

## FEATURE ARTICLES

### JOINT NESTING IN TAIWAN YUHINAS: A RARE PASSERINE CASE

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**Abstract.** Joint nesting, in which more than one pair contributes eggs to a group nest, is rare among cooperatively breeding birds. Early reports of the breeding biology of Taiwan Yuhinas (*Yuhina brunneiceps*) described them as joint nesters; however, these studies were preliminary and did not involve color-banded individuals. We conducted a 7-year study on the breeding biology of yuhinas. We found that the frequency of joint nesting was extremely high (90% of groups). Breeding groups were composed of two to seven adults (mode = 4). Most of the juveniles (78%) disappeared from our study site the year after they hatched. Only 6% remained in their natal groups; therefore, our study groups appeared to be composed primarily of non-kin. Within each group, there was a linear hierarchy of socially monogamous pairs. Mean reproductive skew index, as determined by microsatellite markers, was low (0.19). Alpha males had longer wings than beta males, whereas females did not show any differences in body size. Breeding group size had no significant effect on nest survival rate. Overall clutch size of the group increased while the average number of eggs laid by each pair decreased with group size. However, average number of fledged young per pair per season was similar for all group sizes. Alpha females were the major contributors during both diurnal (65% of groups) and nocturnal (77%) incubation, although beta females and males also contributed substantially toward incubation.

**Key words:** cooperative breeding, joint nesting, mating systems, microsatellites, reproductive skew, Taiwan Yuhina, *Yuhina brunneiceps*.