

## Behavioral feeding strategy of frugivorous civets in a Bornean rainforest

### Abstract

We compared feeding behavior of frugivorous civets with those of other sympatric frugivores in a Bornean rainforest. For each frugivore residing in 3 different species of fig trees (*Ficus variegata*, *F. fistulosa*, and *F. benjamina*), we recorded temporal visitation patterns, visitation length, and time spent searching for fruit spanning 1,758h of observations. The civets were strict nocturnal visitors, whereas the other 5 frugivorous species were diurnal visitors. Civets visited *F. variegata*, *F. fistulosa*, and *F. benjamina* trees until 51, 26, and 0.3 days before the end of fruiting, respectively, whereas the other frugivores visited the trees until 84.5, 32, and 1.2 days before the end of fruiting. Civets foraged longer in the *F. variegata*, *F. fistulosa*, and *F. benjamina* trees at each visit (119.17, 109.37, and 97.77min, respectively) than did the other frugivores (39.88, 17.06, and 40.2min). Civet search times (62.61, 27.55, and 18.9s) were longer than those of the other frugivores (34.34, 12.46, and 9.49s), and civet search duration significantly increased over time. Our results indicate that nocturnality is the most important factor in avoiding contest competition with larger diurnal frugivores, thus enabling long visits at feeding patches although long search times decreased feeding efficiency. Long foraging visits of civets would be advantageous in fruit-deficient environments and may compensate for their morphophysiological disadvantages for frugivory.