

**BREEDING AND OBSERVED HABITAT PREFERENCE OF THE SCARLET-CHESTED PARROT *Neophema splendida* IN YUMBARRA CONSERVATION PARK.**

In late December 1998, one of the authors (CR) travelled with John and Heather Cox to the Dog Fence on the southern boundary of Yumbarra Conservation Park in search of Scarlet-chested Parrots *Neophema splendida*. Ian Hopton (pers. comm.) had reported that several females had been seen along the fence in recent years. Along a track into the park we located two juvenile Scarlet-chested parrots at about midday. Over the remainder of that day and the following day about 20 individuals, but only one male, were sighted (Cox 1999; SAOA 1999).

In December 2000, CR returned to the same location with David Close (DC). At about midday on 24 December we flushed one female and one juvenile from the side of the track. Over the remainder of the afternoon and following morning we saw numerous females and juveniles and only three adult males, with a total of 53 birds. The ratio of males to females was much lower than the 2:1 ratio reported for post-breeding flocks by Andrew and Palliser (1993) and Stewart and Shepard (1996) (both in Higgins 1999: 587) and the 6:1 reported by Henderson (1977).

The presence of numerous juveniles, identified by the pale orange-yellow bill and duller plumage, suggested that breeding had occurred at or near this location. The breeding season for Scarlet-chested Parrots is August–December and after fledging the young stay with the parents for some weeks (Sindel and Gill 1993; Forshaw in Higgins 1999, pp. 587 and 589). The orange-yellow bill of juveniles changes to brown by 10 weeks (Sindel and Gill 1993; Higgins 1999: 591). With a fledging period of approximately 30 days this suggests that breeding took place in November. On the earlier visit in December 1998 two juveniles were flushed from a hollow in red mallee *Eucalyptus oleosa* and subsequently returned to the hollow once the disturbance had passed. The presence of numerous juveniles in December 2000 suggested that this area of Yumbarra Conservation Park may be a significant breeding location for the species.

As most reports of this species suggest (e.g. Jarman 1968; Stewart and Shepard 1996; Higgins 1999: 585 and 588), the birds appeared relatively tame and curious in the sense that after first light small groups of between one and six

landed in the trees near the camp before moving. Individuals approached to within 7 m on several occasions. At least 30 females and juveniles, but no adult males, exhibited this behaviour. Other small groups were observed flying below the canopy some distance from the camp and these birds did not stop. This flock behaviour is consistent with that reported by other observers who note that large flocks appear to be composed of smaller family groups that are largely independent of each other (Higgins 1999: 588).

Most observations were of individuals perched in the mallee near the camp. On other occasions several individuals were flushed from the ground or low bushes alongside the track. A female was observed feeding in a low bush (described below) and two males were observed feeding on the ground. Higgins (1999: 585) reported that Scarlet-chested Parrots feed mostly on the ground, usually on fallen seeds, and only rarely on low seeding or fruiting shrubs.

On numerous occasions soft twittering calls were heard when the birds were perched close to the camp. As reported by Higgins (1999: 588) the call is unlike that of Turquoise Parrot *N. pulchella* and not nearly so loud as similar calls of other neophema species.

The parrots appeared to favour a habitat of mallee (*Eucalyptus*) woodland with a dense understorey of shrubs on a broad sand-plain between spinifex-covered (*Triodia*) sand-ridges. This accords with the habitat described in Higgins (1999: 585), however this paper provides a more detailed description of the composition of the understorey.

Although there was a considerable amount of spinifex on the sand ridges within a few kilometres of the observation site no Scarlet-chested Parrots were observed in this habitat. Andrew and Palliser (1993: 5) also noted that no Scarlet-chested Parrots were observed in mallee with spinifex although they have often been reported from this habitat. Scarlet-chested Parrots were observed in red mallee only where the understorey was relatively dense and more varied. Although superficially similar in appearance, areas of red mallee with a less varied and less dense understorey did not appear to contain any birds. This observation is consistent with that of Andrew and Palliser (1993: 5) who remarked that although they passed through ‘miles’ of apparently similar habitat, Scarlet-chested Parrots were encountered at only one location.

Why the parrots were concentrated in such a fashion they regarded as something of a mystery. Our observations reflect a similar concentration.

All but two birds were seen in red mallee with an understorey of spiny fanflower *Scaevola spinescens*, broom emubush *Eremophila scoparia*, Desert hop-bush *Dodonaea stenozyga*, stiff westringia *Westringia rigida*, and crinkle-leaf daisy-bush *Olearia calcarea*. It appeared to differ from areas where Scarlet-chested Parrots were absent only in terms of density and diversity. Other areas had some but not all of these species in the understorey. A female was observed feeding on spiny fanflower, but it was not possible to determine what part of the bush the bird was ingesting. Lester (1998) reported a male Scarlet-chested Parrot feeding on satiny bluebush *Maireana georgei* in Danggali Conservation Park. On another occasion we observed two male Scarlet-chested Parrots feeding on the ground but again it was not possible to establish what was ingested. Henderson (1977) reported Scarlet-chested Parrots feeding on the fallen seeds of *Newcastelia dixonii* [now *telopea Gammosolen dixonii*], *Haloragis odontocarpa* [mulga nettle] and *Triodia* spp.

Of additional interest is the observation of several birds with orange bellies. Higgins' (1999: 590) discussion of Scarlet-chested Parrot plumage suggests that occasionally individuals have orange to orange-red suffusion on the belly feathers. Six individuals were observed with this feature. One had an almost complete orange belly. This bird had a greenish breast and a clear demarcation between a narrow yellow band that graded to extensive orange on the belly. The description of immature males in Higgins (1999: 590) suggests that the breast is red to orange-red with possible green and yellow patches. This bird had a completely green breast and the head and other plumage features were suggestive of an adult female.

Yumbarra Conservation Park appears to be a reliable site for observing Scarlet-chested Parrots, however, this paper suggests that the birds are not uniformly distributed throughout the park. Rather, on some occasions at least, perhaps when breeding, they appear to be concentrated in narrow strips of mallee where

the understorey provides sufficient food.

As the observations reported here occurred only in December additional surveys through the year are required to establish if the birds are resident or seasonal migrants. As noted in Higgins (1999: 587) the movements of Scarlet-chested Parrots are very poorly known and most claims in the literature are speculative. Previous authors have classed Scarlet-chested Parrot as nomadic, sedentary, or locally nomadic and prone to irruptions when conditions are favourable. The presence of Scarlet-chested Parrots in Yumbarra Conservation Park in recent years would appear to offer a relatively accessible opportunity to dispel some of the ignorance about the species. In view of potential mining activity in the park additional research is also required to establish the extent of suitable Scarlet-chested Parrot breeding habitat within the park.

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