

Breeding Successes of Hornbills of the West Visayan Faunal Region at the Talarak Foundation Inc.

Matt Ward^{1*}, Monica Atienza², Fernando Gutierrez³

¹Sibulan, Negros Oriental, Philippines 6201

²Bacolod City, Negros Occidental, Philippines 6100

³Kabankalan City, Negros Occidental, Philippines 6111

*Corresponding author email: italarakconservationteam@gmail.com

The Philippines is a biodiversity hotspot and megadiverse country, with high endemism in terrestrial fauna and flora. All 11 species of hornbills within the Philippines are endemic, but within the archipelago, some species are endemic to specific island groups. The West Visayan Islands have two endemic hornbill species, the Visayan Hornbill (*Penelopides panini*) and Rufous-headed Hornbill (*Rhabdotorrhinus waldeni*); amongst the 3 most endangered hornbills in the Philippines. Both of these species faced threats from habitat loss and poaching (for food, sport and, trade) for several decades, leading to drastic declines and island extinctions; both species are now found only on the islands of Negros and Panay, with the *R. waldeni* functionally extinct on Negros.

In conjunction with the Negros Forest and Ecological Foundation Inc. (NFEFI) there has been captive breeding of these species for over 20 years. NFEFI, a precursor to the Talarak Foundation, had been breeding *P. panini* since 1997 up to the Talarak Foundations facility takeover in 2016. Including the Talarak Foundation breeding center, there were 17 successful fledglings between 1997 and 2015. Between January 2019 and July 2020 there have been 21 successfully fledged *P. panini*; the *R. waldeni*, previously without breeding success for almost



Fig. 1: Mother Visayan Hornbill and chicks inside the artificial nest box.

10 years, have now had 2 successful breeding years with 3 fledged chicks. This boom in breeding success increased the captive population within the Talarak breeding centers to 47 *P. panini* and 18 *R. waldeni*. There are currently 5 proven breeding pairs of *P. panini* and 2 proven breeding pairs of *R. waldeni*.



Fig. 2: Family of Visayan Hornbills in the Talarak Foundation breeding centre.



Fig. 3: Family of Rufous-headed Hornbills in the Talarak Foundation breeding centre.

This breeding success may be down to the strict dietary schedules; a general diet of fruits, vegetables, animal protein with low iron pellets fed twice daily, changed to three times daily during the breeding period with increased animal protein sources. At the time of hatching, this diet is further modified to include double portions of the regular food, increased crickets, and soaked dog food. Alongside the diet, the nest boxes, and level of privacy during breeding can be influential in breeding success. The nest boxes for the *P. panini* are hand made from wood fibre with dimensions of 84 (height) x 51 (width) x 58 (depth) centimeters and a diamond entry hole measuring 35.5 cm vertical entry and 10 cm horizontal entry. The successful nest boxes for *R. waldeni* have been constructed from hollowed palm trunks measuring at least 76 (height) x 51 (diameter) centimeters and dia-

mond entry holes measuring 20 cm vertical with 10 cm horizontal opening. During the breeding period, the active enclosures are isolated from public display and disturbance limited to only feeding times.

These breeding successes could prove crucial in the future conservation efforts for both species. The status of *P. panini* within the breeding centers, coupled with protected reserves absent of the species, promote future reintroductions being used to boost wild populations. The *R. waldeni* captive population and limited breeding success indicate that captive management is still a priority conservation activity, with continued reforestation, habitat protection, and searching for extant populations the best course of conservation actions.



Matt Ward



Monica Atienza



Fernando Guitierrez