SHORT COMMUNICATIONS

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MIGRATION OF THE RUFOUS-THIGHED KITE (*HARPAGUS DIODON*) IN SOUTHEASTERN BRAZIL

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Migración del Milano de Corbata (*Harpagus diodon*) en el sudeste de Brasil.

Key words: Birds of prey, migration, Atlantic forest, *Harpagus diodon*, Rufous-thighed Kite, Itatiaia National Park, Serra da Mantiqueira.

INTRODUCTION

The Rufous-thighed Kite (*Harpagus diodon*) inhabits continuous and fragmented rainforests from southern Colombia to southern Bolivia, northeastern Argentina, and southern Brazil (Thiollay 1994). Despite being locally abundant, all aspects of the biology of the Rufous-thighed Kite are largely unstudied (Bierregaard 1998), and there is no consensus regarding whether the species is migratory. Thiollay (1994) and Ferguson-Lees & Christie (2001) describe it as a presumably sedentary species. On the other hand, Bildstein (2004), based on Hayes *et al.* (1994) and Ridgely & Greenfield (2001), considers the species as an irregular or local migrant. To our knowledge, there are no published descrip-tions of direct observation of migration movements for the Rufous-thighed Kite, except for a brief reference in Zalles & Bildstein (2000).

Here we report observations of migration of Rufous-thighed Kites in the Itatiaia National Park, Rio de Janeiro, Brazil, and suggest that the Serra da Mantiqueira may be an important feature influencing kite migration geography in the region.

METHODS

Study area. The Itatiaia National Park (30,000 ha) is in the Brazilian states of Rio de Janeiro and Minas Gerais (Fig. 1). The park is in the Atlantic forest biome (Galindo-Leal & Câmara 2003), and is mostly covered with dense ombrophila forest, together with natural grasslands and rocky fields at higher altitudes. A highly deforested area is beyond the southeast border of the park. Altitude in the park ranges from 650 to 2700 m a.s.l. The Itatiaia National Park is at the northern end of the Serra da Mantiqueira (Fig. 1) which runs southwest to northeast for c. 250 km along the border between the states of São Paulo

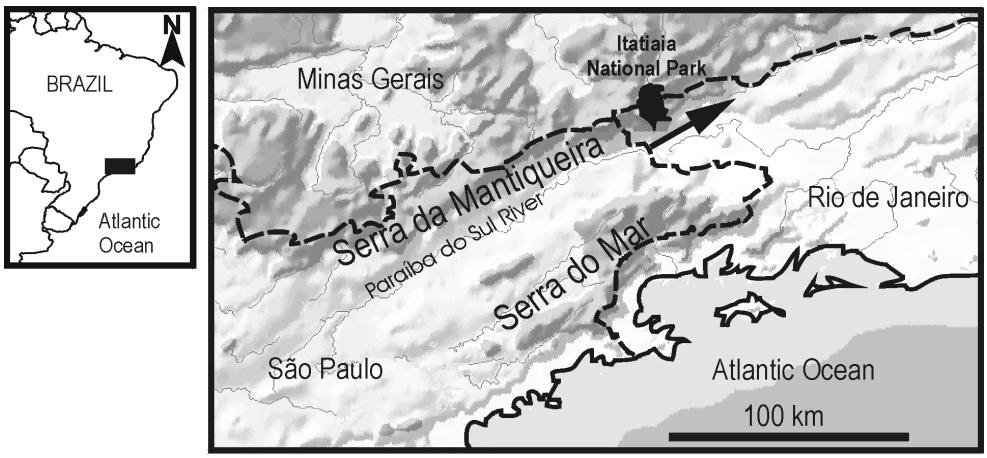

FIG. 1: Itatiaia National Park and details of the surrounding landscape. Arrow indicates the flight direction of migrating Rufous-thighed Kites.

and Minas Gerais, and Rio de Janeiro and Minas Gerais.

Surveys. One of us (GSC) surveyed raptors at the Itatiaia National Park between 12 and 20 March 2005, from a vantage point (Último Adeus panoramic platform, altitude 800 m a.s.l.) on the park's entrance road, and within the valley of the Campo Belo river. Surveys took place between 09:30 h and 12:30 h on rainless days (mean survey time = 2 h, SD = 32 min, n = 7). Raptors were photographed and counted using 8 x 42 binoculars. During observations, prevailing winds were southwesterly or northerly.

RESULTS AND DISCUSSION

One hundred twenty-nine migrating Rufous-thighed Kites were counted in 13 h 45 min of observation along seven surveys (9.38 birds/h). Birds/survey varied from zero to 59 (mean = 18.42, SD = 21.11, n = 7). The kites flew alone (8%) and in groups of 2 to 30 birds (92%, average birds/flock = 6.6, SD = 7.5, n = 18). Two surveys performed with 100% cloud cover resulted in no sightings. Most kites soared at low altitude, frequently ascending in thermals with Black Vultures (*Coragyps atratus*) and after having attained high altitude (> c. 800 m above the vantage point), glided together from the southwest to the northeast following the slope of the Serra da Mantiqueira. Neither Black Vultures nor other raptors were seen migrating. We also detected eight lone individuals or pairs of Rufous-thighed Kites that did not follow the flight path of the migrating birds, but always flew at lower altitudes, and were sometimes involved in display flights (Cabanne 2005); they were not considered as migrants.

We conclude that the Rufous-thighed Kites flying southwest to northeast were on migration because (1) this species is not known to flock when flying locally whereas many species are known to flock on migration (Bildstein 2004), and (2) all the birds (single or in flocks) consistently followed the same direction along the slope of the Serra da Mantiqueira, clearly defining a flight path throughout the survey, a behavior typical of many migratory birds of prey (Bildstein 2004, Porras-Peñaranda *et al.* 2004). Thus we believe that our observations support the migratory

status of the Rufous-thighed Kite in the southern extreme of the species' range (Hayes *et al.* 1994). This is in agreement with the absence of kites in southern Brazil, Paraguay and northeastern Argentina during the autumn and winter (Hayes *et al.* 1994, Bencke 1996, Azevedo *et al.* 2003, Cabanne & Seipke unpubl.) and with the scant available data on the species' reproduction. Based on behavior and the presence of juveniles, Cabanne (2005) proposed that the kites reproduce in southern Brazil and Argentina during August-September to January.

Although our observations are limited, they suggest that Serra da Mantiqueira is a leading line for migrants in the region. The valley of the Paraíba do Sul river, which runs between the Serra da Mantiqueira and the Serra do Mar (Fig. 1), seems to funnel the birds migrating northwards, as it becomes more narrow and deeper towards the northeast. Additional observations at several locations in the region are likely to yield useful new information.

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