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Abstracts

FEATURE ARTICLES

NESTING BIOLOGY OF TAPACULOS (RHINOCRYPTIDAE) IN FRAGMENTED SOUTH-TEMPERATE RAINFORESTS OF CHILE

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Abstract. We studied the effect of forest fragmentation on the nesting biology and reproductive success of three species of tapaculos (Rhinocryptidae) in relation to forest size, edge effects, and disturbance from livestock or logging over a 6-year period (1993–1999) in Chilean temperate rainforest. Overall, Mayfield nest success (n = 360) among the three species ranged from 64% to 85%, and predation accounted for 64% of nest losses. Considering all types of losses, nest mortality was similar in fragmented and unfragmented forest, but predation was higher in fragmented forest. Successful nest sites of the Chucao Tapaculo (*Sclerochilus rubecula*; the species with the largest sample size) were nearer forest edges, better concealed, closer to the ground, and had longer entrance tunnels, on average, than depredated nests. Reuse of nest sites by chucaos was more common in forest fragments with livestock or logging than in undisturbed forests, but reuse was independent of forest size. Success of second broods was lower in reused nest sites than in new nest sites. Nestling growth in fragmented forest and forest with livestock or logging activity was similar to that in unfragmented and undisturbed forest. Clutch size was typically two, but birds nesting at low densities in forest fragments often laid three-egg clutches following a nest failure. In addition to negative effects of forest fragmentation during nesting (greater use of less-successful nest sites, higher nest predation), there was an indication that early juvenile survival was lower in forest fragments.

Key words: clutch size, forest fragmentation, juvenile survival, nest-site availability, nest-site reuse, nest success, Rhinocryptidae.