent of occurrence is estimated to be in the range of:

    ☐ <1,000,000 km^2 ☐ 1,000,001-2,000,000 km^2 ☐ 2,000,001-3,000,000 km^2

    ☐ 3,000,001-4,000,000 km^2 ☐ 4,000,001-5,000,000 km^2 ☐ >5,000,001 km^2

Level of your confidence in this estimated extent of occurrence

☐ 0–30% - low level of certainty/ a bit of a guess/ not much data to go on

☐ 31–50% - more than a guess, some level of supporting evidence

☐ 51–95% - reasonably certain, data suggests this range of decline

☐ 95–100% - high level of certainty, data indicates a decline within this range

☐ 99–100% - very high level of certainty, data is accurate within this range

If, because of uncertainty, you are unable to provide an estimate of past area of occupancy, you may wish to provide an estimated range. If so, please choose one of the ranges suggested in the table below of ranges of past area of occupancy, and also choose the level of confidence you have in this estimated range:

Past area of occupancy is estimated to be in the range of:

☐ <50,000 km^2 ☐ 50,001-100,000 km^2 ☐ 100,001-150,000 km^2 ☐ >150,001 km^2

Level of your confidence in this estimated extent of occurrence:

☐ 0–30% - low level of certainty/ a bit of a guess/ not much data to go on

☐ 31–50% - more than a guess, some level of supporting evidence

☐ 51–95% - reasonably certain, data suggests this range of decline

☐ 95–100% -high level of certainty, data indicates a decline within this range

☐ 99–100% - very high level of certainty, data is accurate within this range

PART 2 – INFORMATION FOR CONSERVATION ADVICE ON THREATS AND CONSERVATION ACTIONS

SECTION G DO YOU HAVE INFORMATION ON THREATS TO THE SURVIVAL OF THE SPECIES/SUBSPECIES? (If no, skip to section H)

20. Do you consider that all major threats have been identified and described adequately?

21. To what degree are the identified threats likely to impact on the species/subspecies in the future?

22. Are the threats impacting on different populations equally, or do the threats vary across different populations?

23. Can you provide additional or alternative information on past, current or potential threats that may adversely affect the species/subspecies at any stage of its life cycle?

24. Can you provide supporting data/justification or other information for your responses to these questions about threats?

SECTION H DO YOU HAVE INFORMATION ON CURRENT OR FUTURE MANAGEMENT FOR THE RECOVERY OF THE SPECIES/SUBSPECIES? (If no, skip to section I)

25. What planning, management and recovery actions are currently in place supporting protection and recovery of the species/subspecies? To what extent have they been effective?

26. Can you recommend any additional or alternative specific threat abatement or conservation actions that would aid the protection and recovery of the species/subspecies?

27. Would you recommend translocation (outside of the species' historic range) as a viable option as a conservation actions for this species/subspecies?

SECTION I DO YOU HAVE INFORMATION ON STAKEHOLDERS IN THE RECOVERY OF THE SPECIES/SUBSPECIES?

28. Are you aware of other knowledge (e.g., traditional ecological knowledge) or individuals/groups with knowledge that may help better understand population trends/fluctuations, or critical areas of habitat?

29. Are you aware of any cultural or social importance or use that the species/subspecies has?

30. What individuals or organisations are currently, or potentially could be, involved in management and recovery of the species/subspecies?

31. How aware of this species/subspecies are land managers where the species/subspecies is found?

32. What level of awareness is there with individuals or organisations around the issues affecting the species/subspecies?

    a. Where there is awareness, what are these interests of these individuals/organisations?

    b. Are there populations or areas of habitat that are particularly important to the community?

PART 3 – ANY OTHER INFORMATION

33. Do you have comments on any other matters relevant to the assessment of this species/subspecies?