



Consultation Document on Listing Eligibility and Conservation Actions

***Neochmia phaeton evangelinae* (crimson finch (white-bellied))**

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

- 1) the eligibility of *Neochmia phaeton evangelinae* (crimson finch (white-bellied)) for inclusion on the EPBC Act threatened species list; 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 and Energy.

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

or by mail to:

The Director
Marine and Freshwater Species Conservation Section
Wildlife, Heritage and Marine Division
Department of the Environment and Energy
PO Box 787
Canberra ACT 2601

Responses are required to be submitted by 19 May 2017.

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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 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/biodiversity/threatened/pubs/guidelines-species.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>.

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 Minister.

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.

Neochmia phaeton evangelinae

crimson finch (white-bellied)

Taxonomy

Conventionally accepted as *Neochmia phaeton evangelinae* (d'Albertis & Salvadori 1879).

Sub-species Information

Description

The crimson finch (white-bellied) is a small bird that measures about 13 cm long, has a wing-span of about 16 or 17 cm, and a mass of about 8-10 g (Higgins et al. 2006).

The plumage of the adults differs between the sexes. The adult males have a bright red face, bill, throat and breast, and have bright red flanks that have a series of white spots running along them. They have greyish-brown colouring on the crown and back of the head, the rear and sides of the neck, the back and shoulders, and the upper surfaces of the wings. The brownish-grey colouring on the back and shoulders, and on the upper surfaces of the wings, is suffused with red. They have white colouring on the under surfaces of the wings, a white to cream belly, and white to cream thighs and under-tail coverts; the tail itself is mainly red above, with darker centres to the feathers, and brown below, with red trim. Their irises vary in colour from red to brownish, and they have brownish legs and feet (Higgins et al. 2006).

The adult females have a bright red face, but differ from the adult males in having a brownish-grey breast, brown flanks (that retain the white spotting of the male), and brown thighs and uppertail coverts. They have paler, greyish-brown colouring on the crown and back of the head, the rear and sides of the neck, the back and shoulders, and the upper surfaces of the wings, and the red suffusion on the back and shoulders, and on the upper surfaces of the wings, is paler and weaker than in the adult males. The appearance is otherwise similar to that of adult males (Higgins et al. 2006).

Juvenile birds can be distinguished from the adults. The most obvious differences are the predominantly brown plumage (including brown plumage on the face), the duller and less extensive suffusion of red, the dark brown or greyish-black bill, and the absence of the white spots on the flanks (Higgins et al. 2006).

Distribution

The crimson finch (white-bellied) occurs on the Cape York Peninsula in Queensland, and in the Fly region of southern Papua New Guinea (Coates 1990; Schodde & Mason 1999).

In Australia, the crimson finch (white-bellied) is found only on the Cape York Peninsula in northern Queensland (Schodde & Mason 1999), where it occurs in four separate subpopulations. The four subpopulations are located near Aurukun, near Pormpuraaw, at Magnificent Creek (near Kowanyama), and in Lakefield National Park, where the crimson finch (white-bellied) has been recorded along the Normanby River and in surrounding areas to the north, and along the Laura River to the south (Dorricott & Garnett 2007; Garnett & Crowley 2000).

The crimson finch (white-bellied) populations in Australia and Papua New Guinea are geographically separated by Torres Strait, and the crimson finch (white-bellied) is not known to undertake long-distance movements (Higgins et al. 2006). This indicates that the crimson finch (white-bellied) population in Australia is genetically isolated from the crimson finch (white-bellied) population in Papua New Guinea (Garnett & Crowley 2000).

Relevant Biology/Ecology

The crimson finch (white-bellied) occurs in rank grasses and other vegetation that grows near bodies of fresh water such as rivers and swamps. It is more common in habitats that are associated with *Pandanus* or dune swales (Dorricott & Garnett 2007; Garnett & Bredl 1985; MacGillivray 1918).

Two key habitat types have been identified. The first, *Pandanus* type habitat, is usually located within 10 km of the coast, and consists of swampy grasslands with scattered *Pandanus spiralis*, or dune woodlands with a dense understorey of long grass, a midstorey dominated by *P. spiralis*, and a canopy comprised of varying species of trees. Crimson finch (white-bellied) sub-populations near Aurukun and Pormpuraaw inhabit this type of habitat (Dorricott & Garnett 2004).

The second key habitat, cane-grass type habitat, consists of open forest with a dense understorey of grasses, and is usually located along watercourses. This is the type of habitat used by the crimson finch (white-bellied) sub-populations near Kowanyama and in the Lakefield region. The canopy in cane-grass habitat is usually dominated by *Corymbia tessellaris* on the east coast of the Cape York Peninsula, and by *C. tessellaris* var. *dallachyana* on the west coast. The midstorey includes deciduous shrubs and palms such as *Corypha elata* and species of *Livistona*. In the Lakefield region, the understorey is mostly composed of *Chionachne cyathopoda*, although other grasses probably fulfil a similar role (Dorricott & Garnett 2007). The crimson finch (white-bellied) has also been recorded around human settlement at Pormpuraaw (Garnett & Bredl 1985). The species builds a domed grass nest in *Pandanus* or *Corypha* palms (Todd 2002) and lays up to six eggs (Immelman 1982).

The preferred habitat of the crimson finch (white-bellied) is regularly burnt by wildfire and deliberate burning. The finch is able to persist in burnt areas by occupying unburnt shrubs and other habitat remnants nearby. For example, near Pormpuraaw, the crimson finch (white-bellied) moved from its burnt preferred habitat in vegetation surrounding a lagoon in a crocodile farm, into unburnt vine forest on nearby sand dunes (Garnett & Crowley 2000).

A generation time of 3.5 years (Garnett et al. 2011) is derived from an average age at first breeding of 1.0 years, an annual survival of adults of 50 percent, both extrapolated from mean values for *Estrildidae*, and a maximum longevity in the wild of 6.9 years, extrapolated from *P. personata* (Masked Finch) (Australian Bird and Bat Banding Scheme unpublished data).

Threats

The crimson finch (white bellied) is threatened by invasion of habitat by rubber vine (*Cryptostegia grandis*) and altered timing of fire events in canegrass habitat (Dorricott & Garnett 2007).

Table 1 – Threats impacting the crimson finch (white-bellied) in approximate order of severity of risk, based on available evidence.

| Threat factor | Threat type and status | Evidence base |
|--|------------------------|--|
| Invasive species | | |
| Invasion of riparian habitats by rubber vine | known present | Invasion of preferred habitats by rubber vine (a weed of national significance) is a threat to the crimson finch (white bellied) as it shades out grasses used by the species (Dorricott & Garnett 2007). Rubber vine infestations have been associated with the disappearance of the species from previously occupied sites, including Laura River (Garnett et al. 2011). |

| | | |
|-------------------------------|-------------------|---|
| Fire | | |
| Altered timing of fire events | suspected present | Fire events that occur late in the dry season in canegrass type habitat pose a threat to the crimson finch (white bellied) as they destroy the canegrasses that provide shelter for the species (Dorricott & Garnett 2007). |

Assessment of available information 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> <p>(a) direct observation [except A3]</p> <p>(b) an index of abundance appropriate to the taxon</p> <p>(c) a decline in area of occupancy, extent of occurrence and/or quality of habitat</p> <p>(d) actual or potential levels of exploitation</p> <p>(e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites</p> | | |

Evidence:

The Australian population of crimson finch (white bellied) is estimated at approximately 2 000 mature individuals and the population is thought to be stable (Garnett et al. 2011).

The data presented above appear to demonstrate 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 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 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 indicating distribution is precarious for survival: | | | |
| (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

Evidence:

The extent of occurrence (EOO) is estimated at approximately 55 000 km² and area of occupancy (AOO) is estimated as 156 km² (DOEE 2017), and both are thought to be stable (Garnett et al. 2011).

The data presented above appear to demonstrate 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 | | | |

Evidence:

The Australian population of crimson finch (white-bellied) is estimated at approximately 2 000 mature individuals and the population is thought to be stable (Garnett et al. 2011).

The data presented above appear to demonstrate 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 |
| Number of mature individuals | < 50 | < 250 | < 1,000 |

Evidence:

The Australian population of crimson finch (white-bellied) is estimated at approximately 2 000 mature individuals and the population is thought to be stable (Garnett et al. 2011).

The data presented above appear to demonstrate 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, whichever is longer (100 years max.) | ≥ 20% in 20 years or 5 generations, whichever is longer (100 years max.) | ≥ 10% in 100 years |

Evidence:

As a population viability analysis appears not to have been undertaken, 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.

Consideration for delisting

The crimson finch (white-bellied) appears not to be eligible for listing under the EPBC Act as it does meet any of the listing criteria. The species is considered near threatened in the Bird Action Plan 2010 due to the population nearing 2 000 mature individuals (Garnett et al. 2011). While population declines likely occurred during the 20th century, the current population and the extent and area of occurrence are considered stable (Garnett et al. 2011).

While there is a recovery plan in place for the crimson finch (white-bellied), it is unclear to what extent the plan is being enacted and how any actions that might be occurring are benefitting the survival of the species.

As a listed threatened species, the crimson finch (white-bellied) is afforded protection under the EPBC Act (1999) as a 'matter of national environmental significance'. This means that any person who proposes to take an action that will have, or is likely to have, a significant impact on the crimson finch (white-bellied) must refer that action to the minister for a decision on whether assessment and approval is required under the EPBC Act. More information on the significant impact guidelines can be found at <https://www.environment.gov.au/epbc/publications/significant-impact-guidelines-11-matters-national-environmental-significance>. If the crimson finch (white-bellied) is removed from list of threatened species then it will no longer be protected as a matter of national environmental significance.

The purpose of this consultation document is to elicit additional information to better understand the species' status and what impacts, if any, would likely occur if the crimson finch (white-bellied) were to be removed from the list of threatened species.

Conservation Actions

Recovery Plan

The crimson finch (white-bellied) is currently included in the 'National recovery plan for the white-bellied subspecies of the crimson finch *Neochmia phaeton evangelinae* and the Northern subspecies of the star finch *Neochmia ruficauda clarescens*' (Dorricott & Garnett 2007). This

recovery plan sunsets in April 2022. A decision about whether there should be a recovery plan for this species, if it is not removed from the threatened species list of the EPBC Act, after that plan has expired has not yet been determined. The purpose of this consultation document is to elicit additional information to help inform this decision.

Primary Conservation Actions

The primary conservation actions for the crimson finch (white-bellied) in the recovery plan focus on active habitat management to control rubber vine.

Conservation and Management Priorities

Habitat loss disturbance and modifications

- Manage rubber vine at crimson finch (white-bellied) sites in Lakefield National Park and on Magnificent Creek.
- Undertake burning at selected sites at Lakefield National Park to maintain grassland structure.

Survey and Monitoring priorities

- Undertake monitoring to more precisely assess population size, distribution and ecological requirements of the crimson finch (white-bellied).

Information and Research priorities

- Investigate the importance of Pormpuraaw lagoon for the crimson finch (white-bellied), and develop a management strategy if required.
- Assess the potential for re-introduction at Lockhart River.

Collective list of questions – your views

1. Do you agree with the current taxonomic position of the Australian Faunal Directory and Birdlife Australia for this species (as identified in the draft conservation advice)?
2. Can you provide any additional references, information or estimates on longevity, age of maturity, average life span and generation length?
3. Has the survey effort for this species been adequate to determine its national distribution and adult population size?
4. Do you accept the estimate provided in the nomination for the current population size of the species?
5. For any population with which you are familiar, do you agree with the population estimate provided? If not, are you able to provide a plausible estimate based on your own knowledge? If so, please provide in the form:
Lower bound (estimated minimum):
Upper bound (estimated maximum):
Best Estimate:
Estimated level of Confidence: %
6. Can you provide any additional data, not contained in the current nomination, on declines in population numbers over the past or next 10 years or 3 generations, whichever is the longer?
7. Is the distribution as described in the nomination valid? Can you provide an estimate of the current geographic distribution (extent of occurrence or area of occupancy in km²) of this species?
8. Has this geographic distribution declined and if so by how much and over what period of time?
9. Do you agree that the species is eligible for inclusion on the threatened species list, in the category listed in the nomination?
10. Do you agree that the threats listed are correct and that their effects on the species are significant?
11. To what degree are the identified threats likely to impact on the species in the future?
12. Can you provide additional or alternative information on past, current or potential threats that may adversely affect this species at any stage of its life cycle?
13. In seeking to facilitate the recovery of this species, can you provide management advice for the following:
 - What individuals or organisations are currently, or need to be, involved in planning to abate threats, and any other relevant planning issues?
 - What threats are impacting on different populations, how variable are the threats and what is the relative importance of the different populations?
 - What recovery actions are currently in place, and can you suggest other actions that would help recover the species? Please provide evidence and background information.
14. Can you provide additional data or information relevant to this assessment?
15. Can you advise as to whether this species is of cultural significance to Indigenous Australians?

References cited in the advice

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