

## RECOVERY OUTLINE

# Crimson Finch (white-bellied)

1	Family	Estrildidae
2	Scientific name	<i>Neochmia phaeton evangelinae</i> d'Albertis & Salvadori, 1879
3	Common name	Crimson Finch (white-bellied)
4	Conservation status	Endangered: B1+2c

### 5 Reasons for listing

This subspecies is known with certainty from only three locations, with a total area of about 200 km<sup>2</sup> (Endangered: B1), and has a history of decline that suggests the quality of habitat has deteriorated and may continue to do so (2c). Global status is Least Concern but the status of the Australian population is assessed independently, because it is genetically isolated from the extralimital population in New Guinea (as per Gärdenfors *et al.*, 1999).

Australian population	Estimate	Reliability
Extent of occurrence	55,000 km <sup>2</sup>	medium
trend	stable	medium
Area of occupancy	200 km <sup>2</sup>	low
trend	decreasing	medium
No. of breeding birds	2,000	low
trend	stable	medium
No. of sub-populations	3	medium
Largest sub-population	1,000	low
Generation time	2 years	low
Global population share	10 %	low
Level of genetic exchange	low	high

### 6 Intraspecific taxa

*N. p. phaeton* (central-eastern and north-western Queensland, northern Northern Territory, northern Western Australia) is Least Concern, as is the species. Although no morphological differences has been detected between Australian and New Guinea populations, behaviour and geography suggest they have been separated at least as long as other taxa that are now considered separate subspecies. Black-bellied birds at Pormpuraaw (M. Todd) and on the Laura R. (W. Entsch) may represent gene flow from further south (Schodde and Mason, 1999) but, given the distance between the subspecies' distributions, seem more likely to be aberrant individuals (M. Todd).

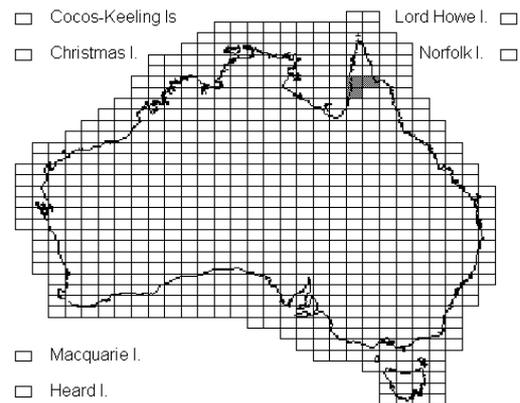
### 7 Past range and abundance

Southern New Guinea and near coastal Cape York Peninsula, where three, possibly four, separate sub-populations (Schodde and Mason, 1999). On west coast, disjunct distribution: at mouth of Archer R., near Aurukun, along Edward and Chapman Rivers, near Pormpuraaw, and along Magnificent Ck, near Kowanyama (MacGillivray 1918, Thompson, 1935, Garnett and Bredl, 1985, A. Taplin, M. Todd).

Common around Aurukun in 1913 (MacGillivray 1918). On east coast, along Claudie R. and Marina Plains (MacGillivray, 1918, Schodde and Mason, 1999).

### 8 Present range and abundance

Apparently declined in abundance in Aurukun region between 1930s and 1980s, and searches since 1913 failed to locate birds along Claudie R. (A. Taplin). On recent surveys, encountered only at Pormpuraaw, Kowanyama and along Laura R., Lakefield National Park (M. Todd).



### 9 Ecology

The white-bellied subspecies of Crimson Finch lives in rank grass and other vegetation beside watercourses, particularly in association with *Pandanus*, or in dune swales (MacGillivray, 1918, Garnett and Bredl, 1985, M. Todd). Their habitat is regularly burnt, but the finches persist in shrubs and nearby, unburnt remnants (M. Todd), at Pormpuraaw, using the crocodile breeding lagoon and unburnt vine forest on the dunes (M. Todd). Banding and morphological studies suggests the birds are largely sedentary, and that survival is low between breeding seasons. They build a domed grass nest in the leaf bases of either *Pandanus* or *Corypha* palms (M. Todd), and lay up to 6 eggs (Immelmann, 1982).

### 10 Threats

Though there are large areas of apparently suitable habitat on both sides of Cape York Peninsula, they are largely unoccupied. Rank grasses may be removed when both pigs and stock congregate near fresh water during the dry season, such as at one former collection

site, near Aurukun (A. Taplin). Previously occupied grassland, near the Claudie R., has been replaced by rainforest, although apparently suitable habitat persists nearby (M. Todd). Fires that would be extensive enough to remove all habitat are infrequent in the riparian habitat along Laura R. and Magnificent Ck, but rare, extensive, late dry season fires may have been responsible for restricting the finch's range to small segments of creek bank. Along the Mitchell R., the native riparian vegetation is being smothered by Rubber Vine *Cryptostegia grandis*, and this may also have caused disappearance of the species along parts of the Laura R. (M. Todd). White-bellied Crimson Finches, from an unknown source, have been appearing in the Australian bird trade in the last decade. Given the limited distribution of the subspecies, bird trapping must be considered a threat.

## 11 Information required

- 11.1 Develop and analyse fire histories for areas with and without finches and determine whether differences in timing and frequency of fire can explain the presence of finches and the patchiness of rubber vine.
- 11.2 Undertake genetic comparisons with population in New Guinea and southern subspecies.

## 12 Recovery objectives

- 12.1 Ensure persistence of known sub-populations, and any others that may be discovered.

- 12.2 Explore the option of reintroduction to Aurukun and Lockhart R.

## 13 Actions completed or under way

- 13.1 A two-year study of Star Finch ecology is under way.
- 13.2 A fire history is being developed for the Laura basin.

## 14 Management actions required

- 14.1 In consultation with local land managers, develop and implement fire management based on fire history analysis.
- 14.2 Establish a captive breeding population with the aim of undercutting the illegal market.
- 14.3 Consult communities at Aurukun and Lockhart R. about reintroduction.

## 15 Organisations responsible for conservation

Queensland Parks and Wildlife Service.

## 16 Other organisations involved

Pormpuraaw and Kowanyama Community Councils, Rimmerr Aboriginal Corporation, Northern Territory University, Cooperative Research Centre for Sustainable Development of Tropical Savannas, Natural Heritage Trust, Olivevale Station.

## 17 Staff and financial resources required for recovery to be carried out

Staff resources required 2001-2005

0.2

Project Officer

Financial resources required 2001-2005

Action	Conservation agencies	Other funding sources	Total
Continue study of ecology <sup>1</sup>	\$19,000	\$24,500	\$43,500
Genetic comparisons <sup>1</sup>	\$0	\$5,000	\$5,000
Fire histories <sup>2</sup>	\$5,000	\$3,000	\$8,000
Plan and implement appropriate fire management <sup>2</sup>	\$5,000	\$5,000	\$10,000
Captive breeding	\$0	\$18,000	\$18,000
Assess reintroduction	\$4,000	\$0	\$4,000
<b>Total</b>	<b>\$33,000</b>	<b>\$55,500</b>	<b>\$88,500</b>

<sup>1</sup> Costs shared with Star Finch. (Cape York Peninsula)

<sup>2</sup> Fire history and management protocols are being developed for a variety of purposes, costs shared with Star Finch (Cape York Peninsula) and Golden-shouldered Parrot and relate only to specific costs for finch habitat

## 18 Bibliography

Blakers, M., Davies, S. J. F. and Reilly, P. N. 1984. *The Atlas of Australian Birds*. RAOU and Melbourne University Press, Melbourne.

Gärdenfors, U., Rodríguez, J.P., Hilton-Taylor, C., Hyslop, C., Mace, G., Molur, S. and Poss, S. 1999. Draft guidelines for the Application of IUCN Red List Criteria at National and Regional Levels. *Species* 31-32:58-70.

Garnett, S. T. and Bredl, R. 1985 An annotated list of the birds in the Vicinity of Edward River Settlement. *Sunbird* 15:6-23, 25-40.

Immelmann, K. 1982. *Australian Finches*. Angus and Robertson, Sydney.

MacGillivray, W. 1918. Ornithologists in north Queensland. *Emu* 17:180-212.

Schodde, R. and Mason, I. J. 1999. *The Directory of Australian Birds: Passerines*. CSIRO, Collingwood, Victoria.

Thomson, D. F. 1935. *Birds of Cape York Peninsula*. Government Printer, Melbourne.

Comments received from  
Mick Todd.