

SHORT COMMUNICATIONS

CAPTURE AND TELEMETRY TECHNIQUES FOR THE LINED FOREST-FALCON (*Micrastur gilvicollis*)

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The Lined Forest-falcon (*Micrastur gilvicollis*) is found in tropical forest throughout most of Amazonia. Recently, Schwartz (1972, *Condor* 74:399-415) described the species as being distinct from the Barred Forest-falcon (*Micrastur ruficollis*). Although the Lined Forest-falcon is the most common raptor in some thoroughly surveyed Amazonian forests (e.g., the Minimum Critical Size of Ecosystem project area 70 km north of Manaus, Brazil, pers. obs.; Manu, Peru, S. Robinson, pers. comm.), the bird is only rarely observed and biologically poorly known. Morning calling censuses and banding data indicate that densities of two to four pairs/100 ha may not be uncommon (Klein and Bierregaard, in press). High densities and small home ranges of 40-50 ha (Klein and Bierregaard, in press) make the Lined Forest-falcon an ideal raptor for further behavioral study using radio telemetry in dense tropical forests. Our objectives here are to outline techniques for capturing and attaching transmitters to the Lined Forest-falcon.

Although BCK has called the Barred Forest-falcon to within four meters in Costa Rica by imitating prey alarm calls, such had no apparent effect with the Lined Forest-falcon. Many of our unintentional falcon captures in the past (>70) were from Forest-falcon attacks on passerines in mist nets. In an attempt to capture Forest-falcons, we played tape recorded passerine distress calls (*Turdus albicollis*) near nets with live passerines placed directly in the nets as decoys. We did this during four d for three to four hr each day in areas where Lined Forest-falcons were recently heard. No observed Forest-falcon responses were recorded with this technique. Playing calls of conspecifics did elicit a response from Forest-falcons in three of seven tries. Falcons approached the tape recorder and vocalized but always remained high in the canopy above mist nets. The closest and most frequent approaches occurred between 0600-0700 H.

Four Forest-falcons were captured with bal-chatri traps (Berger and Mueller 1959, *Bird Banding* 30:18-26). Falcons often fed in the afternoon in the same area they called from in the morning. Thus, we were able to mark locations during calling periods and return later with a bal-chatri trap baited with a live juvenile chicken (180-250 g). Traps were checked every two hr throughout the day. We were successful with three of eight tries. In another attempt bal-chatri traps were placed in the forest in a manner

visible from long distances. Three traps used for a total of 14 days resulted in the capture of one Forest-falcon and one juvenile Ornate Hawk-eagle (*Spizaetus ornatus*).

Mist nets were also placed in close proximity to birds calling at or just before dawn. Although nets remained open all morning, the three falcons captured during 10 attempts were not captured until late morning or early afternoon when falcons tried to take passerines caught in the nets.

Transmitters (6-7 g) were placed at the base of central rectrices on four birds weighing from 200-220 g (see Fitzner and Fitzner 1977, *N. Am. Bird Bander* 2:56-57). Although one of four tagged birds did lose the transmitter-attached feather after nine d, tail mounts presented no obvious problems. The other three transmitters remained on birds for at least 27-30 d when transmissions ceased.

Transmitter back-pack mounts (10 g) were placed on two additional Forest-falcons. Transmitter packs were attached with 7 mm braided nylon string on one bird and a flat, elastic string provided by the transmitter manufacturer on the other. Strings passed over the birds' shoulders, tied just below the crop, tied again 2 cm lower near the legs and went between the legs and onto the back. Back-pack transmitters remained on birds without any observed ill effects until transmissions stopped after three mo. The ease with which the Lined Forest-falcon accepts transmitters, is captured in relatively large numbers, and can be followed in dense tropical forest makes it an ideal raptor for further study.

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