

**Advice to the Minister for the Environment and Heritage from the Threatened Species
Scientific Committee on Amendments to the list of Threatened Species under the
*Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)***

1. Scientific name, common name (where appropriate), major taxon group

Epthianura crocea tunneyi (Yellow Chat (Alligator Rivers)).

2. Description

The Yellow Chat (Alligator Rivers) is a small member of the Honeyeater family, growing to approximately 11 cm. The male is a strikingly coloured bird with a bright yellow head and underbody and a distinctive black chest band. Females are pale lemon yellow, and have no chest band. The Yellow Chat (Alligator Rivers) is mainly insectivorous and typically forages on the ground, on alluvial grassy floodplains.

3. National Context

The Yellow Chat (Alligator Rivers) is endemic to the Northern Territory and is restricted to a small geographic area encompassing the floodplains from the Adelaide River to the East Alligator River, between Oenpelli and Darwin. The Yellow Chat (Alligator Rivers) has been reported from Kakadu National Park and the Mary River National Park.

The species is currently listed as endangered under the Northern Territory *Territory Parks and Wildlife Conservation Act 2000*.

4. How judged by the Committee in relation to the EPBC Act criteria.

The Committee judges the species to be eligible for listing as **endangered** under the EPBC Act. The justification against the criteria is as follows:

Criterion 1 – It has undergone, is suspected to have undergone or is likely to undergo in the immediate future a very severe, severe or substantial reduction in numbers.

The Yellow Chat (Alligator Rivers) is known to occur in a range of river catchments in the Northern Territory, including the floodplains of the East and South Alligator, Wildman, Mary and Adelaide Rivers (Armstrong 2004).

There have been limited targeted surveys for the Yellow Chat (Alligator Rivers), with the most recent survey being undertaken in 2004 (Armstrong 2004). However, this survey was limited to Yellow Chat habitat within Kakadu National Park and did not extend to areas beyond Kakadu National Park known to be within the range of the subspecies. Results from this survey were largely comparable to earlier records of the Yellow Chat (Alligator Rivers) within Kakadu National Park, providing no evidence of recent decline in numbers within Kakadu National Park.

There are a number of threats operating in the areas where the Yellow Chat (Alligator Rivers) occurs. An immediate threat to the late dry season habitat areas favoured by the Yellow Chat (Alligator Rivers) in Kakadu National Park is damage by feral pigs. During the 2004 survey, the Yellow Chat (Alligator Rivers) was not recorded in otherwise suitable habitat where mud-banks had been significantly disturbed by pig-rooting. The impact of pigs on the Yellow Chat

(Alligator Rivers) is likely to be magnified as they both concentrate around wetter floodplain areas at the end of the dry season (Armstrong 2004).

Additional threats to the subspecies include the continuing invasion of floodplains by exotic woody weeds and introduced grasses. The Yellow Chat (Alligator Rivers) is also affected by inappropriate fire regimes. However, due to a lack of historical survey information, there are no quantitative data available to indicate past trends in the population size of the species across the entire range of the subspecies, nor any current evidence to suggest that the species is likely to undergo a decline in numbers in the immediate future.

Therefore, there are no quantitative data available to assess the species against this criterion.

Criterion 2 –Its geographic distribution is precarious for the survival of the species and is very restricted, restricted or limited.

The Yellow Chat (Alligator Rivers) is endemic to the Northern Territory and is restricted to a relatively small geographic area encompassing the floodplains from the Adelaide River to the East Alligator River, between Oenpelli and Darwin (Woinarski 2002).

The extent of occurrence of the Yellow Chat (Alligator Rivers) is estimated to be 5000 km². This estimate was derived from the Atlas of Australian Birds project. During the period of 1977-1981, the Atlas of Australian Birds project was conducted on a national scale. This project collected bird records and observations from volunteers and is now known as the First Atlas of Australian Birds. During 1988, the Atlas of Australian Birds project was resumed and it is ongoing to the present day. During the period of the First Atlas of Australian Birds, the Yellow Chat (Alligator Rivers) was recorded from three separate locations – the South Alligator River floodplains, the Mary River floodplains and the Darwin area where a specimen was collected from the Leanyer sewage ponds. The extent of occurrence of 5000 km² was derived from calculating the area of the minimum convex polygon that encompasses all records from the First Atlas.

An extent of occurrence of less than 5000 km² was also endorsed by the Northern Territory Department of Infrastructure, Planning and Environment (Armstrong 2004). The species area of occupancy is estimated to be less than 500 km², based on the extent of the floodplain habitats that the Yellow Chat (Alligator Rivers) has been recorded in (Armstrong 2004).

There are a number of threats operating in the areas where the Yellow Chat (Alligator Rivers) occurs. It is likely that the subspecies is most vulnerable towards the end of the dry season when it appears to be concentrated in relatively small areas of suitable habitat (Armstrong 2004).

An immediate threat to the late dry season habitat areas favoured by the Yellow Chat (Alligator Rivers) in Kakadu National Park is damage by feral pigs. During the 2004 survey, the Yellow Chat (Alligator Rivers) was not recorded in otherwise suitable habitat where mud-banks had been significantly disturbed by pig-rooting. The impact of pigs on the Yellow Chat (Alligator Rivers) is likely to be magnified as they both concentrate around wetter floodplain areas at the end of the dry season (Armstrong 2004). Uncontrolled grazing, trampling and wallowing by feral pigs is likely to contribute to the decline of habitat quality for the Yellow Chat (Alligator Rivers).

Additional threats to the subspecies include the continuing invasion of floodplains by exotic woody weeds such as *Mimosa pigra* and introduced grasses such as para grass, gamba grass, aleman grass and olive hymenachne, which alter habitat structure, thereby making it unsuitable for the Yellow Chat (Alligator Rivers) (Garnett & Crowley 2000; Woinarski 2002). *Mimosa pigra* can replace sedgeland and other aquatic vegetation which forms the

preferred habitat of the Yellow Chat (Alligator Rivers), drastically altering the structure and floristics of complex floodplain vegetation by replacing it with an almost monospecific tall shrubland. On the East, South Alligator and Wildman River floodplains, para grass is well established in patches and olive hymenachne is currently being controlled. Each weed species has the ability to rapidly colonise bare mudflats and, with lower moisture requirements than native floodplain grasses, they are likely to persist late into the dry season (Armstrong 2004). If these species are allowed to spread, the amount of suitable habitat available to the Yellow Chat (Alligator Rivers), particularly toward the end of the dry season, will ultimately be reduced.

The Yellow Chat (Alligator Rivers) is also affected by inappropriate floodplain fire regimes.

In conclusion, the geographic distribution of the Yellow Chat (Alligator Rivers) is restricted and is precarious for the survival of the subspecies due to a range of threats operating in its habitat, and the tendency of the subspecies to congregate in relatively small areas of suitable habitat, late in the dry season. Therefore, the species is **eligible** for listing as **endangered** under this criterion.

Criterion 3 – The estimated total number of mature individuals is limited to a particular degree and: (a) evidence suggests that the number will continue to decline at a particular rate; or (b) the number is likely to continue to decline and its geographic distribution is precarious for its survival.

There is no accurate information on the total population size for this species. The Action Plan for Australian Birds (2000) estimated that the total population size was approximately 500 birds, but acknowledged this to be of low reliability (Garnett & Crowley 2000). The most recent targeted survey undertaken in Kakadu National Park in 2004, estimated that the Kakadu population of the Yellow Chat (Alligator Rivers) is probably fewer than 300 individuals (Armstrong 2004). It is difficult to extrapolate this figure across the whole of the species' range as the Wildman, Mary and Adelaide Rivers floodplains have not been surveyed specifically for the Yellow Chat (Alligator Rivers) and may contain higher densities of the subspecies.

The Yellow Chat (Alligator Rivers) is vulnerable to a range of threats, including grazing, trampling and wallowing by feral animals, specifically feral pigs, invasion of exotic woody weeds and introduced grasses, and inappropriate fire regimes. However, due to a lack of historical survey information, there are no quantitative data available to indicate past trends in the population size of the species, nor any current evidence to suggest that the Yellow Chat (Alligator Rivers) will continue to decline at a particular rate.

Therefore, there are no quantitative data available to assess the species against this criterion.

Criterion 4 – The estimated total number of mature individuals is extremely low, very low or low.

There is no accurate information on the total population size for this species. The Action Plan for Australian Birds estimated that the total population size was approximately 500 birds, but acknowledged this to be of low reliability (Garnett & Crowley 2000).

Therefore, there are no quantitative data available to assess the species against this criterion.

Criterion 5 - Probability of extinction in the wild

There are no quantitative data available to assess the species against this criterion.

5. CONCLUSION

The Yellow Chat (Alligator Rivers) is endemic to the Northern Territory and is restricted to a small geographic area encompassing the floodplains from the Adelaide River to the East Alligator River, between Oenpelli and Darwin. The species' total extent of occurrence is estimated to be less than 5000 km² and it is vulnerable to a range of threats operating in the area, including grazing, trampling and wallowing by feral animals, specifically feral pigs, invasion of exotic woody weeds and introduced grasses, and inappropriate fire regimes.

The species is eligible for listing as **endangered** under criterion 2.

6. Recommendation

The Committee recommends that the list referred to in section 178 of the EPBC Act be amended by **including** in the list in the **endangered** category:

Epthianura crocea tunneyi (Yellow Chat (Alligator Rivers))

Publications used to assess the nomination

- Armstrong, M., Woinarski, J., Hempel, C., Connors, G. and Beggs, K. (2002). A plan for the conservation of biodiversity in the Mary River catchment, Northern Territory. Parks and Wildlife, Department of Infrastructure, Planning and Environment, Darwin.
- Armstrong, M. (2004). The yellow chat *Epthianura crocea tunneyi* in Kakadu National Park. Report to Parks Australia North (NT DIPE, Darwin)
- Garnett, S.T. and Crowley, G.M. (2000). The Action Plan for Australian Birds 2000. Environment Australian, Canberra.
- Lucas, D., Gapindi, M., and Russell-Smith, J. (1997). Cultural perspectives of the South Alligator River floodplain: continuity and change. In *Tracking knowledge in north Australian landscapes: studies in indigenous and settler ecological knowledge systems*. (eds D.B. Rose and A. Clarke). Pp120-140. (North Australian Research Unit, Darwin).
- Roberts, S.J. (1995). Fire on the Gapalg (Floodplain): contemporary Aboriginal and other burning patterns in Kakadu National Park, Northern Australia. In: *Fire in wetlands: a management perspective*. (eds S.I. Cerulan and R.T. Engstrom). Pp. 31-38 Proceedings of the Tall Timbers Fire Ecology Conference, No. 19. (Tall Timbers Research Station, Tallahassee, Florida).
- Schodde, R. and Mason, I.J. (1999). The Directory of Australian Birds: Passerines. CSIRO Publishing, Melbourne.
- Wilson, B.A., Brocklehurst, P.S., and Whitehead, P.J. (1991). Classification, distribution and environmental relationships of coastal floodplain vegetation, Northern Territory, Australia – March to May 1990. Technical Memorandum No. 91/2. (Conservation Commission of the Northern Territory, Darwin).
- Woinarski, J. (2002). Threatened Species of the Northern Territory: Yellow Chat (Alligator Rivers subspecies) *Epthianura crocea tunneyi*. Parks and Wildlife Commission of the Northern Territory Threatened Species Information Sheet, PWCNT, Darwin.