

**FIRST RECORD OF THE ASIAN OPENBILL,
ANASTOMUS OSCITANS (AVES: CICONIIDAE) IN SINGAPORE,
WITH NOTES ON FORAGING AND DISPERSIVE MOVEMENTS**

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ABSTRACT. — We report the first record of the Asian openbill (*Anastomus oscitans*) in Singapore. The six birds observed at Seletar North since 23 Jan.2013 foraged on a small, flooded field and were seen to feed on apple snails, subsequently flying to roost on adjacent trees of albizia (*Falcataria moluccana*) on observation days. Recent southwards dispersive movements down the Thai-Malay Peninsula based on observations of large flocks in southern Thailand and Peninsular Malaysia at multiple sites is unprecedented and may represent post or pre-breeding dispersal from colonies in central Thailand or Cambodia, although the exact causes remain unclear.

KEY WORDS. — new record, Asian openbill, Singapore, dispersive movements, Thai-Malay Peninsula, foraging

INTRODUCTION

The Asian openbill (*Anastomus oscitans*) is a small, greyish-white stork that is readily distinguished from other large waterbirds in Asia by having a greyish bill with an open space between the mandibles (Robson, 2000). It is widely distributed across the Indian subcontinent and mainland Southeast Asia (Robson, 2000), with a number of breeding colonies in central Thailand (e.g., Wat Phai Lom; McClure, 1998), Tonle Sap Lake in Cambodia (Sun Visal & Allebone-Webb, 2009) and in U Minh Thuong National Park, southern Vietnam (Safford et al., 1998). Despite its wide distribution and the occurrence of apparently suitable habitats such as paddy fields and freshwater marshes, it has never been historically recorded on the Thai-Malaysian Peninsula with the exception of probable dispersants at Krabi Province, Thailand, in 1936 (Wells, 1999). Asian openbills were only documented for the first time in Peninsular Malaysia in 2008 in Chuping, Perlis State (Lim et al., 2011), and increasingly regularly in Penang and Perak (e.g., Permatang Pauh) thereafter.

Asian openbills from the well-known colony at Wai Phai Lom, Pathum Thani Province, central Thailand, were intensively studied during the Migratory Animals Pathology Survey (MAPS; McClure, 1998), providing much information on non-breeding dispersal from the colony. At its peak, as many as 30,000 birds were counted, possibly representing the largest breeding population in Southeast Asia. Notably, storks that were ringed had been tracked to as far west as northeast India and Bangladesh (McClure, 1998), providing evidence for long-distance, non-breeding dispersal. Colonies in Tonle Sap, Cambodia, are less well known, but recent censuses reported nearly 10,000 individuals, making it the most abundant waterbird there (Sun Visal & Allebone-Webb, 2008), and possibly the second largest concentration of the species in Southeast Asia outside central Thailand.

Recently, a very large flock of Asian openbills, exceeding 1,000 individuals, was documented in Kuala Gula, Perak State in northern Peninsular Malaysia (Chuah, 2013), following similar records of large numbers in Phuket, southern Thailand (Sakoot, 2012). The movement of large congregations of the species down the Peninsula was well monitored, with birds subsequently observed by many birdwatchers in Penang, Melaka, Johore (Tan & Murali, 2013) and subsequently Singapore. In this article, we document the first Singapore record of the species, detail our observations of foraging behaviour and diet, and discuss possible causes of dispersal of the species.

OBSERVATIONS

We first observed six adult Asian openbills at a flooded field adjacent to the Seletar Airport, Seletar North, on 23 Jan.2013, and sporadically on 24–26 Jan.2013. Our observations represent the first record of this species in Singapore. At the time of writing, the birds were reportedly still present in the area. Furthermore, a single individual had been observed over Neo Tiew Lane on 16 Jan.2013 (K. H. Tan, in litt., 2013) and a number of birds were observed in flight over Jurong Island (C. H. Low, in litt., 2013). During our observation, we documented foraging and roosting behaviour. Foraging sessions at dawn and dusk were interspaced with prolonged periods of inactivity towards the middle of the day, during which the flock sought shelter in a grove of young albizia trees (*Falcataria moluccana*) that lined the field.

At dusk on all three observation days, the birds would take off in unison to roost atop dead albizia trees at the nearby Seletar Camp (Fig. 1).

On 25 Jan.2013, the storks were observed foraging in the flooded field in the company of other waterfowl, including a yellow bittern (*Ixobrychus sinensis*; Fig. 2). On 26 Jan.2013, the foraging storks were accompanied by single individuals of little (*Egretta garzetta*) and intermediate egrets (*Egretta intermedia*), as well as two unidentified pond herons (*Ardeola* sp.) One individual was observed feeding on an apple snail (Fig. 3), possibly the alien golden apple snail *Pomacea canaliculata*. Additionally, we observed on a few occasions, aggressive interactions between several individuals within the flock (Fig. 4).

DISCUSSION

The Asian openbill is one of the most successful large waterbirds in Southeast Asia, and remains the most abundant stork in the region. It is a mollusc specialist whose success has been partly attributed to the proliferation of the golden apple snail (*Pomacea canaliculata*), a regular prey item and an invasive species from South America which is now widespread throughout Southeast Asia (Sawangproh & Poonswad, 2010). However, no regular southward movements of the species from its stronghold in mainland Southeast Asia has previously been observed, with the species recorded only as a rare vagrant south of the Kra Isthmus (Wells, 1999).

The sighting of Asian openbills in Singapore is not surprising, in light of reports of large numbers of the species in Peninsular Malaysia in recent weeks, and large flocks seen over Chumphon Province, southern Thailand in the latter months of 2012 during regular raptor surveys (P. D. Round, in litt., 2013). Up to 1,000 individuals had initially been reported in Kuala Gula, Perak State on 8 Jan.2013 (D. Z. W. Li, in litt., 2013), with approximately 250 individuals reported in Batang Tiga, Melaka State the following day, and subsequently about 140 individuals in Muar, Johor State (Chuah, 2013). The presence of this species in Singapore, two weeks after the initial sightings in Perak, is suggestive of a fairly rapid, ongoing southward movement, the first time such a phenomenon has been documented along the Thai-Malaysian Peninsula.



Fig. 1. Two Asian openbills thermalling prior to roosting. (Photograph by: Lee Tiah Khee).



Fig. 2. Asian openbill foraging alongside a yellow bittern at a flooded field adjacent to Seletar Airport. (Photograph by: Lee Tiah Khee).



Fig. 3. An Asian openbill holding an apple snail in its beak. (Photograph by: Lee Tiah Khee).



Fig. 4. Aggressive intraspecific interaction between several Asian openbills. (Photograph by: Lee Tiah Khee).

At present, explanations for these observed movements of large flocks of Asian openbill are at best hypothetical. One possibility involves ongoing drought conditions reported in 26 provinces in Thailand (Bangkok Post, 2013), which could have displaced local colonies or that human disturbance has increased in and around the colonies. Besides that, the possibility of a southward range expansion of the species cannot be ruled out, with anecdotal evidence suggesting that the increasing abundance of the species in Thailand may have resulted in many colonies exceeding carrying capacity. At least in Thailand, the species has undergone fairly rapid range expansion both north- and southwards, and has already spread as far north as south China (P. D. Round, in litt., 2013). Furthermore, Asian openbills are now known to be breeding in Thale Noi Lake in Phattalung Province, southern Thailand, where they were unknown just a few decades ago.

Nevertheless, the continued presence of this species in Singapore is intriguing insofar as to suggest the propensity for eventual colonisation. The abundance of aquatic snails in the local freshwater ecosystems, including the invasive golden apple snail which is now widespread across Southeast Asia, coupled with the stork's ability to adapt to freshwater habitats with high levels of disturbance (e.g., human usage), all bode well for long-term residency. Further research is required in order to obtain a better understanding of the continued presence of this species in Singapore.

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