

## FIELD NOTE

# Unusual predation of Hoffmann's two-toed sloth (*Choloepus hoffmanni*) by a coyote (*Canis latrans*) in Costa Rica

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**Abstract** We report predation of Hoffmann's two-toed sloth (*Choloepus hoffmanni*) by a coyote (*Canis latrans*) in a small forest patch in San Ramón, Costa Rica. Sloths have never been reported as prey of coyotes until now. This observation was made in a forest patch close to an urban area. We highlight the ecological importance of forest patches near cities, which reduce the conflicts between wild animals and humans by providing enough food resources and variety of prey to predators such as coyotes.

**Keywords:** coyote, food resources, forest patch, predation, urbanism

### Caso inusual de depredación de un perezoso de dos dedos (*Choloepus hoffmanni*) por un coyote (*Canis latrans*) en Costa Rica

**Resumen** Reportamos un caso de depredación del perezoso de dos dedos (*Choloepus hoffmanni*) por parte de un coyote (*Canis latrans*) en un pequeño parche boscoso en San Ramón, Costa Rica. Este es un caso poco común de depredación, y es particularmente interesante pues no se había reportado anteriormente al perezoso de dos dedos como presa del coyote. Se resalta la importancia ecológica de los parches boscosos en la cercanía de ciudades, lo que podría estar evitando los conflictos entre fauna silvestre y humanos al proveer de diferentes recursos alimenticios y variedad de presas a depredadores como el coyote.

**Palabras clave:** coyote, depredación, parche boscoso, recursos alimenticios, urbanismo

Hoffmann's two-toed sloth (*Choloepus hoffmanni*) ranges from Central to South America (Superina *et al.*, 2010). In Costa Rica, it is possible to find it from 0 m to 3000 m above sea level (Mora, 2000). Nevertheless, it is difficult to observe because of its appearance and arboreal habits (Acevedo-Quintero *et al.*, 2011). This species is included in CITES Appendix III (CITES, 2017) and considered as Least Concern according to the International Union for the Conservation of Nature (Plese & Chiarello, 2014). In Costa Rica, Hoffmann's two-toed sloth has been subjected to many investigations, including habitat use studies (Vaughan *et al.*, 2007) and health of both captive and wild sloths (Zeledón *et al.*, 1979; Hanley *et al.*, 2008; Sibaja-Morales *et al.*, 2009;

Kinney *et al.*, 2013), but there have been no reports of predation.

Species such as the jaguar (*Panthera onca*), ocelot (*Leopardus pardalis*), harpy eagle (*Harpia harpyja*), and large snakes such as anacondas (*Eunectes* sp.) have been reported as predators of *C. hoffmanni* (Hayssen, 2011). In this note, we report an unusual case of *C. hoffmanni* predation by a coyote (*Canis latrans*).

As part of the project "Mamíferos pequeños y medianos en la Microcuenca Alta de la Quebrada el Estero, San Ramón de Alajuela" ("Small and medium-size mammals in the high micro-basin of 'El Estero' creek, San Ramon, Alajuela"), we placed camera-traps within a small forest patch of about 7,000 m<sup>2</sup> called "José Figueres Ferrer Municipal

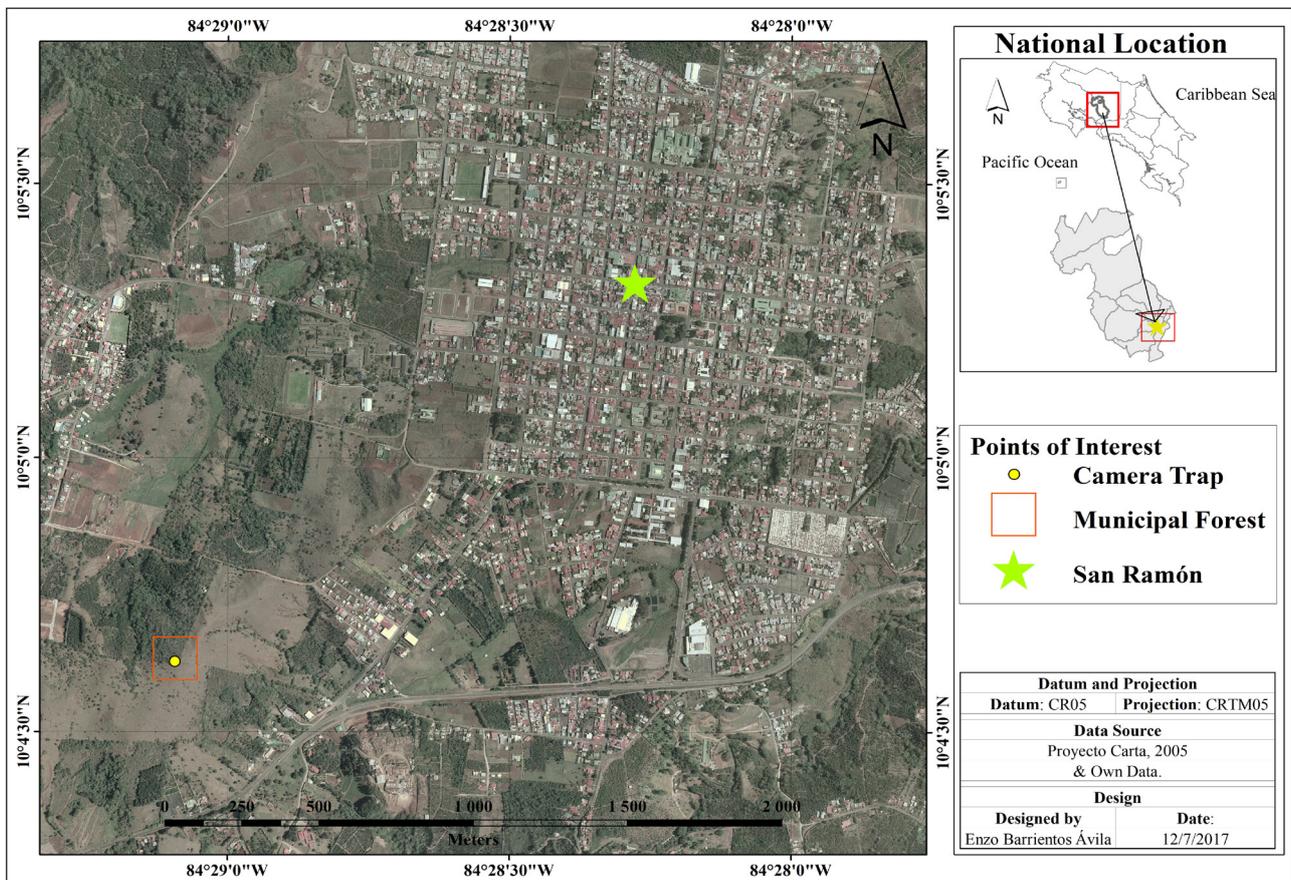
Forest" (JFF; **FIG. 1**; Guido & Rodríguez, 2009) that is close to an expanding urban zone. Most of JFF is secondary forest in which most of the representative flora was planted by humans, e.g., *Bombacopsis quinatum*, *Diphysa americana*, *Cedrela odorata* and exotic species such as *Casuarina equisetifolia*, *Cupressus lusitanica*, and *Eucalyptus* sp. (Guido & Rodríguez, 2009). Despite its small size and atypical floral composition, this patch of forest is a refuge for different wild species of animals, many of which are mammals.

On 16 July 2016, a coyote was filmed while preying a Hoffmann's two-toed sloth at 21:38 hr (**FIG. 2**). The sloth probably descended a tree to defecate and the coyote took advantage to attack. We visited the camera-trap site two days after the event, and there were no physical traces of the attack in the surrounding area. Therefore, the only evidence we have is the digital video file. Coyotes have been detected with camera-traps in nearby locations (e.g., Cartín, 2010), but this is the first time that this species has been recorded while attacking a two-toed sloth.

Coyotes have been favored by forest fragmentation, and they have expanded their distribution as a consequence (Reid, 1997; Mora, 2000). This

may be due to the loss of formerly dominant predators and the resulting lack of competition, and the adaptability of coyotes to different habitats and new food sources. Unlike many other species, coyotes have adapted well to new environments created by urban, suburban, and agricultural development (McClennen *et al.*, 2001). Quinn (1997) showed that coyote diets varied in different habitats. Fruits and small mammals were the norm in all of the study areas but voles (*Microtus* spp.) were the most abundant mammalian food source in mixed agricultural-residential habitats, while house cats (*Felis catus*) and squirrels (*Sciurus* spp. and *Tamiasciurus* spp.) were the two most abundant mammalian food sources in residential habitats.

We highlight the ecological importance of forest patches around cities because, as illustrated in this note, they may decrease the potential risk of human and domestic animal attacks by providing prey and other food sources to predators like coyotes. This is supported by testimony from people living in the area where this unusual sloth predation event occurred, because no conflicts between wild animals and people have been reported. (unpublished information belonging to the authors). We recommend further studies on the subject.



**FIGURE 1.** Study area, San Ramón, Costa Rica. Observe the highly fragmented landscape. Yellow dot: camera-trap location within the municipal forest (10°04'38" N, 84°29'05"W).



**FIGURE 2.** Coyote (*Canis latrans*) predating on a Hoffmann's two-toed sloth (*Choloepus hoffmanni*) in José Figueres Ferrer Municipal Forest, San Ramón Costa Rica, 16 July 2016.

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