Notes on the feeding behaviour of Milky Storks *Mycteria cinerea* at the coast of Indramayu, west Java

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On 5 November 1990, while counting waders on the Bungko estuary, located in Indramayu, 6°31'S 108°33'E, on the north coast of West Java, a group of 12 Milky Storks *Mycteria cinerea* was found resting on a mudflat. One of the group flew toward us and stood still in the shallow, low tide water. Within minutes, other birds of the group flew and landed in the vicinity of the previous bird. The group eventually consisted of eight birds, including three immatures with greyish plumage. The storks then began to feed in an unusual manner which was watched from 100 m through a x20 telescope.

The storks fed in turbid waters less than 40 cm deep, in a single tight flock, each bird about 20-30 cm apart. The flock walked briskly, with long strides, in a straight line parallel to the shore for about 150 m. The birds held their bills half open and searched for prey with less than half the length of their bills submerged. Unidentified fish 10-14 cm in length (length estimated in comparison with the storks' bills) were frequently flushed from the water. Distance, light conditions and the walking speed of the storks prevented us from observing the success rate of their feeding method and, after 10 mins, the observation was terminated.

The communal feeding of the birds had seemed quite deliberate; they apparently congregated in the shallow water where there were schools of fish. The closely related Wood Stork *M. americana* captures prey using 'tactolocation' and tends to feed where density of prey is high, using 'foot-stirring' and 'wing-flicking' to flush and divert prey to the stork's half-opened bill (Kahl 1968). Our observation leads us to speculate that the Milky Storks were using their flock formation, in a similar situation of high prey density, to flush and divert prey to their half-opened bills.

Few published observations exist on the feeding behaviour of the Milky Stork, which is a globally threatened species (Collar and Andrew 1988). Previous accounts have described at least three feeding methods, involving birds feeding individually or in loose flocks: 'probing in mud', 'groping in shallow water', and occasional 'direct visual searching' (Silvius 1986: 36, Swennen and Marteijn 1987: 63-66). The present note, therefore, describes additional information on the feeding behaviour.

Observations of feeding behaviour help to increase our understanding of

the Milky Stork's habitat requirements. The coasts of Indramayu-Cirebon have been identified in recent years as having relatively high numbers of Milky Storks, but also very high hunting pressure (Raharjaningtrah 1988, Milton and Marhadi 1989, Yus Rusila Noor 1989), and it is an important site for implementation of conservation measures and protection of the species in Java.

The observation was made while we took part in a waterbird study training course, organised by the Indonesian Directorate General of Forest Protection and Nature Conservation (PHPA), Asian Wetland Bureau (AWB), Indonesia and Australasian Wader Study Group (AWSG). Comments on the first draft were kindly provided by Marcel J. Silvius, Yus Rusila Noor, Paul Jepson and Bas van Balen.

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A sighting of *Ficedula (crypta) disposita* in Luzon, Philippines

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Two male flycatchers *Ficedula (crypta) disposita* were seen on 12 July 1991 at Angat Dam, Luzon, Philippines. This is the only record of this taxon other than the female type-specimen collected in the Zambales Mountains (Ripley and Marshall 1967). The distinctive appearance of *disposita* appears to warrant its treatment as a species.

Two birds were seen on 12 July 1991 at 500 m in highly degraded secondary forest with much bamboo, about 100 m from a steep slope covered in primary forest, at Angat Dam, Luzon, Philippines. They were first detected by the song: a flycatcher-like warble, similar in tone and pattern to that of Snowy-browed Flycatcher *Ficedula hyperythra*, heard subsequently in the Philippines. The song was a high-pitched, thin warble of three distinct notes, the middle note higher-pitched than the others, then a faster series of descending notes, this phrase being repeated after a few seconds. Over the next five minutes, the birds remained within a few metres of the path, singing intermittently. Although the birds were usually hidden in low undergrowth, clear unobstructed views were obtained by all four observers of both birds. They were small slight passerines, perching on vegetation or fallen branches and logs, up to 2 m off the ground. The tail was strikingly patterned, with pale orange-rufous outer rectrices contrasting with dark brown central rectrices (probably just the central pair) and a terminal band of about 30% of the exposed length of the other rectrices. The uppertail coverts were darker rufous and the rest of the upperparts greyish-brown, becoming grey on the lores, but with the rest of the head plain, making the large eye very prominent. The throat was white and clear-cut from the upperparts, and the breast was mottled with buff. The legs were pale pink. This species was not heard or seen subsequently by these observers, during a total of five days spent at this site.

The descriptions of *disposita* in duPont (1971) and in Ripley and Marshall (1967) enabled only a tentative identification; however, a detailed description of the type specimen made by J. T. Marshall (*in litt.* 1992) agrees very closely with the field description of the Angat birds. The specimen was said by Marshall (*in litt.* 1992) to have a duller rufous base colour to the tail than that described for the Angat birds; this could perhaps be a result of the viewing conditions.

On the basis that the Angat *disposita* were singing, that they appeared to be agonistic towards each other, that the song was sinilar to that of *F. hyperythra* and that only male *hyperythra* were heard to sing, they are concluded to have been male birds. The type was a female and, therefore, *disposita* is apparently sexually monomorphic. *F. bonthaina* shows slight sexual dimorphism, whilst the other taxa discussed below are sexually monomorphic.

The type-specimen was taken in forest at 760 m in the Zambales Mountains, about 130 km west of Angat (Ripley and Marshall 1967). Ripley and Marshall considered *Ficedula crypta* to comprise three allopatric subspecies: *crypta* on Mindanao, *bonthaina* on Sulawesi and *disposita* on Luzon. Closely related are *harterti* of Sumba and *platenae* of Palawan, both generally considered full species (e.g. White and Bruce 1986); all are monotypic. However, duPont (1971), White and Bruce (1986) and Dickinson *et al.* (1991) split *bonthaina* as Lompobattang Flycatcher. *Bonthaina* and *platenae* are represented in the collections of the British Museum (Natural History);