

## The Status of Black Falcon in the Lower Hunter Valley

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The Black Falcon (*Falco subniger*) is considered a rare species in the Hunter Region and is usually recorded only a few times annually (Stuart 2002). Since 2002 this species has been seen more frequently in the Lower Hunter Valley. We report sightings of Black Falcons from 2002 to 2006 and describe behaviour which provides evidence of breeding near the Morpeth Wastewater Treatment Works (MWTW) 32° 44' 06" S 151° 37' 21" E.

The MWTW is situated on a slope above a low lying area which floods after heavy rain creating ephemeral wetlands to the west, south and east. The site is surrounded by lightly timbered agricultural land. The combination of the holding ponds and flooded grazing land provide excellent habitat for waterbirds, particularly ducks and waders. A number of raptor species are attracted to the area (Lindsey & Newman 2002).

The Black Falcon is found primarily in Eastern Australia to the west of the Great Dividing Range where it occurs in lightly timbered country near watercourses. Details of its movements are unclear but it is known to move to more coastal regions during times of drought. Natural corridors across the Great Dividing Range to the north and south of the Liverpool Range provide access to the Hunter Valley allowing its use as a drought refuge by dry country birds.

Prior to 2002, Jerrys Plains, which is approximately 80 km west of Morpeth, was the most coastal location where Black Falcons were recorded with any regularity. The first record of the falcons at Morpeth in 2002 corresponded to a drought year as indicated by the observation in the lower Hunter Valley of such species as Brown Songlark (*Cinchoramphus cruralis*), Singing Bushlark (*Mirafra javanica*), Masked and White-browed Woodswallows (*Artamus personatus* and *Artamus*

*superciliosus*) and unprecedented numbers of Sharp-tailed Sandpipers (*Calidris acuminata*), far exceeding the normal summer population of this species (Stuart 2002). Sharp-tailed Sandpipers and some other species of waders are recorded as prey for the Black Falcon (Marchant & Higgins 1993).

During the period 2002 to 2005, Black Falcons have been recorded in every month within a 20 km radius of MWTW. Our first record of the Black Falcon at the MWTW was on 16 June 2002 when two birds flew fast and low through a copse of trees near the entrance. Black Falcons were also seen in the nearby Bolwarra/Morpeth area on three occasions between 1 and 5 October 2002 (Stuart 2002). A number of sightings in an extended area of 10 km radius around Morpeth, including Largs and Tenambit, led to speculation that the birds could be breeding in the area. Additional support for this hypothesis was provided during 2004 by the observation of three Black Falcons at MWTW on 22 July and sightings of single birds on 22 June and 18 August.

Black Falcons continued to be observed from an increasingly large number of locations in the Lower Hunter including Lake Macquarie, Ash Island, Hexham Swamp, Gillieston Heights and Woodville. The frequent observation of Black Falcons at Ash Island, a habitat comprising tidal lagoons with mangroves used by waders, is interesting because the distribution of this species is primarily inland. Numerous sightings of one or two Black Falcons were made during 2003 and 2004 at Ash Island which has been surveyed monthly since 2000 by Hunter Bird Observers Club members and is frequently visited and sightings recorded at other times. The Black Falcon was first recorded there on 6 February 2003, pursuing a large flock of Sharp-tailed Sandpipers which were feeding in a shallow lagoon known as Swan Pond. It is suggested that the

species did not occur regularly at Ash Island before 2003. As the falcons were first noted at MWTW and Ash Island within an eight month period it is probable that the same birds are involved. It is interesting that at both locations the falcons have been observed chasing flocks of Sharp-tailed Sandpipers, which also occur in large numbers on the Hexham Swamp when flooded paddocks provide suitable feeding habitat.

Compelling evidence of breeding was obtained at MWTW during 2005. On 24 September two Black Falcons were seen pursuing a flock of about ten feral pigeons. One pigeon became isolated and was taken by a falcon which immediately transferred the prey to its mate. This bird flew off in the direction of the MWTW entrance. An unsuccessful search was made for a nest in trees near an adjacent farm. On 10 November, three Black Falcons were observed at extremely close range flying around a clump of shrubs, three metres in height, growing on the ridge of a dyke separating a holding pond from an area of flooded paddock. Several birds in the area including Australian Magpie (*Gymnorhina tibicen*) and Magpie-lark (*Grallina cyanoleuca*) were extremely agitated. One of the three falcons flew from the end of the shrubs with prey held in its talons. This bird, which had worn tail feathers, circled back out of sight behind the shrubs and then re-emerged into view and perched on a fence post about 20m from the shrubs. After several minutes the other two falcons, both of which had much blacker plumage and no tail feather wear, flew into sight heading towards the perched bird. All three falcons then flew off towards the MWTW entrance. Subsequently a fourth Black Falcon flew from a tree in the next paddock and followed the other three birds. Inspection of the end shrub revealed an empty Magpie-lark nest with an adult Magpie-lark close by. It is thought that, obscured from our view, the bird with the worn tail feathers had predated this nest and then dropped the prey for the young.

The Black Falcon usually breeds in pairs between June and December with most records in November (Marchant & Higgins 1993 and Barrett *et al.* 2003). There is little information on the dispersal of juveniles after breeding (Marchant & Higgins 1993). In our opinion, the observations in 2005 provide evidence that Black Falcons bred successfully in the vicinity of MWTW, despite our failure to find the nest site. Published details of hunting and parental care duties suggest that the

feral pigeon was taken by the male and transferred to the female to take to the nestlings. The separation of a single pigeon from a compact flock before capture is consistent with published descriptions of the hunting strategy of the Black Falcon (Debus *et al.* 2005). The subsequent observation of two birds in November with diagnostic juvenile plumage, namely, dark coloration and absence of feather wear (Marchant & Higgins 1993 and Debus 2001), suggests the nestlings had successfully fledged. The duller plumaged bird with the worn tail feathers which had been seen carrying food apparently given to the two juveniles was assumed to be the female. In this species it is the female which does most of the incubation, brooding and post-fledging duties (Marchant & Higgins 1993). Assuming that the incubation, nestling and post-fledging periods are 5, 6 and 3 weeks respectively (Debus *et al.* 2005) it is suggested that incubation commenced about the beginning of August.

Further sightings of Black Falcons were made in the vicinity of MWTW during 2006 and again there were indications of breeding activity: a single bird in January, two in June, four in October and one in November. In June the pair of Black Falcons was seen in the timbered paddocks adjacent to the dyke. They vigorously attacked a Whistling Kite (*Haliastur sphenurus*), almost forcing it to the ground and then persistently attacked a White-bellied Sea-Eagle (*Haliaeetus leucogaster*). In October the four birds were roosting on the ground and preening on the same area of the dyke where juvenile birds were seen in 2005. Plumage differences indicated that two of the 2006 birds were immature. We are uncertain whether this indicates a second successful breeding episode.

We conclude that the present status of the Black Falcon in the Lower Hunter Valley is that of rare breeding resident based on the frequent sightings since 2002 and the breeding evidence in 2005.

## REFERENCES

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