

**ROOSTING AND NEST-BUILDING BEHAVIOUR OF THE WHITE-NEST SWIFTLET
AERODRAMUS FUCIPHAGUS (THUNBERG) (AVES: APODIDAE)
IN FARMED COLONIES**

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ABSTRACT. — The edible-nest swiftlets of the genus *Aerodramus* are amongst the most unusual of birds, being able to navigate in total darkness aided by echolocation and using their own saliva to construct the nest. They are a valuable economic resource, the edible nests being much sought after. Knowledge of nesting and breeding ecology of this species has so far been limited to cave colonies whilst studies focusing on the house-farmed population are lacking. We studied the roosting and nest building behaviour of the white-nest swiftlet *Aerodramus fuciphagus* (Thunberg) in two separate house-farmed colonies of different age in Miri Division, Sarawak, from Jun.2010 to Jan.2011 (Site-I) and Feb.2012 to Oct.2012 (Site-II). Two types of infra-red (IR) cameras were used, namely (i) fixed focal-lens IR to monitor large colony and (ii) Pan-Tilt-Zoom camera for close-up observation. This paper reports new discovery in which three basic activity sessions are described; first emergence period (0600–0700 hours), post-emergence period (0700–1000 hours) and returning period (1800–1900 hours). During the post-emergence period, approximately half of the sampled colony was observed re-entering the swiftlet house to resume nest construction. Ten ethogram categories were developed to describe the roosting behaviours of the white-nest swiftlets: proximity fluttering, random roosting flight, pair switching, parallel shifting, mounting, preening, defaecating, resting, territorial display, and nest building. Our results also revealed that there is a disparity in sexual contribution in nest building, where one partner is twice more hardworking and return more frequently during the post-emergence period to build nest. We hypothesized that it is the male (i.e., Individual-A) that contributes more to nest building, reasons being (i) Individual-A is the one that mounted Individual-B and not the other way around, (ii) Individual-A is nearly twice as hardworking in nest building, correlating with the fact that spermatogenesis is less energy demanding than oogenesis, and (iii) more protective over its partner when their nest reaches full size, a point of time when copulation is expected.

KEY WORDS. — *Aerodramus fuciphagus*, swiftlet, edible nests, roosting, nest building, colony, sexual contribution

INTRODUCTION

The white-nest swiftlet *Aerodramus fuciphagus* (Thunberg) is one of several small cavernicolous, echolocating and insectivorous swifts from the Family Apodidae (Chantler & Driessens, 1995). Swiftlets are arguably the most accomplished flyers among all bird species, spending most of their lives on the wing, catching and feeding on insects in flight (Cranbrook & Lim, 1999). When at roost, these

species are able to construct nests using salivary nest cement secreted from a pair of sub-lingual glands (Lim & Cranbrook, 2002) mixed, in most species of swiftlets, with material such as feathers and plant fibres. The nest of the white-nest swiftlet is comprised primarily of pure saliva (Cranbrook & Lim, 1999). This edible nest cement is the main ingredient of the highly-prized and renowned “bird’s nest soup” which is of significant commercial and reputed pharmaceutical value (Ismail, 1999; Tompkins, 1999; Lim,