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Nesting of the Lesser Nighthawk *Chordeiles acutipennis* in eastern Amazonia

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RESUMO: Comportamento reprodutivo de *Chordeiles acutipennis* na Amazônia Oriental. O bacurau-de-asa-fina (*Chordeiles acutipennis*) ocorre na maior parte das Américas Central e do Sul, México e sudoeste dos Estados Unidos. Essa espécie possui hábitos noturnos e crepusculares e habita vários tipos de ambientes abertos, incluindo savanas, jardins e áreas próximas de regiões urbanizadas. Apesar da ampla distribuição geográfica, existem poucos registros da reprodução de *C. acutipennis* na América do Sul e nenhuma descrição de seu ninho no Brasil. No presente estudo, nós descrevemos um ninho, ovo e filhote dessa espécie na margem da represa de Tucuruí (03°50'S, 49°22'W), Pará, Amazônia Oriental. O ninho simples foi formado por uma leve depressão no solo arenoso e estava circundado por cascalho. Estava ocupado por um ovo (20 × 36 mm) amarelo pálido coberto com manchas marrons e um filhote acinzentado com poucos dias de vida. Adicionalmente, nós presenciámos um comportamento parental ainda não descrito pela ciência em que o adulto discretamente retornou ao ninho andando pelo chão como provável medida de proteção contra predadores de ovos e filhotes.

PALAVRAS-CHAVE: Caprimulgidae, *Chordeiles acutipennis*, comportamento reprodutivo, ninho.

KEY-WORDS: Caprimulgidae, *Chordeiles acutipennis*, breeding behavior, nest.

Chordeiles is a genus of nocturnal, crepuscular, and some even partially diurnal nighthawks ranging throughout most of South, Central, and North America (Cleere and Nurney 1998, Holyoak 2001). Three of the six recognized species, Common Nighthawk (*C. minor*), Least Nighthawk (*C. pusillus*), and Lesser Nighthawk (*C. acutipennis*) have vast breeding ranges and are subdivided into numerous subspecies (Cleere and Nurney 1998, Holyoak 2001).

The Lesser Nighthawk is a medium-sized, brownish or greyish-brown nighthawk widely distributed over most of South America, with its range extending northwards throughout Central America into northern Mexico and southwestern United States (Cleere and Nurney 1998, Holyoak 2001). The species is probably sedentary throughout most of its range. However, North American populations can migrate into Central America and extreme northwestern Colombia during the boreal winter (Cleere and Nurney 1998), and some populations in South America possibly are also migratory, moving northward on the continent during austral winter (Cleere 1999, Restall *et al.* 2006). It ranges throughout Brazil, although it is presumably absent from much of the Amazonian basin (Sick 1997, Cleere and Nurney 1998, Cleere

1999, Holyoak 2001). It is a primarily crepuscular species which inhabits several types of open country from 0 to 1,200 m above sea level, including deserts, scrublands, savannas, farmlands, gardens, suburban areas, mangroves, and beaches (Cleere and Nurney 1998, Holyoak 2001). It forages for insects by flying low over open country such as savannas, airstrips, grassland, and roads, occasionally under cloudy skies during daytime. It also feeds by making short sallies from the ground (Cleere and Nurney 1998, Cleere 1999).

Although *C. acutipennis* is common and widespread in South America, its breeding there is poorly documented. Particularly for Brazil, there is no description of the nest, and the few records of its breeding are historical and give little information (Euler 1900, Snelhage 1928). Nest sites are often near or beneath a bush or close to vegetation (Cleere and Nurney 1998). No nest is constructed constituting a simple and unlined type (Simon and Pacheco 2005), and eggs are laid directly on bare ground, such as on sandy beaches, in gravelly and rocky areas, or on leaf litter (Bent 1940, Komar and Rodriguez 1997, Cleere and Nurney 1998, Holyoak 2001). Clutch size is one or two eggs, incubated mainly by the female for c.18 days. Eggs are elliptical in shape and can vary



FIGURE 1: Egg and chick of the Lesser Nighthawk *Chordeiles acutipennis*. Photograph by César Cestari.

in length and color pattern (Pinto 1938). Eggs hatch asynchronously, and the chicks are able to perform short flights after c.20 days (Cleere and Nurney 1998). Adults flushed from the nest may perform defense or distraction displays, such as the broken wing display (Komar and Rodriguez 1997).

On 1 August 2007, we found a nest after flushing an adult bird off the ground beside a road c.20 m away from Tucuruí Dam on the Tocantins River, Pará state, northern Brazil (03°50'S, 49°22'W). No nest material was used and the eggs were laid directly on the ground in a cleared depression (Figure 1). Ground cover in the immediate vicinity consisted of sand, gravel, and small pebbles in an area of sparse, herbaceous vegetation. The presence of an egg and a chick suggest asynchrony occurred at this nest. Eggs of this species are reported to hatch asynchronously (Cleere and Nurney 1998, Holyoak 2001). However, we are unable to return to determine if the second egg hatched. The elliptical egg measured 20 × 26 mm and was coloured pale creamy, with brownish markings. The chick was covered by buffish, mottled grey down and had dark grey bill and feet (Figure 1).

An adult stayed on the nest during the initial time observation, and was identified as a female by its buffish throat patch and lack of the white sub-terminal band on tail (Figure 2) (Holyoak 2001). As one of us (CC) approached, the female took off and landed c.10 m further on the road. After 10 minutes, it returned discretely to the nest by a slow and time-consuming walking, stopping periodically. The total time of observation was 40 minutes. Slowly walking back to the nest while fully profiting from its cryptic coloration, instead of flying back, appeared to be a way to avoid detection and hence reduce the risk predation to the brood. Displays by flushed birds were described in a nesting colony of Lesser Nighthawks in El Salvador, during which adults flew slowly and called loudly (Komar and Rodriguez 1997). Further, after landing on the ground near the observers, those birds



FIGURE 2: Female Lesser Nighthawk (*Chordeiles acutipennis*) near the nest. Photograph by César Cestari.

performed broken wing displays. We saw no defense or distraction displays while making our observations, and to our knowledge the behavior we observed has not been reported elsewhere.

A female specimen of *C. acutipennis* housed at the Museu Paraense Emílio Goeldi in Belém was collected near our study area, around the Tucuruí Dam, on August 18, 1984 (MPEG 36220). Two eggs were collected with this female, indicating that the Tucuruí Dam area is at least an occasional breeding site for this species during the dry season, particularly in August.

Clutch size for Lesser Nighthawks is normally two eggs in USA and Mexico, but only one egg in Trinidad, northwestern Peru and probably southwestern Ecuador (Holyoak 2001). Eleven nests in Suriname also contained only one egg in each (Haverschmidt and Mees 1994). However, two eggs are reported for Brazil, Peru and Venezuela (Euler 1900, Snethlage 1928, Pinto 1938). A positive relationship between clutch size and latitude has been demonstrated for many species including caprimulgids, in which clutch size is normally two eggs but a single egg is laid near the equator (Tostain and Dujardin 1988, Sick 1997). Determinants of clutch size in Lesser Nighthawk are unknown, however, these observations, including our own, indicate that latitude does not fully explain this variation, and other factors must influence the clutch size in this species.

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