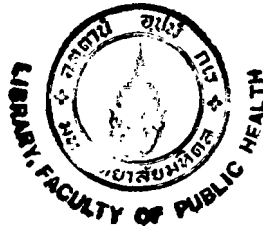


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ECOLOGY AND BEHAVIOR OF KITTI'S HOG-NOSED BAT  
(Craseonycteris thonglongyai)

IN  
WESTERN THAILAND

BY  
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### ABSTRACT

A survey to search for Craseonycteris populations was made in west Thailand during August, 1983 to April, 1984. Twenty-one roosting caves out of 50 examined were found in a total area of 450 sq km. Craseonycteris was the most widespread, but not the most abundant, at all species of bats in the limestone region, occurring in 41 % of all caves searched. Its colony sizes were small. Mean number of individuals was 100 bats per cave and the range in numbers was 1 to 500. The total number of individuals known from the 21 caves was about 2000.

Statistical analysis was done on cave and environmental characteristics to determine which characteristics could best predict the presence of Craseonycteris. Craseonycteris was found to occur most regularly in caves with one entrance, with one chamber, with dome and conical ceiling form, with many small chambers, with long passager with junctions, with normal section type and in caves with stalactites (see definitions in table 3). Three cave characteristics which correlated most significantly with the presence of Craseonycteris were dome ( $X^2 = 8.56, P < 0.005$ ) and conical

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( $X = 3.99$ ,  $P < 0.05$ ) ceiling from and caves with normal  
<sup>2</sup>  
sections ( $X = 5.42$ ,  $P < 0.025$ ).

A colony of Craseonycteris was selected for study of ecology and behavior during November, 1984 to May, 1986. Craseonycteris was found to have two short activity periods, in the twilight of the morning and in the evening near dusk. The mean lengths of foraging period were 18 min in the morning and 30 min in the evening. The bats used specific flyways to reach their foraging areas which were not further than 1 km from the cave. The number of bats on each flyway changed from day to day and from season to season. The foraging periods of the bat also changed from season to season. Craseonycteris is very sensitive to change in environmental condition. Low temperature and heavy rain were found to stop foraging activity of Craseonycteris.

The results of this study should help in formulating a management plan for the survival of Craseonycteris. Recommendations are made concerning minimizing disturbance to the roost caves and foraging habitat, guidelines concerning further research, establishment of a long term population monitoring program and an education center.