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A RECORD OF REPRODUCTION IN *ANTHOPS ORNATUS* (CHIROPTERA: HIPPOSIDERIDAE), YSABEL ISLAND, SOLOMON ISLANDS.

Memoirs of the Queensland Museum – Nature **56**(2)*:* 331-332. 2013:- The Solomons Leaf-nosed (or Fower-faced) Bat (*Anthops ornatus* Thomas 1888a) belongs to a monotypic genus of hipposiderid bats endemic to the Solomon Islands and Bougainville (Flannery 1995). The nose-leaf is complex with two secondary leaflets and three upward projections that rise to form backward facing spherical cups. The tail is short, comprising four transparent vertebrae that terminate less than mid-way to the external edge of the membrane. The nose-leaf and lower jaw are orange; hairs of the dorsum have black bases changing to silver then tipped with black; and ventral hairs are black-based tipped with silver (Thomas 1888a, b; Flannery 1995).

Records of the species are extremely rare. Its description was based on six specimens collected from Aola on Guadalcanal Island by C.M. Woodford. Subsequently, Sanborn (1931) reported a specimen from Choiseul during the Whitney South Seas expedition in 1929, and Troughton (1936) reported a specimen from Bougainville and remarked on a second specimen collected from Ysabel by N. S. Heffernan in 1924. More recently, Flannery (1995) recorded a male at Balani Village on the southern coast of Guadalcanal and Bowen-Jones *et al.* (1997) recorded an individual on Choiseul. In addition to these locations, the Bernice Pauahi Bishop Museum (Honolulu) holds one specimen collected from Ngella in 1964. This distribution comprises islands that were connected as the *Greater Bukida* landmass during the Pleistocene (Mayr & Diamond 2001), plus Guadalcanal.

On 12 November 2011, we captured a female *A. ornatus* carrying a neonate. The capture occurred on Ysabel Island (Fig. 1) in a mist net positioned within the understorey of lowland forest at an elevation of 411 m a.s.l. As we approached the net, the female managed to free itself, however the neonate had become entangled and remained behind. We had deployed 168 m² of mist net over two nights (total 14 hours) for the single capture. Nets were 12 m long by 2.8 m high and constructed of 38 mm mesh.

Vegetation at the site was ultrabasic/ultramafic forest. This forest type is distinct from typical Solomon Island lowland forest but does share some similarities in species composition and structural characteristics. Dominant canopy trees are *Xanthostemon melanoxylon*, *Gymnostoma papuana*, *Metrosideros salomonensis*, *M. collina, Gnetum gnemon, Podocarpus salomoniensis* and *Fagraea obtusifolia*. The palms *Actinorhytis calapparia* and *Hydriastele hollrungii* are also common. The understorey contains *Nastus obtusus, Lycopodium cernuum, Gleichenia linearis, G. oceanica, and Capitularia involucrata.*

The specimen was lodged with the Queensland Museum, Brisbane, Australia (QM JM19844). Weight was not recorded in the field, however, body measurements with comparative dimensions of existing museum specimens are given below in Table 1.

The age of the specimen is likely to have been less than two weeks, as this is typically the upper time limit for which other hipposiderid bats carry their young before depositing them in roosts (Churchill 2008). The forearm was approximately 40% of adult length. Short, dark hair was present over much of the body, the eyes were closed, ears were erect and an umbilical scar was evident. In China, juvenile *Hipposideros cineraceus* Blyth, 1853 with such attributes have been determined to be approximately five days old (Jin *et al.* 2010). Tate (1941) identified one of the

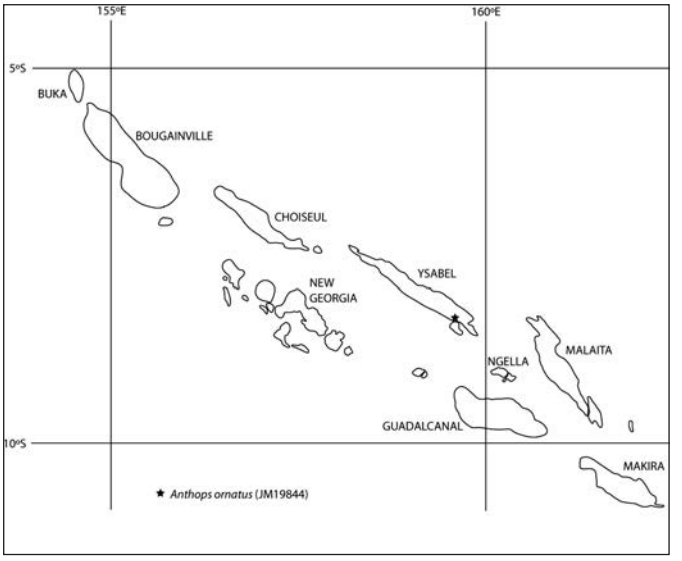

FIG 1. The geographical Solomon Islands and location of *Anthops ornatus* record (JM19844).

TABLE 1. Comparisons of external measurements (mm) between adult *Anthops ornatus* museum specimens and the captured juvenile.

Source	Specimen	Island	Sex	HB	FA	EA	TIB
Thomas, 1888a	B.M.88.1.5.16*	Guadalcanal	F	51	51	17	22
Tate, 1941	B.M.88.1.5.1	Guadalcanal	F	-	51	-	-
Flannery, 1995	-	-	F	46.6	49.3	18.5	22.4
Thomas, 1888b	-	Guadalcanal	M	53	50	16.5	23
Flannery, 1995	-	Guadalcanal	M	49	48.6	19	23.2
Tate, 1941	B.M.88.1.5.28	Guadalcanal	M	-	48.5	-	-
Tate, 1941	B.M.89.4.3.5#	Guadalcanal	M	-	37	-	-
Lavery *et al.*, 2013	BPBM-24473	Ngella	M	52	51	21	23
Lavery *et al.*, 2013	**JM19844**	**Ysabel**	**F**	**31**	**19.9**	**8.7**	**10.3**

HB head-body length; FA forearm length; TL tail length; EA ear length from tip to ear notch; TIB tibia length. *Holotype. #Specimen regarded as a juvenile by Tate (1941).

specimens collected by C.M. Woodford (Thomas 1888a) as being a juvenile, however, JM19844 is the first record of a neonate for the species. *Anthops ornatus* is believed to be a foliage-gleaning insectivore (Bonaccorso 1998; Flannery 1995). All previous specimens have been captured within primary lowland forest below 200m a.s.l (Bonaccorso 1998). This capture thus extends the upper known altitudinal limit of the species to 411 m a.s.l.

Most published records of this species do not specify collection localities. We have completed extensive searches of caves within the species' range but are yet to encounter an *A. ornatus* roost. Given this, and the apparent rarity of captures, it is possible *A. ornatus* does not roost in caves but instead utilises hollow trees or strangler figs (*Ficus* spp.). In northern Queensland, Australia, the rainforest hipposiderid *Hipposideros semoni* Matschie, 1903 is a non-obligate cave roosting species and single individuals or small groups have been encountered in hollow trees (Van Deusen 1975; Churchill 2008; G. Hoye personal communication).

The apparent rarity of *A. ornatus* and the rapid loss of its primary lowland forest habitat raise concern for the species' conservation. It was previously listed as *Vulnerable* under the IUCN *Red List of Threatened Species* (Baillie & Groombridge 1996) but at present is listed as data deficient (IUCN 2011). Only five records of the species have been published since the original specimens were collected in 1888 and we identified only 19 museum specimens in a review of major museum collection databases. All records have come from primary lowland forest, a habitat type predicted to face exhaustion from commercial logging by the year 2015 (URS 2006)

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