

THE BLACK-NAPED MONARCH (*HYPOTHYMIC AZUREA*) IN SINGAPORE

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INTRODUCTION

The black-naped monarch (*Hypothymis azurea*) belongs to the order Passeriformes, and family Monarchidae (monarch and paradise-flycatchers family) (Coates et al., 2006). There are 24 subspecies of the black-naped monarchs, ranging from the Indian subcontinent, Sri Lanka, South China (Sichuan to Fujian), Taiwan, South East Asia (Peninsular Malaysia, Sumatra, Borneo, Java, Bali, the Philippines, Sulawesi, and the Natuna Archipelago). *Hypothymis azurea* can be found in a multitude of habitats, ranging from lowland primary forest, freshwater swamp, subcoastal peat swamp forest, tall secondary growth and overgrown plantations (Wells, 2007). These birds however, are generally found in the shade layers of their habitat, from the canopy downwards. *Hypothymis azurea* is generally a lowland species, although it has been recorded in Peninsular Malaysia up to an altitude of 915 m in *Dacrydium*-rich conifer ridge forest at Lawit Peak in Terengganu as well as a record on the slopes of Gunung Tahan at around 1000 m. Those occurring on small islands can be found at the landward side of mangrove forests.

Food consists of small arthropods such as butterflies, moths, grasshoppers, beetles and bugs (Coates et al., 2006; Wells, 2007). Feeding includes aerial sorties from a perch and hovering in front of foliage to flush out insects. Leaf gleaning seems to be the preferred method for obtaining prey. Large food items are usually held under foot and torn to pieces before swallowing. This species has been recorded to join mixed foraging parties of up to 25 member species in the Gombak Valley in Selangor, Peninsular Malaysia.



Fig. 1. *Hypothymis azurea prophata* (male) on its nest in the Lower Kinabatangan, Sabah, Malaysia. (Photograph by: Eric Soo).



Fig. 2. *Hypothymis azurea prophata* (female) in its nest in the Panti Forest Reserve, Johore, Peninsular Malaysia. (Photograph by: Myron Tay).

Although records of this species in mixed foraging parties are occasionally reported, they are more often found in pairs or singly, sometimes with dependent fledglings. There has also been a report of this species moving in parties of up to 10 individuals outside breeding season, although this is assumed highly usual with no other workers reporting such a phenomenon (Wells, 2007). During the breeding season, this species becomes highly aggressive towards intruders, attacking birds much larger than it. On one occasion, a male black-naped monarch was observed attacking a red-crowned barbet that had come too close to its nesting area (C. H. Low, pers comm.).

The subspecies native to Singapore is *Hypothymis azurea prophata* (Figs. 1, 2). It ranges from Southern Thailand, Peninsular Malaysia to Sumatra (Wells, 2007). The male (Fig. 1) has a predominantly bright-blue plumage, which is slightly darker on the back. There is also a narrow, black frontal-band over the bill and a black nuchal tuft. A black narrow half collar is also noticeable just below the throat. The breast areas are also bright-blue just under the collar, fading to a white at the belly and stretching to the vent. The eyes are surrounded by a cobalt blue eye wattle, the bill is blue with a black tip and the legs are greyish-blue. The female (Fig. 2) like the male, has a bright-blue head, a narrow black frontal-band over the bill and a black nuchal tuft. Unlike the male, the female does not have a distinct black narrow half collar. The breast is a rather dull light grey, fading to an off-white belly and vent. The wing and tail feathers are a dull greyish-brown, with slightly blue tinge on the upper sides of the tail feathers.

Nesting often takes place in a multi-pronged stem fork around 2–3 m above the ground, but has also been recorded on a liana, on a bamboo culm, and also recorded outside forest in a branch fork of a rubber tree as high up as 12 m (Wells, 2007). The nest is a deep compact cup of fibre and bark-like material (Fig. 3), as well as fungal hyphal clumps, cob webs, spider eggs sacks and cocoon silk (Fig. 4) which is used as an anchorage material for attaching green moss (Coates et al., 2006). Nest-building on the Thai-Malay Peninsula is reported from Mar. to as late as Jul. (Wells, 2007). A nesting record was documented in the Panti Forest Reserve in Johore, which occurred in Jun. (B. S. Tey, pers comm.). On the 14 Jun. 2009, nest-building was observed at its final stages with participation from both male and female parents (Figs. 3, 4), although nest-building was reported to be predominantly done by the female (Wells, 2007). On 21 Jun. 2009, incubation had commenced, although the number of eggs was not reported. The general number of eggs per clutch for this species is usually two and with only one record of a brood of three from Phuket (Wells, 2007) although clutches of 2–4 eggs have been recorded (Coates et al., 2006). The egg of this species is whitish-cream or



Fig. 3. Female adding cobwebs or a spider egg sack to its nest (Panti Forest Reserve, Johore, Peninsular Malaysia). (Photograph by: Tey Boon Sin).



Fig. 4. Male inserting fibrous plant material to its nest (Panti Forest Reserve, Johore, Peninsular Malaysia). (Photograph by: Tev Boon Sin).

off-white, with a fine freckling of brown, rather pointed-ovate, and 17 by 13 mm. Incubation was observed from 21 Jun.2009 to 5 Jul.2009 (B. S. Tey, pers comm.). On 12 Jul.2009, a rare clutch of three chicks was observed. The nestling period for the chicks was observed for about 10–12 days, as the nest was observed to have been empty after that period. Brooding and feeding of the chicks is done by both parents, although Wells (2007) reported the female doing most of the work. In the Panti Forest Reserve nesting, both parents were seen feeding (Figs. 5, 6) and tending to the chicks. Food was brought back to the nest every 10–15 minutes, with the frequency increasing as the chicks matured. The predominant food was noted as orthopterans (grasshoppers and crickets) (Figs. 5, 6) although an unidentified food item was offered to the chicks by the male parent (Fig. 7). Both parents were also noted to clear faecal pellets (Fig. 8) from the nest, flying a short distance away before dropping it.

PAST AND PRESENT RECORDS

Hypothymis azurea prophata is considered nationally endangered in Singapore (Wang & Hails, 2007) and in Peninsular Malaysia is considered near-threatened, bordering on vulnerable (Wells, 2007). This species was formerly recorded from Singapore Island only in small numbers (Robinson, 1927; Gibson-Hill, 1949) and thought to have disappeared from Singapore Island some time after World War II (Gibson-Hill, 1950). On Pulau Ubin, this species was last recorded in Apr.1995 (Ollington & Loh, 1999). A female was reported in Pulau Sakijang Pelepah (Lazarus Island) on 19 Jan.2001, although this was assumed a stray from the Riau Islands (Wang & Hails, 2007). The most recent Singapore Island record was made of a female specimen from Sime Road on the 1 Jan.2004, since the report by Gibson-Hill (1949). At present, Singapore's population of *Hypothymis azurea prophata*, estimated at 15 individuals in 1992 (Lim, 1992), is restricted to the northern part of Pulau Tekong, in old secondary forest and abandoned plantations. The loss of this species from Singapore Island was attributed to habitat loss and disturbance. More recent reports from Pulau Tekong, suggests that this species is doing well on the island with a thriving breeding population (estimated from



Fig. 5. The male with a kaytdid (Panti Forest Reserve, Johore, Peninsular Malaysia). (Photograph by: Tey Boon Sin).



Fig. 6. The female with a cricket (Panti Forest Reserve, Johore, Peninsular Malaysia). (Photograph by: Tey Boon Sin).



Fig. 7. The male *Hypothymis azurea prophata* with an unknown food item (Panti Forest Reserve, Johore, Peninsular Malaysia). (Photograph by: Jonathan Cheah Weng Kwong).



Fig. 8. The male *Hypothymis azurea prophata* clearing a faecal pellet from a chick (Panti Forest Reserve, Johore, Peninsular Malaysia). (Photograph by: Tey Boon Sin).

the number of calls) (R. Subaraj, pers comm.). Nesting has also been recorded on the island from May to mid Jul., with nests similar in appearance to those observed in the Panti Forest Reserve and the lower Kinanbatangan region. No photographs were available of the nesting at Pulau Tekong as the island is presently used as a military training area and inaccessible to the public.

CONCLUSIONS

The only population of *Hypothymis azurea prophata* in Singapore at present seems to be confined to the more inaccessible, and thus relatively undisturbed, areas of Pulau Tekong, where the military's interests also keep these birds protected. The fact that this species has disappeared total from the mainland, including the military protected areas of the western catchment, suggests that this species is especially sensitive to disturbance. And judging from the health and size of our forest, not to mention extent of human disturbance in our nature reserves (Bukit Timah and Central Catchment Nature Reserves), reintroduction of this species would almost certainly be met with failure. It is possible that this species may persist on the larger southern islands set aside for military training, such as Pulau Pawai, Pulau Senang and Pulau Sudong. These islands seem to be large enough, and appear to have forest dense enough to sustain this species. With the black-naped monarch presently extinct on the mainland, the offshore islands would offer the best chances for the survival of this sensitive species in Singapore.

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