A record of early breeding season of Blue-bearded Bee-eater in Buxa Tiger Reserve, West Bengal

The Blue-bearded Bee-eater *Nyctyornis athertoni* (Jardine & Selby 1830) (Family Meropidae) is a species found in the Indian subcontinent and southeastern Asia (Rasmussen & Anderton 2012; BirdLife International 2016). It is a common, forest mid-storey resident species in Buxa Tiger Reserve in West Bengal (Sivakumar et al. 2006).

The bee-eater prepares its nest by digging burrows tunnelled into vertical sandy banks, often at the side of a river or stream, and at times in sloping hillsides. The breeding season for this species is recorded from February to August by the earlier studies (Ali & Ripley 1983; Rasmussen & Anderton 2012). Ali & Ripley (1983) mentioned that the excavation commences a month or more before actual egg laying, while Rasmussen & Anderton (2012) has mentioned that the excavation may start by December.

In November 2018, a Blue-bearded Bee-eater pair was noticed excavating a burrow on a wall of a trench made for the water channel on the boundary of the Vulture Conservation Breeding Centre at the Rajabhatkhawa range (26.6161^{0}N, 89.5362^{0}E) in Buxa Tiger Reserve. The area represents eastern Himalayan moist-mixed deciduous forest (Champion & Seth 2005).

The nest hole was at the height of about two feet from the base of the channel. The ground vegetation was scanty around it, although the location was in the woodland. The nesting did not succeed, however, on 19 October 2019, the pair was seen again preparing tunnels at the same location.

There were two nest holes dug, both circular, about eight cm in width. The process of excavation continued for a week and then birds were observed perching nearby. On 8 December 2019, the pair was seen with two juveniles. In January 2020, more than a month after the breeding concluded, the nest hole

Adult Blue-bearded Bee-eater at Rani, Assam in May 2020. © Sachin Ranade.

Nest of Blue-bearded Bee-eater at Rajabhatkhawa, BTR, in January 2020. © Sachin Ranade.

was photographed. On 12 October 2020, consecutively for the third year, the pair prepared a nest in same location in Rajabhatkhawa and bred successfully. These records of the nest-tunnel building and breeding of the Blue-bearded Bee-eater are almost two months earlier than the previous known records (Ali & Ripley 1983; Rasmussen & Anderton 2012).

Two additional nesting attempts were recorded in Buxa Tiger Reserve during December 2019-January 2020. One attempt produced a single fledgling at Rani, Kamrup District in Assam during May 2020.

It is possible that the earlier breeding documented here is a characteristic of the population of Blue-bearded Bee-eater in northeastern India, however this could also be variation influenced by climate change.

Blue-bearded Bee-eater near the nest of Greater banded hornet at BTR, December 2019. © Sachin Ranade.

The diet of the Blue-bearded Bee-eaters included the Dwarf Honey Bee *Apis florea* that prepared a comb-nest in my wooden house at Rajabhatkhawa, which attracted a pair of Blue-bearded Bee-eater. The pair perched on a wire close to the window and fed on the bees. Adults and newly fledged young also foraged on a nest of Greater Banded Hornet, *Vespa* cf. *tropica,* on a tree near their nest.

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