

## Flocking of hornbills observed in Tongbiguan Nature Reserve, Yunnan, China

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Flocking behaviour are often observed in Asian hornbills (Kinnaird and O'Brien 2007). In Thailand, over 1 000 Wreathed hornbill *Rhyticeros undulatus* have been seen flocking together to roost site (Poonswad and Kemp 1993), while in Malaysia, a gathering of 2 421 Plain-pouched hornbills *Rhyticeros subruficollis* was reported (Ho and Supari 2000).

However, for the five species of hornbills found in China (Rufous-necked hornbill *Aceros nipalensis*, Austen's Brown hornbill *Anorrhinus austeni*, Oriental Pied hornbill *Anthracoceros albirostris*, Great hornbill *Buceros bicornis* and Wreathed hornbill), the documentation of flocking behaviour is absent. During a recent field survey on 12<sup>th</sup> October 2019, staff from Tongbiguan Nature Reserve (TBG), situated in Dehong Prefecture at the western part of Yunnan Province adjoining Myanmar's Kachin State, were thrilled to observe a large flock of 102 Wreathed hornbills and 45 Great hornbills (Fig. 1), which was the largest hornbill flock ever recorded in China.

TBG was established in 1986 to preserve the unique biodiversity of the region. It is within the distribution range of all five species of hornbills found in China, and is widely known as "Horn-

bill Valley" among Chinese birders. In China, Wreathed hornbill only occurs in TBG while the Great hornbill is being regularly seen here only in recent years. As the only tropical region of the Irrawaddy River Basin in China, TBG is part of WWF's Northern Indochina subtropical forests ecoregion (IM0137), CI's Indo-Burma biodiversity hotspot and BirdLife's Important Bird Area (CN245). TBG is also home to the largest patch of *Shorea*-dominated dipterocarp rainforest in China (Fig. 2), with a large population of the large deciduous tree *Tetrameles nudiflora* which could be potential nest trees for hornbills as has been reported in other studies (Poonswad 1995, Datta and Rawat 2004).

Dedicated hornbill conservation work in TBG started in 2015 after Kadoorie Farm and Botanic Garden (KFBG), TBG and the local government co-organised an international workshop on hornbill conservation in China in Yingjiang County of Dehong Prefecture. Delegates of the Yingjiang workshop, including hornbill experts like Pilai Poonswad and Aparajita Datta, called for enhanced conservation effort for Chinese hornbills. The relevant government agencies have taken the advice seriously. TBG started to monitor and record nesting activities and breeding success of Wreathed hornbill, Great hornbill and Oriental Pied hornbill for five consecutive years since 2015. In 2019, 12 nests,



**Fig. 1.** Sixteen of the 45 Great hornbills observed on 12<sup>th</sup> October 2019; the largest flock recorded in China (photo credit: Ding-Ying Ban)



**Fig. 2.** Tongbiguan Nature Reserve has the largest patch of *Shorea*-dominated dipterocarp rainforest in China with high plant endemism.





Fig. 3. A nest of Wreathed hornbill being monitored in Tongbiguan Nature Reserve.

including six of Wreathed hornbill, four of Great hornbill and two of Oriental Pied hornbill were intensely monitored by TBG during the breeding season (pers. obs. by the authors; Fig. 3).

In recent years, TBG has been collaborating with KFBG and other conservation organizations to explore sustainable conservation initiatives. By developing sustainable ecotourism in community forests with hornbills in villages surrounding TBG, many of the local communities have been inspired and are engaged in the conservation of the last stronghold of hornbills in China. KFBG and TBG are developing Indigenous and Community Conserved Areas (IC-CAs) in community forest blocks with hornbill nesting trees, and we hope such effort could further enhance the long-term survival of hornbills in this corner of China.

## References

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