

THREATENED SPECIES SCIENTIFIC COMMITTEE

Established under the *Environment Protection and Biodiversity Conservation Act 1999*

The Minister's delegate approved this Conservation Advice on 15/07/2016.

Conservation Advice

Epthianura crocea tunneyi

yellow chat (Alligator Rivers)

Conservation Status

Epthianura crocea tunneyi (yellow chat (Alligator Rivers)) is listed as Endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act).

The yellow chat (Alligator Rivers) was listed as Endangered under the EPBC Act in 2006 based on evidence which estimated the total extent of occurrence to be less than 5000 km²; and that the subspecies is susceptible 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 (TSSC 2006).

The subspecies is listed as Endangered under the *Territory Parks and Wildlife Conservation Act 2000* (Northern Territory).

Description

The yellow chat (Alligator Rivers) is a small bird that grows to approximately 11 cm long and has a weight of approximately 9 g (Higgins et al., 2001). The adult male breeding plumage is mainly bright yellow-white, including the head, with a narrow black loreal (between the beak and the eye) stripe, olive-brown wings and back, a distinctive black chest band and a dark tail (Higgins et al., 2001). The female breeding plumage differs from the male by being olive-brown on the head with a yellow eyebrow, and a pale yellow below and lacking the black chest band (Higgins et al., 2001).

Distribution

The yellow chat (Alligator Rivers) has been recorded from a small number of sites in the Northern Territory on the floodplains of the Adelaide, Mary, Wildman, South Alligator and East Alligator rivers (Garnett et al., 2011). Most records are from within Kakadu National Park but the relative importance of the different floodplains is unknown (Garnett et al., 2011). Occasional records elsewhere, mostly from between Darwin to Oenpelli, are probably dispersive individuals. The subspecies is presumed to be a single a contiguous population (Garnett et al., 2011).

Relevant Biology/Ecology

The yellow chat (Alligator Rivers) is restricted to alluvial coastal and subcoastal grassy floodplains, primarily near floodplain depressions and channels, typically sparsely vegetated with a small number of grasses, sedges and forbs, and aggregates around refugial waterholes in the late dry season (Armstrong 2004). The subspecies has also been recorded from tall grasslands and samphire shrublands (Woinarski et al., 2007).

The yellow chat (Alligator Rivers) is mainly insectivorous, feeding on ants, beetles, bugs, flies, moths, caterpillars and spiders (Higgins et al., 2001; Armstrong 2004). The foraging behaviour of the subspecies is likely to be similar to the other subspecies of yellow chat, which pick prey

items from the ground, grass stems from branches of trees, bark and foliage (Higgins et al., 2001). Very occasionally they may sally for flying insects (Reynolds et al., 1982).

As no study has been undertaken for this subspecies, a generation length of 5.8 years is derived from an age-at-first-breeding of 1.5 years and a maximum age of 10.1 years extrapolated from other species in the family Meliphagidae (Garnett et al., 2011).

Threats

Habitat degradation from exotic plant species, pig-rooting of mud-banks by feral pigs (*Sus scrofa*), wallowing by water buffalo (*Bubalus bubalus*), altered fire regimes and saltwater intrusion are the primary threats to the yellow chat (Alligator Rivers). Invasion by the weeds, such as Mimosa (*Mimosa pigra*), para grass (*Urochloa mutica*), gamba grass (*Andropogon gayanus*), and potentially Aleman grass (*Echinochloa polystachya*) and olive hymenachne (*Hymenachne amplexicaulis*), which are established across much of the yellow chat's range, may render habitat unsuitable, although the relationship between these weeds and chat abundance has not been established and the largest population of the Capricorn yellow chat (*E. c. macgregori*) occurs on grazed land dominated by *H. amplexicaulis* (Houston & Melzer 2008).

The plains are also at risk from saltwater incursion as a result of sea level rise, though this is not straightforward as mobilisation of sediments by rising sea levels can lead to re-emergence of freshwater wetlands at a higher level (Winn et al., 2006).

Table 1 – Threats impacting the yellow chat (Alligator Rivers) in approximate order of severity of risk, based on available evidence.

Threat factor	Threat type and status	Evidence base
Habitat loss, disturbance and modifications caused by invasive species		
Invasion by exotic weeds	suspected current	Invasion by weeds such as mimosa, para grass, gamba grass and potentially Aleman grass and olive hymenachne, which are established across much of the subspecies' range, may render habitat unsuitable.
Habitat degradation by feral pigs	known current	The species has not been recorded in otherwise suitable habitats where mud-banks had been significantly disturbed by 'rooting' by feral pigs (Armstrong 2004, cited in Garnett et al., 2011).
Habitat degradation by water buffalo	potential	Wallowing by feral water buffalo will degrade habitat for the yellow chat (Alligator Rivers) if numbers are allowed to return to high densities (Garnett et al., 2011).

Invasive species		
Predation by feral cats	suspected current	Predation by feral cats (<i>Felis catus</i>) has been suggested as a threat (Woinarski et al., 2007, cited in Garnett et al., 2011).

Conservation Actions

Conservation and Management priorities

- Develop and implement a management plan designed to eradicate vertebrate pests, especially pigs, water buffalo and feral cats, from the areas which the yellow chat (Alligator Rivers) occurs.

Survey and Monitoring priorities

- Survey the population of the Alligator Rivers yellow chat and establish a monitoring protocol.
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- At a fine scale, establish high use areas and the interaction between the floodplain and elevation. Predict how a defined saltwater intrusion may affect the population.

Information and research priorities

- Determine the scale of negative impact that invasive weeds, such as mimosa, para grass, gamba grass, Aleman grass and olive hymenachne, are having on Alligator Rivers yellow chat habitat.
- Once a population monitoring program has been established, analyse population data to determine trends.
- Focus greater research on the movement trends of the species, potential for dispersal across the landscape, habitat requirements and threats.

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