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OBSERVATIONS ON YELLOW CHATS *EPHTHIANURA CROCEA* IN WESTERN QUEENSLAND

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SUMMARY

The population of Yellow Chats in south-western Queensland is now reported from several additional localities. Males observed at Coorabulka in August were much paler than a specimen collected in January: this may be the result of an eclipse plumage. The white iris is not a constant feature. The Yellow Chat habitat at Coorabulka is described in detail and although the bore drains are being cleared of vegetation, the swamps are likely to remain as a suitable habitat. Yellow Chats at Coorabulka were found in loose groups of 15-20 and were remarkably tame.

INTRODUCTION

The Australian Chats (Fam. Ephthianuridae) belong to an endemic family of five species which may be related to the honeyeaters (Parker 1973). The Yellow Chat *Ephthianura crocea* has the most disjunct distribution of all the chats, being recorded from various coastal localities in northern Australia and from a few isolated localities in Western Queensland.

This scattered distribution and apparent specialised habitat requirements mean that the Yellow Chat populations are potentially vulnerable to habitat changes. Indeed, two populations of the Yellow Chat at southern extremes of their range, on the Fitzroy Rivers in Western Australia and in Queensland, appear to have become extinct (Slater 1978). Little is known of their biology.

OBSERVATIONS

Yellow Chats were observed at Coorabulka Station (see Distribution, below) in late August 1980 during a camp at Davenport Downs Station organized on behalf of the Atlas of Australian Birds. Information from other localities was obtained from several sources (see Acknowledgements), and Yellow Chats collected from Coorabulka by Ford and Parker in 1972 and D. Seton *et al.* in 1981, now in the Queensland Museum, have been examined.

RESULTS

Distribution

The Yellow Chat was first described from specimens collected on the Norman River, Gulf of Carpentaria in Queensland (Castelnau and Ramsay 1877). However, a population on the Fitzroy River in eastern Queensland was sampled 16 years earlier by McGregor in 1859 (Keast 1958). Yellow Chats are also known from the Fitzroy River and Wyndham area of Western Australia and the top end of the Northern Territory (Pizzey 1980). In January 1972, Yellow Chats were found on two bore drains (Nos. 2 and 5) north and south of the Coorabulka homestead in south-west Queensland (Ford and Parker 1972).

The population in south-west Queensland has a wider distribution than was previously recorded. It is now known from several more bore drains on Coorabulka (S. Millard, G. Nielsen, D. Seton, *pers. comm.*); No. 2 bore on Davenport Downs (C. James, *pers. comm.*); Milkamungra Bore, Lorna Downs Station (C. Lloyd & J. Walter, *pers. comm.*) and at Whitula Creek, west of Windorah (R. Slater *pers. comm.*). It is thought that there is some local movement of birds between the bore drains (S. Millard and D. Seton, *pers. comm.*).

Elsewhere in Queensland, there are recent Atlas of Australian Birds records from the Norman River; Hughenden (C. Ashton); and the Mt. Isa area (P. Harris).

A small population found at the Sedan Dip, 80 miles north of Cloncurry (MacGillivray 1914) may represent a link between the populations known at Normanton on the Gulf of Carpentaria (250 km to the north) and the populations in south-west Queensland (400 km to the south). In times of wet weather and flooding, suitable habitat could link all these localities.

Plumage

In general, the yellow colouration on the face and underside of birds seen at Coorabulka in August 1980 was much paler than that illustrated by Slater (1974, 1978) and Pizzey (1980). Males were yellow under the chin grading to off-white on the belly, with a thin black crescent on the breast. Females were less coloured than males, but both males and females had bright yellow upper tail coverts, resembling those of Yellow-rumped Thornbills. Other observers at Coorabulka in August (R. Noske, T. Ferrier) also reported pale yellow colouration.

Two males collected at Coorabulka in October 1981 (D. Seton *et al.*) showed differences in ventral colouration. One with a fully ossified skull, was golden yellow below while a second, with a skull not ossified, was slightly paler below, particularly in the region of the chin and throat which were predominantly white with a few yellow feathers. The male collected at Coorabulka in January 1972 (Ford and Parker 1974) was golden yellow below.

The paler colouration reported in August may be the result of an eclipse plumage, as is thought to occur in the Crimson Chat *E. tricolor* (Slater 1974, Williams 1979).

LOCATION OF YELLOW CHATS AT COORABULKA

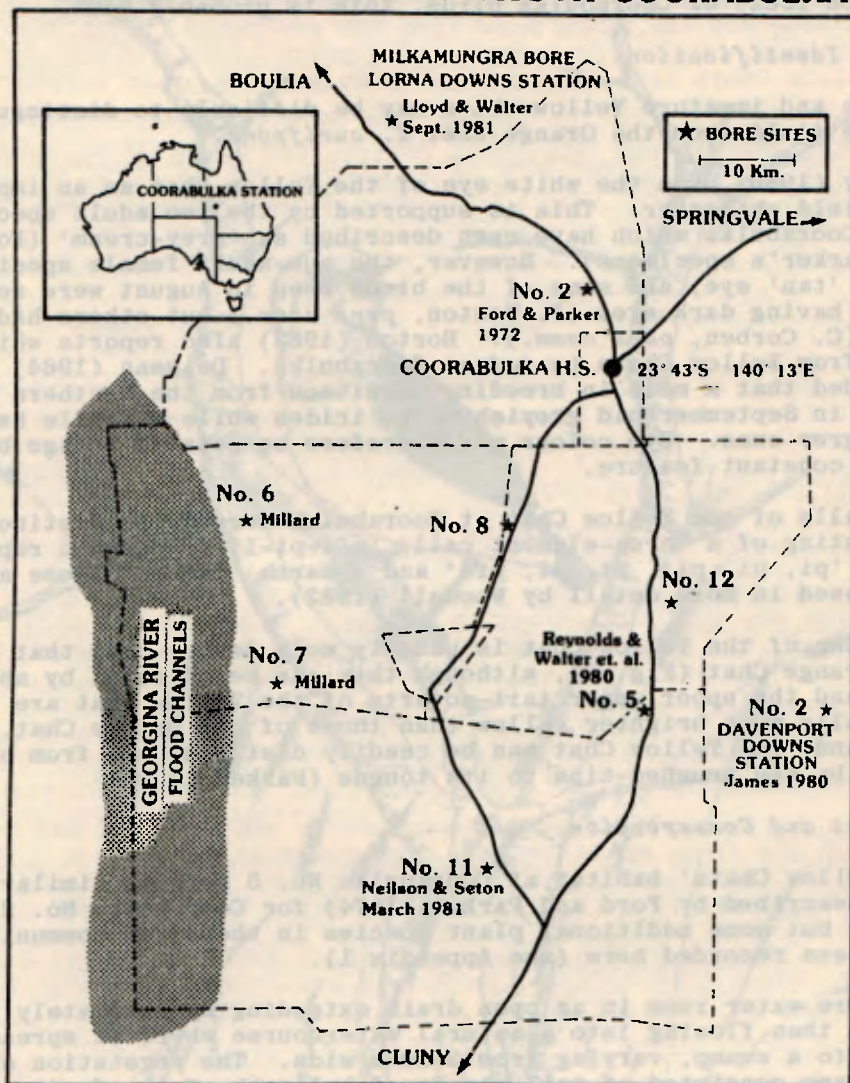


Figure 1. The distribution of Yellow Chats at Coorabulka. Bore sites with an observer indicate the presence of Yellow Chats.

Keast (1958) described four races of Yellow chat from the coastal populations, before the Coorabulka population was known. Ford and Parker (1974) considered that races of the Yellow Chat should not be separated until more is known of its distribution and movements and, in view of the variation in plumage colour and bill lengths (Horton 1982) of Coorabulka birds, this is probably wise.

Field Identification

Female and immature Yellow chats may be difficult to distinguish in the field from the Orange Chat *E. aurifrons*.

Pizzey (1980) uses the white eye of the Yellow Chat as an important field character. This is supported by the two adult specimens from Coorabulka which have eyes described as 'grey-cream' (Ford and Parker's specimens). However, the sub-adult female specimen had a 'tan' eye, and some of the birds seen in August were recorded as having dark eyes (I. Weston, *pers comm.*) but others had pale eyes (C. Corben, *pers comm.*). Horton (1982) also reports white eyes from Yellow Chats banded at Coorabulka. Deignan (1964) recorded that a male in breeding condition from the Northern Territory in September had greyish-white irides while a female had pale grey ones. Eye colour may therefore be related to age but is not a constant feature.

The calls of the Yellow Chat at Coorabulka were quite distinctive consisting of a three-element call, 'pli-pi-lii'; a thin repeated note, 'pi, pi, pii, pi, pi, pii' and a harsh 'cher'. These are discussed in more detail by Woodall (1982).

The wing of the Yellow Chat is usually much darker than that of the Orange Chat (Fig. 2), although this can be affected by abrasion, and the upper upper tail coverts of the Yellow Chat are generally much brighter yellow than those of the Orange Chat. In the hand, the Yellow Chat can be readily distinguished from other chats by the brushed tips to its tongue (Parker 1973).

Habitat and Conservation

The Yellow Chats' habitat at Coorabulka No. 5 bore is similar to that described by Ford and Parker (1974) for Coorabulka No. 2 drain, but some additional plant species in the swamp community have been recorded here (see Appendix 1).

The bore water runs in an open drain extending approximately 1.5 km and then flowing into a natural watercourse where it spreads out into a swamp, varying from 2-50 m wide. The vegetation of the swamp consisted of tall stands of bullrush, *Typha domingensis* to 1.5 m, and sedge, *Scirpus maritimus* (previously unrecorded in the Gregory region). Between the clumps of tall bullrushes was a shorter sward, to 0.5 m, consisting mainly of the sedge *Cyperus laevigatus* but also with the grasses *Cynodon dactylon*, *Diplachne repatrix* and *Sporobolus actinocladius*. Surrounding the swamp were small bushes of *Acacia farnesiana* to 2.5 m and the shrub *Bassia divaricata*. The bullrushes occurred mainly in clumps (20 x 50 m) along the edges of the swamp and the short sedge areas were interspersed with areas of open muddy water (to 0.75 m deep), some containing small numbers of Grey Teal, *Anas gibberifrons*.



Figure 2. A male Yellow Chat at Coorabulka, south-west Queensland. Drawn by Miss K. Walter from a transparency by Mr J. Walter.

The bore drains on Coorabulka are being progressively cleared of vegetation to allow a greater flow of water along the drain in dry weather and to provide better availability of water to cattle. Water from the flowing bores usually finds its way into the natural water courses and, after vegetation has been cleared from the drain, rushes and sedges establish themselves further down the watercourse and the Chats move into the new swamp (S. Millard, *pers. comm.*). As the bore drains are being cleared progressively, the Yellow Chats have an opportunity to move to other nearby swamps during any current disturbance.

The management of the Coorabulka Station are aware of their unique situation as the centre of the Yellow Chat population in Western Queensland and are mindful of the Yellow Chat's requirements when performing major work on their bore drains. These station practices do not seem to be unduly affecting the Yellow Chat population.

Behaviour

A loose group of 15-20 Yellow Chats was observed at No. 5 Coorabulka bore for several hours. The birds seemed loosely attached to particular areas in the swamp and, when pursued by observers too far in one direction, they would fly back, over the observers, to their original position.

The birds moved around in small groups, or singly, keeping largely to the sedge or the muddy edges of the swamp. Small, dead *Acacias* were regularly used as vantage points but only rarely did the birds use the bullrushes as perches. However, one male returned to the site of original flushing in the bullrushes, and called continuously from the rushes for 15 minutes.

R. Noske (*pers. comm.*) visited Coorabulka in August 1975 and noted the birds foraging in *Typha* and on the swamped ground. A Yellow Chat was seen once hawking after insects in the air.

Fourteen birds were the maximum counted in one group at any one time and the group moved over an area covering 400 x 50 m. The birds were quite tame and could be approached to 6 m, unlike some Yellow Chats in the Northern Territory which were very shy (Deignan, 1964). These habits are also very different from those reported from Derby, W.A. (MacDonald 1973) where the birds were feeding 'among tree foliage, rarely on the ground, very furtive and apparently solitary'.

Yellow Chats observed recently on the East Alligator River and at Borroloola in the Northern Territory were not shy and could be approached quite closely (C. Corben, *pers. comm.*).

Breeding

The breeding season of the Yellow Chat was reported as November to January by Mathews (1921-22) and this seems to have been followed by most recent authors (MacDonald 1973; Slater 1978; Parker 1979). Beruldsen (1980) gave the breeding season as November to January 'but probably after sufficient rainfall in dry and arid areas'.

The adult male collected at Coorabulka in October 1981 had enlarged testes while the juvenile male had small testes. The adults collected at Coorabulka in January 1972 were in breeding condition (male with enlarged testes, female with a yolky egg in the oviduct). This female was also undergoing primary moult, with the 4th (from distal) primary half-grown. Usually there is no overlap between breeding and moult, but this is a feature of some Australian desert birds (Serventy 1971).

It is worth correcting here some misconceptions published by Williams (1979) who seems to have based his information solely on a one-day visit to the population at Coorabulka without reference to the coastal populations. He found young fledglings at Coorabulka in June and concluded that the Yellow Chat has a similar pattern of reproduction to the other species of chat, that is, winter breeding. This is not the general case, and other records, including Ford and Parker's (1972) specimens from Coorabulka, indicate summer breeding. Even Williams' (1979) record from Coorabulka would indicate egg-laying in April or May, earlier than any other species of chat in his data.

DISCUSSION

The distribution of Yellow Chats in Australia, and particularly the origin of the Coorabulka population, is uncertain. Keast (1961), prior to the discovery of the Coorabulka population, noted the Yellow Chat's requirements for 'somewhat damp river valleys' and suggested that in former times 'this type of habitat must have been much more common across the north of the continent'. Ford and Parker (1974) suggest that the Yellow Chat colonized the swamps formed by artesian bores sunk in the Great Artesian Basin which were mainly sunk in the 1890's and 1900's. Pizzey (1980) also writes that the Yellow Chat has '(?) recently) colonized parts of western Queensland by exploiting bore-waters'. However, Parker (1979) considers that the Great Artesian Basin may be the centre of distribution of the species and that the peripheral populations are the result of dispersal.

It seems likely that the Yellow Chat had a much wider distribution during the wetter periods of the Pleistocene, when there were still extensive freshwater lakes in the interior, and contracted its distribution to the coast during the more recent aridity. Deignan (1964) has suggested that there may be local movement of Yellow Chats in the Northern Territory as the marshy swamps are reduced seasonally. The Coorabulka population is probably the result of a recent invasion to exploit the suitable habitats created by bore drains.

Williams (1979) states that the Yellow Chat 'occupies extremely arid environments and probably has an even more economical water balance than *E. aurifrons* (Orange Chat). It seems to be more tolerant of aridity ...'. While Coorabulka is in an arid region, this is not true of the coastal localities, and Williams (1979) does not seem to have appreciated that the Yellow Chat's habitat requirements seem always to be closely associated with swamps or watercourses. They are seldom seen any distance from these swamps, although T. Ferrier (*pers. comm.*) noted that they would fly 30 yards from the swamp into the adjoining saltbush country - some of

it covered with shallow water - to feed on the ground. Even if the swamps contained saline water they would still ameliorate the dry air and are likely to provide adequate dew for drinking (Williams 1979). Thus, the Yellow Chat does not seem to be the most arid-adapted of the chats.

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APPENDIX 1

Additional plant specimens taken at Coorabulka No. 5 bore in September 1981 by J. Walter and identified by the Queensland Herbarium.

Ground Cover

<i>Portulaca oleracea</i>	Pigweed
<i>Cynodon dactylon</i>	Couch

Shrubs, under 0.6 m

<i>Atriplex crassipes</i>	Saltbush
<i>Atriplex lindleyi</i>	
<i>Enchylaena tomentosa</i>	Ruby Saltbush
<i>Sclerolaena andersonii</i>	
<i>Sclerolaena ericantha</i>	
<i>Sclerolaena lanicuspis</i>	Spinach burr
<i>Sclerolaena muricata</i>	Black Roly poly
<i>Frankenia serpyllifolia</i>	
<i>Senecio lautus</i>	Fireweed
<i>Craspedia pleiocephala</i>	Soft Billybuttons
<i>Helipterum floribundum</i>	Large White Sunray
<i>Astelba pectinata</i>	Mitchell Barley Grass
<i>Eragrostis dielsii</i>	Mallee Love Grass
<i>Sporobolus actinoclaudus</i>	Raygrass
<i>Digitaria divaricatissima</i>	Umbrella Grass
<i>Scirpus caldwelii</i>	Sedge
<i>Cyperus laevigatus</i>	Sedge

Shrubs, over 0.6 m

<i>Acacia farnesiana</i>	Mimosa bush
<i>Typha domingensis</i>	Bullrush, Cumbungi

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CALLS OF THE YELLOW CHAT IN SOUTH-WEST QUEENSLAND

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INTRODUCTION

The Yellow Chat *Ephthianura crocea* has been recorded from a number of apparently isolated populations on the north and north-eastern coasts of Australia (Pizzey 1980) together with some inland localities, including the Coorabulka Station in south-west Queensland (23°44'S, 140°18'E).

Its biology is little known and this particularly applies to its calls. McGill (1970) stated that the only reference he could find to its call was that it was 'slight and simple' and MacDONALD (1973) reported that no details of its voice were available. Subsequently Ford and Parker (1972, 1974) described a three note call from the Coorabulka locality and this description, somewhat altered, appears to have been used by Slater (1974) and Parker (1979). Pizzey (1980) gave three calls of the Yellow Chat but did not include the three note call mentioned above.

All these descriptions suffered from the problems of converting acoustic signals into written language and this makes it very difficult to evaluate different versions of the call. Therefore it seems important to provide sonograms of the calls which will allow critical, quantitative comparison.

METHODS

During the RAOU Atlas camp at Davenport Downs in August 1980, a visit was made to the nearby Coorabulka Station where the Yellow Chats were found in the swampy surrounds to the southern bore-drain (No. 5) (see Reynolds *et al.* 1982, for more details).

The calls were recorded using an AIWA TM-406 cassette tape recorder with a Shotgun Cardioid microphone (frequency response 40-18000 Hz). They were subsequently analyzed using a Kay Sonograph operating between 80-8000 Hz. The sonograph produces a tracing which indicates the frequency of the calls (y-axis) and their duration (x-axis). The other important feature of a call, its intensity, can only be depicted in a crude fashion on the sonogram by the darkness of the tracing. These features are shown in copies of the original sonogram (Figure 1), in which background noises at low frequencies, mainly due to wind, have been omitted. The use of technical terms follows the definitions of Jellis (1977). In particular the term *element* is used for an unbroken trace on the sonogram in preference to 'note' which has musical connotations.

Calls were initially recorded from a single male perched on a small *Acacia farnesiana* bush. Subsequently they were recorded from a small party of Yellow Chats, moving through the marshy vegetation (*Cyperus laevigatus*, *Scirpus maritimus*, *Typha domingensis*, *Sporobolus actinocladius*, *Diplachne reptatrix*, *Cynodon dactylon*)

where it was impossible to determine which birds were calling.

RESULTS

Three main types of call were identified and these are described below (Figure 1). In each case, a written description of the call is provided to help comprehension of the sonogram.

1. *"Cher" Call*

The "Cher" call consisted of harsh grating sounds: "churr, cher, cher, cher" (Figure 1A). These calls were heard on two occasions, both near the start of the recording session, when the birds were presumably most disturbed by our arrival. The number of elements in the call varied from one to four with three being the most common. Some parts of these calls were complex, with two or more sounds of different frequencies, not harmonically related, being made at the same time. The "churr" of this call (Figure 1A) shows this phenomenon for a very short period of time and this may be the result of modulation. Subsequent elements ("cher", Figure 1A) show this more clearly and, with the frequencies of the two simultaneous notes diverging, this is unlikely to be a modulation effect but probably represents a "double-element" (Jellis 1977) in which a different fundamental tone is produced independently in each bronchial tube.

2. *"Pi-pi-pii" Call*

This call typically consisted of a thin repeated note: "pi pi pii, pi pi pii" (Figure 1B). The individual elements were very similar in frequency, ranging between 3.33 to 3.42 kHz. They were often given in two groups of three elements (Figure 1B), in which the third element was about twice as long as the two preceding ones. Variations of this pattern, consisting of three, four, five or seven elements were also frequently given.

3. *"Pli-pi-lii and Pu-li-pii" Call*

These three-element calls were frequently given, often with various modifications. Two examples of the more usual forms are shown in Figure 1Ca, "pli-pi-lii" and Figure 1Cb, "pu-li-pii". The common features of the call were that the second element was higher in frequency than the first, and the third element was lower than the second (although not necessarily lower than the first) (Figure 1Cb). The third element was also considerably longer in duration than the first two, resembling in this respect the "pi-pi-pii" call.

The last element of the "pli-pi-lii" call (Figure 1Ca) was complex, probably representing a "double-element" of two concurrent frequencies, while the other elements were of fairly constant frequency. In this call, the first two elements had greater intensity (loudness) than the last.

The "pu-li-pii" call (Figure 1Cb) appears to consist of four elements but the first two, both at 2.96 kHz, were of very low intensity which made for difficult reproduction on the sonogram. It seems likely that these are in fact joined, so that this call

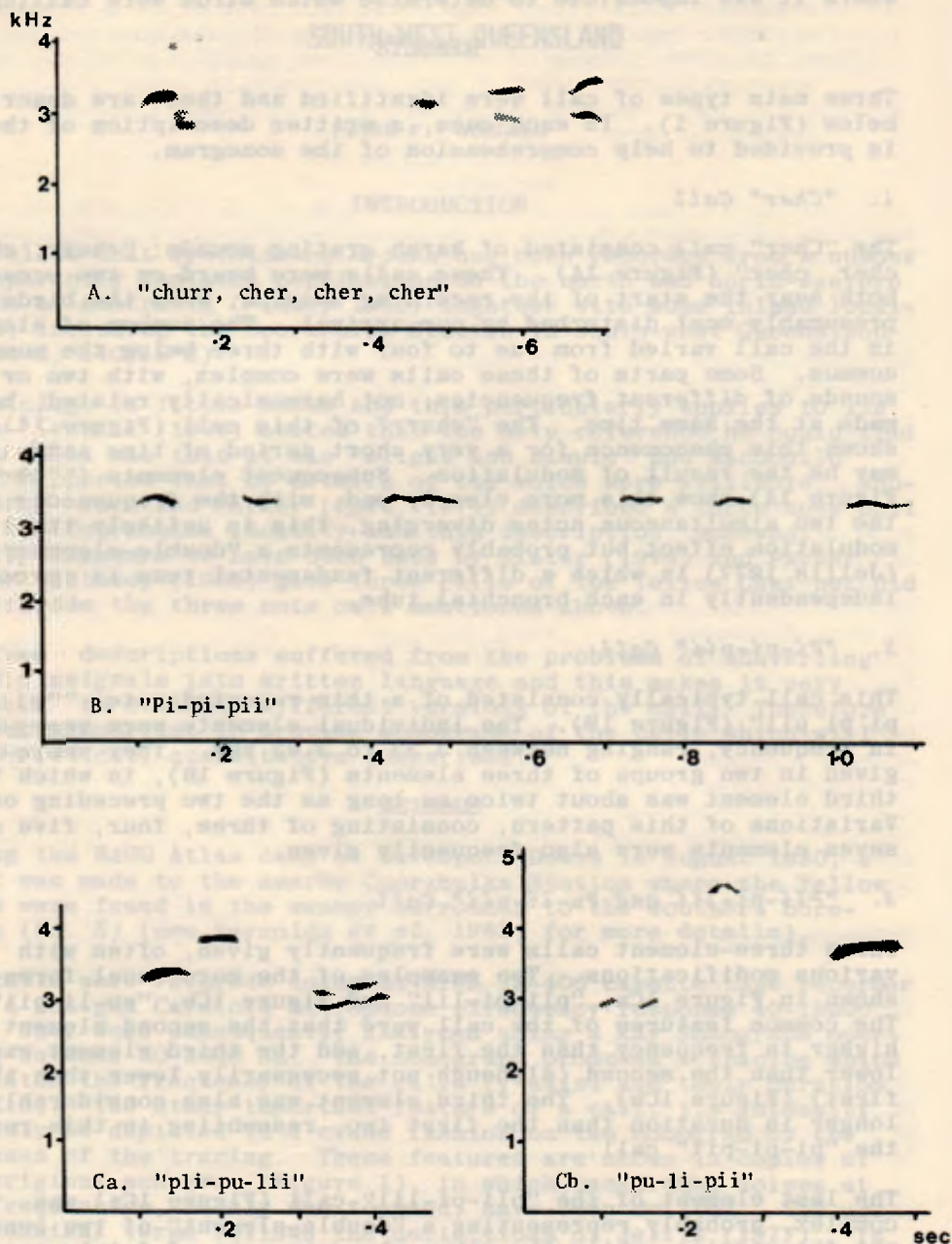


FIGURE 1. Sonograms of Yellow Chat calls.

conforms to the regular three-element sequence. The last element in this call was much higher in intensity than the preceding ones and also was higher in frequency than the first element.

Occurrence of Calls

The relative occurrence of the different calls may give some indication of their function. A total of 120 calls were recorded with the following representation:

A.	Cher call	15	(13%)
B.	Pi-pi-pii call (ca. 3 elements)	14	(12%)
	Pi-pi-pii call (ca. 6 elements)	35	(29%)
Ca.	Pli-pi-li call	12	(10%)
Cb.	Pu-li-pii call	38	(32%)
Cc.	Pi-li-pu call	6	(5%)

The calls of the Yellow Chat were more variable than the limited number of sonograms given here which only represent the common variants. For example, during a sequence of "pu-li-pii" calls, slight modifications would sometimes be introduced, ("Cc" above).

DISCUSSION

Calls of the Yellow Chat were first described by Ford and Parker (1972) - "The call was short and attractive one of three notes, the first the highest, the third the lowest" and subsequently repeated in Ford and Parker (1974). This seems to correspond to the call "Pli-pi-lii" (Figure 1Ca) in this study. The initial description seems to have been modified by Slater (1974) and Parker (1979) to "short, attractive, descending three-note call". This is not as accurate since the three notes do not descend regularly (Figure 1Ca & b), although this may be difficult to detect by ear, due to changes in intensity.

Pizzey (1980) recorded three distinct calls for the Yellow Chat: "one rather like metallic 'tang' of White-fronted Chat; a rather strident churring noise like a cricket; and a musical pee-ep". The 'churring noise' may correspond to the "Cher" call of this study but the other two do not seem similar to any calls described above. It is surprising that Pizzey (1980) did not mention the 'pu-li-pii' call which had been previously reported by Ford and Parker (1972) and which seems so common. I have been unable to ascertain where Pizzey obtained his description of the calls but Keast (1958) has described variation in plumage between the various isolated populations of Yellow Chat and it is quite possible that their calls may also differ.

A comparison of the calls recorded for the various species of *Ephthianura* chats is presented in Table 1, although without sonographs it is quite possible that some misclassification has taken place. The 'tang' call seems widespread among the chats although it has only been reported by Pizzey (1980) for the Yellow Chat, and it has not been heard at Coorabulka. The 'chee-chee-

chee" call also seems widespread among the chats but seems little used by the White-faced Chat, having only been reported by H.S. Dove in Mathews (1922).

TABLE 1. Calls of the *Ephthianura* chats.

Call	White-faced <i>E. albifrons</i>	Orange <i>E. aurifrons</i>	Crimson <i>E. tricolor</i>	Yellow <i>E. crocea</i>
Tang/tang/tang/ tic-tac	1,3,4,5	3,5,6,9	1,2,3,4	11
Chee-chee-chee/ tsee-tsee-tsee/ pi-pi-pii/etc	1	11	2,5,6 7,8,9,11	12
Cheek-cheek/cheep		5,8,9		
tee-whee/dik-it			2,5,7,8,10,11	
pee-eep				11
pu-li-pi, etc				6,9,12
low chatter/squeak	10	10	2,5,7,8,10	11,12
bill clicking	10	10	2,10	
hissing			2,7,8	

* References: 1 = Mathews (1922); 2 = White (1950); 3 = McGill (1970); 4 = Cayley (1971); 5 = MacDonald (1973); 6 = Slater (1974); 7 = Frith (1976); 8 = Serventy & Whittell (1976); 9 = Frith (1979); 10 = Williams (1979); 11 = Pizzey (1980); 12 = this study.

The "tee-whee" call of two elements in the Crimson Chat, described by White (1950) as being uttered by the male in territorial establishment, may be related to the three-element "pu-li-pii" call of the Yellow Chat. Without more information it is difficult to speculate on the "cheek-cheek" call of the Orange Chat or the "pee-eep" call of the Yellow Chat.

White (1950) described a "low truculent chatter" of the Crimson Chat when a territory holder attacked a straying neighbour, and Williams (1979) recorded a "low pitched chatter" used by White-fronted and Crimson Chats and a "squeak" used by Orange Chats when a territorial male flies at an intruder. These may be similar to the "cher" call recorded for the Yellow Chat. Williams (1979) also noted that bill clicking was used by White-fronted, Crimson and Orange Chat males when an intruder approached their

territory. This has not been recorded for the Yellow Chat. Finally a plaintive hissing has been reported for the Crimson Chat (White 1950) when feigning injury.

The data in Table 1 suggest that the Crimson and Yellow Chats have a more extensive range of calls than the other two species but this may merely indicate that they have received greater attention than the other species. However, Williams (1979) suggested that chats inhabiting arid regions (Orange and Crimson) experienced more intense competition for nesting sites and thus showed stronger territorial displays and defence than the White-fronted Chat, which was found in a more mesic environment. This may also be reflected in their repertoire of calls.

With the limited time available for observation it is difficult to ascribe behavioural significance to the calls of the Yellow Chat. The "cher" call may be a defensive call and the "Pi-pi-pii" call may reflect a mild state of alarm. These were the only two calls recorded by I. Weston in Reynolds *et al.* (1982) when a larger party of observers (10) visited the Coorabulka bore drain in August 1980 and possibly caused more disturbance to the birds (four observers wading in the marsh) than in this study.

Bird song is associated with reproduction and can be distinguished by its proclamatory function and by the fact that it is limited to a particular part of the year for most species (Jellis, 1977). The "pli-pi-lii-" calls seem to have some of the characteristics of a song in that the notes are grouped into phrases with predictable pauses, they are repeated regularly and show some elaboration and variation (Jellis 1977). However, the "pli-pi-lii" calls have been noted in August (1980) and April (1981) (D. Seton, personal communication). Parker (1979) indicates the breeding season for the Yellow Chat is November to January but Williams (1979) found young fledglings of the Yellow Chat at Coorabulka in June. Thus, the identity of a true song in the Yellow Chat is uncertain.

The calls analyzed here undoubtedly do not represent the complete repertoire of the Yellow Chat. Further recordings are clearly required to discover additional calls; to elucidate the behavioural significance of these calls; and also to determine the extent of any geographical variation in calls of the Yellow Chat.

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SIZES AND DESCRIPTION OF YELLOW CHATS AT COORABULKA BORE, S.W. QUEENSLAND

W. HORTON

In January 1972, J. Ford and S. Parker located Yellow Chats (*Ephthianura crocea*) at Coorabulka Station on Bore No. 2 about 7 miles (11 km) north of the homestead. Three specimens were collected and are now housed at the Queensland Museum, specimens Nos. 013699-013701. Two further specimens, Nos. 018972 and 018973, were collected from the same area on 26 October 1981 by D. Seton, D. Reiner and D. Crossman.

On 8-9 June 1972 I made an overnight stay at a bore on Coorabulka Station, in company with Billie Gill and Barry Brokenbrow. There is some doubt about which bore we visited, but it was probably No. 5.

Seepage from the hot bore and bore drain had created a shallow, swampy area directly to the north. There was little or no tall vegetation in the area and the swamp itself was only sparsely vegetated with reeds less than a metre in height.

The morning of the 9th June was cool and overcast and the Yellow Chats were not sighted and did not seem to be active in the swamp area until sunlight started filtering through the cloud an hour or two after dawn. The birds kept very low over the warm water and actively investigated squeaking by the observers. Mist nets were erected in the swamp and once one or two birds were netted the majority rapidly followed, being attracted by the distress calls of the netted birds.

Twenty-two were caught in quick time and only one or two birds remained free.

Measurements

Wing, tail, tarsus and bill measurements were taken for the 22 birds and these are listed in Table 1. Measurements were subsequently taken from the five Queensland Museum specimens and these are listed in Table 2.

TABLE 1. Birds Banded June 9, 1972.

	Range	Mean	Standard Deviation
Wing	54-61	58.5	1.6
Tail	36-41	38.8	1.7
Bill	9.8-11.4	10.7	0.5
Tarsus	18.1-20.6	19.3	0.6 (4)

TABLE 2. Queensland Museum specimens.

			(1) Wing	(2) Tail	(3) Bill
No. 013699	Adult	Male	59	37.5	13.0
No. 013700	Adult	Female	60	37	12.0
No. 013701	*	Female	63	37?	12.5
No. 018972		Male	59	43	13.7
No. 018973		Male	58	41	13.4

* Skull - two tiny windows, (i.e. not fully ossified, but virtually fully grown).

- (1) Wing measurements were taken with the same rule - with an end stop.
- (2) Tail measurements of specimens in dried condition were difficult to take positively and accurately.
- (3) Bill measurements were all taken in the same manner - from their junction with the skull to the tip.
- (4) On the live birds the tarsus was measured between joints, with legs and feet bent to highlight the joints. It was impractical to measure dried specimens in the same manner.
The discrepancy between bill lengths of live and preserved birds was probably an artifact of the preservation process.

Description

Generally the birds netted were not clearly marked or strongly coloured; none was as highly coloured as the two male Museum specimens, 013699 and 018972 from the same area in January and October.

The following summary has been compiled from notes taken to supplement the banding data.

- Eye white - recorded for first five birds (all assumed to be males - by body colour and markings) - thereafter only variations were noted and no change of eye colour is recorded.
- Bill - black, some with pale base, one or two with paler bills.
- Legs - pinky grey with dark grey feet.
- Head - blotchy yellow - absent in birds assumed to be female.
- Breast - blotchy yellow with ill-defined crescent in all but two of the males, absent in birds assumed to be female or immature. Upper breast tinged grey in some cases.

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- Back - grey with slight orange/yellow wash.
- Tail - rectrices dark grey to black tipped white with outer edges yellow.
 - upper and under tail coverts bright yellow, all birds.
- Wings - primaries grey edged yellow. Yellow edging paler in females. Upper wing coverts grey edged white. Under wing coverts white tinged yellow.

Tentatively the 22 birds were listed on the banding record as:

Adult male	10
Immature male	3
Adult female	4
Immature female	2
Doubtful	3.

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COMMUNAL FEEDING IN CHESTNUT-RUMPED THORNBILLS

ALI LLOYD

I watched Chestnut-rumped Thornbills (*Acanthiza uropygialis*) carrying food to a nesting hole at Thylungra, south-western Queensland (26°05' - 143°25') on 2 September 1981 at 0830 hours. The nest was in a small hole in the trunk of a Eucalypt, approximately 4 metres from the ground.

The nest was observed for about an hour and during this time three adult thornbills carried food to the nesting hole. The three birds would arrive with food (small insects) - within seconds of each other - at about 7-10 minute intervals, and there appeared to be a set pattern of roosting or perching spots before each bird entered the nest. These positions were: above the nest; one to the right and one to the left. The birds landed on the same three spots and, one after the other, would enter and leave the nest.

The nesting hole was quite small, only just allowing each adult bird to enter, and on most feeding occasions two out of the three birds would emerge from the nest with a faecal sac. Perhaps an indication of more than one young and not the single nestling of a cuckoo.

Dow (1980) reports communal breeding from five species of thornbills but confirmed records, from three or more nests, are only available for three species (Buff-rumped, Yellow-rumped and Striated Thornbills). Communal breeding has been reported only once for the Chestnut-rumped Thornbill (White 1950), when three adults were observed feeding a young Horsfield's Bronze Cuckoo *Chrysococcyx basalis* in their nest. Dow (1980) states that "further observations are required to assess the regularity of communal activity" in this species.

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