THE YELLOW CHAT *EPHTHIANURA CROCEA* AT PANDIBURRA BORE, NORTH-EASTERN SOUTH AUSTRALIA

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On 27 September 1982, during a trip to the far North-East of South Australia, the authors and six other observers (see Acknowledgements) visited Pandiburra Bore on Clifton Hills Station. At least 15 Yellow Chats *Ephthianura crocea* including a breeding pair, were observed in the area of the bore drain and an adult male specimen was obtained (South Australian Museum, reg. no. B36279). This represents the first record of Yellow Chats in South Australia.

DESCRIPTIONS

Adult Male Specimen, SAM reg. no. B36279

Skull fully pneumatized, testes 4 mm x 3 mm. Throat and frons intense orange-yellow, similar to colour of male Orange Chat *E. aurifrons*. Sooty black crescent extends, from sides of neck just above shoulder level, across upper chest. Rump and remainder of undersides slightly less intense orange-yellow. Crown shading from rich orange-yellow of frons to yellow-olive on the hind neck, some feathers with a dark central streak, and a few pale fawn feathers present. Back a darker, yellow-olive with dark grey centres to each feather shading to a yellow-olive edge (giving a faintly streaked effect in the field).

Primaries and secondaries dark grey, edged light grey-yellow, primaries tipped light grey, secondaries tipped white, outer primaries worn, faded and browner. Coverts greyish, edged whitish to light yellow. Tail dark grey with fine yellow edges to feathers and tipped white. Rump golden. (In flight tail appears as dark band in contrast to the bright rump.)

Bill black, legs black. Eye-rim blackish. Iris cream. A dark line formed by several blackish feathers, extends from anterior edge of eye to base of bill.

Male Variation

The specimen described is typical of the males we observed. However, field observation and examination of photographs of several males at Pandiburra showed the following variations. Two or three were considerably paler in the lower abdominal region having a patch of very pale yellow feathers. Several differed from the specimen in the size, shape and intensity of the crescent marking on the chest. For instance, in one, the crescent marking was merely an oval smudge.

Females

General appearance similar to female *E. aurifrons* but paler above and below with a greyish head and a pale eyebrow. Throat and undertail lemon-yellow. Rump bright orange-yellow. Primaries, secondaries and coverts greyish-brown with paler edges. Back greyish-brown. Bill grey-brown shading paler at base. Legs dark, grey brown. Iris pale greyish-cream .

Comparison with Orange Chats

Orange Chats were seen in close proximity to the Yellow Chats on a number of occasions in the more open, muddy areas of the bore drain and near its edge, thus allowing a comparison of the two species.

Apart from the obvious differences of male markings and iris colour, the most notable difference we discerned between the two species in both sexes lay in the prominent pale edging of wing and tail feathers of *E. crocea*. This gave the appearance of a bird with paler, greyer wings than *E. aurifrons*. In the female *E. crocea* this extended to the overall dorsal colouring, thus resulting in a much greyer bird than the dull brown of the *E. aurifrons* female. Reynolds *et al.* (1982) noted that the wings of *E. crocea* they observed were darker than those of *E. aurifrons*. Possibly the birds they observed had lost the pale feather edgings through wear. (See Plates 1 and 2.)

Female *E. crocea* we observed had a more prominent orange-yellow rump than *E. aurifrons*.

HABITAT

Attention was first drawn to the birds by their distinctive piping calls coming from vegetation in the bore drain. The vegetation closely resembled that described by Ford and Parker (1972) for where they found the species on Coorabulka Station, South-west Queensland. It consisted predominantly of Bullrushes *Typha* sp. *ca* 2 m high and the sedge *Scirpus maritimus* up to 1 m high, both emergent in water up to 0.5 m deep. Small clumps of Swamp Canegrass *Eragrostris australasica* were scattered among the sedge. Among the areas of Bullrushes and sedge were numerous patches of open soil and mud with scattered, small (*ca* 0.5 m high), living and dead Bassia *Sclerolaena intricata* shrubs.

The chats were seen over *ca* one hectare of this type of habitat where the hot bore water had cooled and spread out into numerous channels and shallow pools. They perched on living and dead twigs and stems above the level of the *Typha* and *Scirpus*, on *Scirpus* and *Typha* flags, on top of Bassia bushes and on stones on open soil. Feeding took place among *Scirpus* flags in mud and shallow water among sedges and in the more open areas. Several birds were also observed flying out 10-15 m away from the

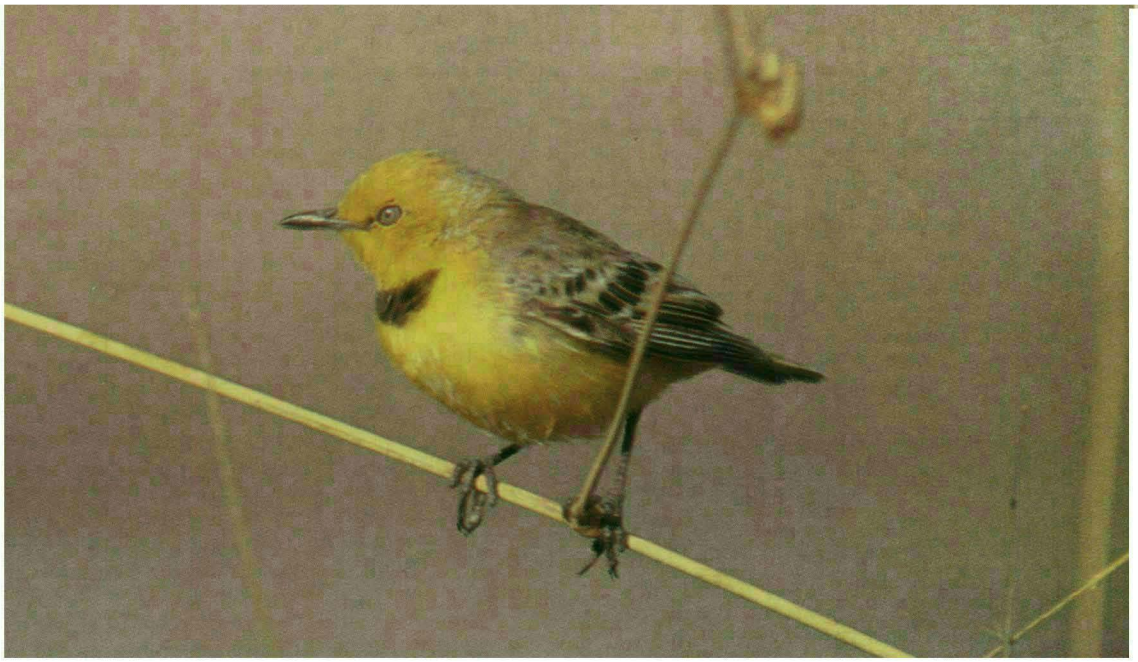

Plate 1 (above) and Plate 2 (below): Adult male and female respectively, Yellow Chats above nest at Pandiburra Bore.

Photos (above) L. Pedler; (below) G. Duggan.

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muddy edges where they fed among Bassia bushes with nearby *E. aurifrons*.

POPULATION

At least six female-phase birds were seen in the area. All were accompanied by a male and sometimes were pursued by one or two males. At least nine males were present. A pair was found to have a nest with two young in a clump of sedge, while a third was carrying food into sedges 50 m away. While 15 individuals were so identified it is likely that 20 or more birds were present.

NEST

The nest was well concealed 30 cm above the water (*ca* 40 cm deep) in a clump of sedge 1 m high which had dry Cane-grass poking through it (*ca* 2 m high). The cup nest (4-5 cm across) was made with pieces of fine, dry grass and the lining included several feathers. It contained two partially feathered young. Twice, the female attending the nest was seen with single, small damsel flies, both *ca* 2 cm in length.

CALLS AND BEHAVIOUR

The call which first attracted our attention, and which we heard continually during our day of observation, was a high pitched, three-note, piping call, *"te-tsu-te"* with the middle note either higher or lower than the first or third. It agrees well with the *"pli-pu-lii"* and *"pu-li-pii"* calls described by Woodall (1982) except that, in our observation, the second note was frequently lower than the first and third, not higher. This call was given frequently by males while perched in a variety of situations. A. B. Black did not hear a three note call but described instead a two note call *"pee-ee"* (descending) similar to that described by Pizzey (1980). This discrepancy may be due to a slight reduction of high-tone hearing acuity in some listeners.

Several display flights by males were seen. They consisted of a slow dipping flight above the level of *Typha* and sedge, with head raised and bill tilted slightly upwards. The rump feathers were fluffed out and the tail slightly depressed and spread. The call given during this flight was a metallic, piping, *"te-te-te-te. . .,"* rapidly repeated 2-15 times. A call consisting of only two notes *"te-te"* with the first note higher than the second, probably a shortened form of the display call, was also heard frequently. This call was not described by Woodall (1982).

Several males were seen pursuing females. Two males were seen carrying strips of dry grass into different places in the edge of a large *Typha* area, and female-phase birds were seen with males in both of these places.

The nesting pair returned repeatedly to perch on canegrass above the nest when observers were only 2 m away. They gave scolding (harsh churring) calls and both gave "broken wing" displays when the nest was approached closely.

A harsh sparrow-like *"chirp"* was also given by birds on open ground.

All the *E. crocea* were more easily approached than *E. aurifrons* in the same area. When disturbed the *E. crocea* generally flew into nearby *Typha* or sedge whereas *E. aurifrons* flew out away from the bore-drain onto gibber.

DISCUSSION

This record of *E. crocea* extends its known range southwards by 300 km from Coorabulka, the nearest locality at which the species is known. The vegetation of the bore drain at Pandiburra was in excellent condition when we visited it as few cattle had recently been in the area. It thus probably represented ideal habitat for *E. crocea*. The bore drain has been visited by competent observers on a number of occasions since Cox (1976) reported Grass Owls *Tyto longimembris* and Grey Grasswrens *Amytornis barbatus* nearby. If we discount the fairly remote possibility that *E. crocea* was overlooked on those occasions, we must then assume either that it is an infrequent visitor to, or that it has only recently colonized this particular area. Pandiburra Bore is on the edge of Goyder's Lagoon which is itself periodically inundated by flooding of the Diamantina River and Eyre Creek. It is possible, therefore, that in times of flood the Pandiburra and Coorabulka areas are connected by habitat which is suitable for travelling Yellow Chats. However, if the birds are able to cross large areas of dry country it is possible that their occupation of Pandiburra Bore was a chance event and that they may also occur at any of the other similar man-made bore-drains within the region as predicted by Ford and Parker (1974). It is clear that *E. crocea* is not necessarily sedentary as suggested by Pizzey (1980); indeed, nomadism may be as characteristic of this species as it is of the Crimson Chat *E. tricolor* and *E. aurifrons*.

The suggestion that "white" irides are not a constant feature of this species (Reynolds, Walter & Woodall 1982) needs verification. These authors gave no details of the birds seen at Coorabulka in August 1980 which had 'dark' eyes (seen by Western, pers. comm. in Reynolds, Walter & Woodall 1982). Therefore, the possibility remains that those dark-eyed birds were *E. aurifrons*. The only indication that *E. crocea* may have other than pale irides stems from the sub-adult female collected by Ford & Parker (1972) which had a 'tan' eye.

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