

## Description of a Bridled White-eye Nest from Rota, Mariana Islands

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**Abstract**—The nest of a Rota Bridled White-eye was discovered on 9 June 1993 in the Applatatgua region of Rota. The nest tree was a *Hernandia labyrinthica* in well-developed limestone forest. The nest's exterior measured 70 by 50 mm, and the interior 50 by 30 mm. The nest was constructed of what were probably fibers from *Pandanus tectorius* and rootlets of *Asplenium nidus*. The exterior of the nest was covered with an unidentified moss. The nest was probably unfinished.

### Introduction

The Rota Bridled White-eye (*Zosterops conspicillatus rotensis*) is endemic to the island of Rota, Commonwealth of the Northern Mariana Islands. This White-eye subspecies is currently limited in distribution to the Sabana region of Rota (Engbring et al. 1986). Recent surveys by the U.S. Fish and Wildlife Service indicate that the population may have declined by at least 50% over the past decade (Ramsey & Harrod 1995, unpublished report). Little is known about the life history of this subspecies. Only two other nests have been located on Rota.

On 9 June 1993 a nest of the Rota Bridled White-eye was discovered when an adult was seen flying to and from the nest. The nest was later observed on the mornings of 23 and 24 June and judged to be inactive. White-eye flocks were seen in the vicinity during this time, but no birds approached the nest. Measurements of the surrounding vegetation and nest tree were taken. The nest was initially too high in the canopy to collect, but it was found lying on the ground near the nest tree on 6 July 1993 and collected for measurement.

### Nest Location

The nest was located in the Applatatgua region (UTM coordinates 1564800 N, 305500 E) of Rota at approximately 400 m elevation in well-developed limestone forest with an extremely rugged karst substrate. The nest tree (*Hernandia labyrinthica*) was located on the western edge of a secondary road that was bounded by a

seven m deep ravine. The nest tree was 12 m in height and 22.1 cm in diameter at breast height. The surrounding canopy was estimated to average 12.5 m in height, with 50% canopy closure (as measured by spherical densitometer). The nest was 7.5 m from the ground and 2.0 m from the bole of the first major fork in the tree. The nest was attached to a small limb and was well hidden by large leaves.

### Nest Description

The nest measured 50 mm total height and 70 mm in total diameter, with the interior measuring 50 mm in diameter and 30 mm deep. The interior was an interwoven mesh of what appeared to be fibers from *Pandanus tectorius* and rootlets from bird's nest ferns (*Asplenium nidus*), both species which are found commonly in the area. The walls of the nest were thin with no separate inner cup. The exterior of the nest was covered in a light green moss (unidentified sp.) that grows abundantly as an epiphyte on trees at this elevation. We were not able to determine if the moss was growing naturally on the nest or if it had been used in nest construction by the birds. The light green color of the nest made it extremely difficult to detect amid the surrounding foliage.

### Discussion

Yamashina (1932) described a Rota Bridled White-eye nest that was located 3 m above the ground and contained two eggs. The outer nest was 50 mm high and 70 mm in diameter, while the inner cup measured 30 mm in diameter and 30 mm deep. It was composed of fine vines, stems, unknown fibers, *Pandanus* sp. fibers, and "cotton." Based on personal observations of White-eye (*Z. c. saypani*) nests on Tinian, we believe that Yamashina's (1932) "cotton" probably referred to spider webs. The nest was also described as being "thick." It was collected on 7 March 1931, but the tree species and general location on Rota were not recorded. Pratt (1985) mentioned an active nest discovered on 19 May 1984 beside the Water Cave trail on Rota. The nest was cup-shaped and hanging from a leaf petiole 7 m up in a young *Hernandia* sp. tree. This tree was probably *H. labyrinthica*, a limestone obligate (Raulerson & Rinehart 1991). The only other species of *Hernandia* found in the Marianas, *H. sonora*, is primarily restricted to beach strand and is only occasionally found on limestone (Raulerson & Rinehart 1991). Jenkins (1983) briefly described a White-eye (*Z. c. conspicillatus*) nest on Guam as being composed of finely woven fibers and rootlets that measured 4 to 5 cm in diameter by 7 to 8 cm deep.

Our nest measurements are similar to Yamashina's (1932), except our nest's interior was 20 mm larger in diameter. Our nest was probably unfinished, which would account for Yamashina's description of the nest walls being "thick," whereas the walls of our nest were 20 mm thinner. One reason we believe the nest was unfinished is because it was found lying on the ground only 26 days after it was discovered, suggesting that it was not yet complete and therefore not strong enough to withstand normal weather.

The discovery of this nest, along with the earlier records, indicates that the breeding season for the Rota Bridled White-eye extends at least from March until June. The Guam subspecies of White-eye is believed to have bred year-round (Jenkins 1983, Marshall 1949). In the two cases where the nest tree was reported for White-eye nests on Rota, both were probably *H. labyrinthica*. We recommend that searchers for White-eye nests on Rota pay special attention to this tree species, focusing on the mid and lower canopy regions. This nest description should be helpful to zoos breeding Rota Bridled White-eyes in captivity and to researchers looking for active White-eye nests.

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