

Starling Flock Behaviour Thwarts a Black Falcon Attack

On 1 June 1986 near Sutton, New South Wales, we noticed a Black Falcon *Falco subniger* perched on the upper branches of a dead eucalypt. It was dusk and the falcon was hunting Common Starlings *Sturnus vulgaris* as they flocked over a reed-bed before roosting. We estimated that there were 500-600 starlings in the air when we arrived; however, groups of 4-50 were dashing in continuously from the surrounding countryside to join the main flock. Just before dark, there were at least 1000 starlings wheeling and turning as one over the reeds. The sound of their wings as they dipped, curved and twisted en masse was extraordinary even though we were seated about 50 metres away.

The effect of co-ordinated flocking as a defence against avian predators was obvious. The falcon looked comparatively slow and clumsy in its attempts to single out a starling from its fellows. When first seen, the falcon was harassing small groups of starlings before they reached the safety of the main flock, in similar fashion to an Australian Hobby *Falco longipennis*. Once the number of small groups dwindled, it attempted to isolate a bird from the main flock. At each attempt, however, the starlings simply parted, allowed the falcon to pass through their midst, then reformed almost immediately. All attempts were initiated from the dead tree and the methods employed included: (a) tail chasing; (b) high-speed horizontal passes through the main flock; (c) a combination of the two previous methods, where an unsuccessful horizontal pass became a tail chase after the flock had divided; (d) a low-speed horizontal glide attack once the starlings had gone to roost.

We observed a minimum of eight fruitless attempts to capture a starling over a 40 minute period. These forays ceased when the starlings settled in the reeds for the night, leaving the obviously hungry falcon perched in the dead tree.

Interestingly, a female Brown Goshawk *Accipiter fasciatus* then landed within 5 metres of the falcon. There was no visible interaction as she branch-hopped to within a metre, preened for a short time, then launched herself into a long glide that terminated in the reeds. This caused quite a commotion and she soon emerged carrying a starling. Within 1½ minutes the Black Falcon launched a similar glide attack. However, instead of dropping into the reeds as the goshawk had done, it simply passed over them. This created waves of discontent amongst the starlings but, again, did not result in a meal.

We then decided to intervene on the falcon's behalf. After flushing the starlings we kept them flying in a mass over the reeds until, on its second pass, the falcon captured a straggler.

It is interesting to note that the starlings were practically immune to the falcon's attacks when they could organise into a co-ordinated swirling mass; when we disrupted that organisation, by flushing them from the reeds, the falcon was successful. That is, flocking itself did not protect the starlings, a flock organised in a particular way protected them.

Burton (1985) noted that flocking benefits birds like starlings because a raptor can be confused by the numbers: 'The typical reaction to a bird of prey is for the flock to gather in a tight formation, and circle or fly erratically, rather than try to make an escape by speed. The defensive formation makes it harder for the predator to strike a victim without risking a collision with other birds. Even a slight injury can be fatal to a bird of prey in the long run.' It may also make it difficult for the raptor to judge distances and see individuals sufficiently well to single one out. As noted in Hollands'

(1984) description of a similar episode involving a Brown Goshawk, the flock alternately appears and disappears against the background as the birds in unison bank to present their dark upperparts then their pale underparts. This may be quite confusing to an aerial predator. S. Debus (pers. comm.) has observed similar behaviour by alarmed wader flocks: they swirl and bank, becoming almost invisible when they present their pale undersides against a bright sky; combined with frequent changes of direction, this makes it difficult for the observer (and presumably a raptor) to track an individual for more than a few seconds at a time.

The dam and associated reed-bed at Sutton are situated on a gently undulating grassy plain, with scattered patches of eucalypt woodland and occasional isolated trees. We visited it on the following evening and the starlings behaved in identical fashion, though no raptors were seen. Possibly, dusk is a vulnerable time for the starlings, so they evolved the massing behaviour as protection against aerial predators.

References

Burton, R. (1985), *Bird Behaviour*, Granada, Sydney.

Hollands, D. (1984), *Eagles, Hawks and Falcons of Australia*, Nelson, Melbourne.

By TONY ROSS¹ and JERRY OLSEN²

¹42 Willis Street, Evatt, A.C.T. 2617

²R.M.B. 1705, Read Road, Sutton, N.S.W. 2620

Crested Shrike-tit in the Kimberley, Western Australia

The distribution of the northern race of the Crested Shrike-tit *Falcunculus frontatus whitei* is imperfectly known: there are few records in the Kimberley Division of Western Australia (Storr 1980, Blakers et al. 1984), therefore any observations are noteworthy. This note records a sighting in the Kimberley at Beverley Springs Station (16°35'S, 125°30'E).

On 24 May 1979 at 1145 h, I observed a Crested Shrike-tit 4-5 m up in a *Eucalyptus tetrodonta* of moderate height. The bird was observed through 8 x 30 binoculars from a position 11 m from the foot of the tree. The sky was somewhat overcast, but light and visibility were good with the sun behind me. At first the bird was only partly visible among the leaves, only a portion of the bright yellow underparts being observable. It then moved into full view and the crested black head with broad white stripes above and below the eye could be seen. It was breaking up an unidentifiable object in its deep, narrow bill. It had well-defined, brilliant plumage and was probably a male. It moved out of sight and could not be relocated. It was silent while under observation.

This observation is in the general region of previous published records, in 1° blocks 14/126, 16/128 and most recently in 15/126 on the Drysdale River (Blakers et al. 1984). However, the species may be restricted to certain habitats within this region, and more information is required. At the above site and also in the Northern Territory where I have seen it, the bird was in *Eucalyptus tetrodonta*/E. *miniata* woodland.

References

Blakers, M., Davies, S.J.J.F. & Reilly, P.N. (1984), *The Atlas of Australian Birds*, Melbourne University Press, Melbourne.

Storr, G. (1980), 'Birds of the Kimberley Division, Western Australia', *Spec. Publs West. Aust. Mus.* 11.

By ERIC H. SEDGWICK, 20 Herbert Road, Harvey, 6220