



## CHAPTER 1

### INTRODUCTION

The White-nest Swiftlet is renowned as an important species due to its valuable white nests. Some of its ecology and breeding biology were studied in Vietnam, Malaysia, Singapore and Indonesia. In Thailand, only few studies existed. Despite the fact that the right to harvest nests under the official permission was evident in the reign of King Taksin the Great (BE 2312,1769 AD), neither concessionaires nor local administrators who issued the harvesting rules, have a true understanding of the ecology of these birds.

Generally, the White-nest Swiftlet is a cave dweller. Its habitat is usually inaccessible for human and is located at completely dark sites in limestone caves. However, the White-nest Swiftlet is occasionally found to breed in abandon houses or man-made buildings (Wildash, 1968; King and Dickinson, 1975, Langham, 1980; Kang, Hails, and Sigurdsson, 1991). In this regard, there is a good opportunity to conduct the ecological study as well as to develop the population for economical purposes.

This study focused on a small isolated breeding colony of the White-nest Swiftlet that has established its colony naturally for more than 30 years in a sacred building at Suthiwatwararam Temple, Samut Sakhon Province. The unique characteristic of this colony is that it is the only colony found in Samut Sakorn and nearby Provinces and is located at the northern most part of its species' distribution range in Thailand. It is estimated that the nearest breeding colony of the same species is located at Phetchaburi Province which is around 100 km away. This isolated population produces high quality nests and is very well adapted to live and breed in the environment under strong disturbances from human activities of which this type of environment almost totally differs from those in caves or abandoned houses. Hence, this population is expected to have a high potential to be developed for farming in larger scale. The detailed ecological study in terms of its population characteristics, breeding biology, feeding habits including nest-site

characteristics and nest sizes in comparison to the population of the same species in the natural habitat at Si-Ha Islands, Phatthalung Province would provide a crucial information for the conservation and the management of this population. In addition, the study on the use of artificial nest-sites, designed from the knowledge of nest-site characteristics in nature, was conducted. The information from the study would pave the way on the development of cultivated houses in the future.

### Objectives

1. To study the population size, diet and foraging areas of White-nest Swiftlet nesting in the sacred building, Suthiwatwararam Temple, Samut Sakhon Province.
2. To study its breeding biology including parental investment and reproductive success in the sacred building.
3. To study the nest-site characteristics and nest sizes of the White-nest Swiftlet, living in the sacred building and in the caves at Si-Ha Islands, Phatthalung Province.
4. To conduct the study on the use of artificial nest-sites by White-nest Swiftlets, living in the sacred building.