NOTES

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Distribution Extension

Easternmost record of the clouded tiger cat *Leopardus pardinoides oncilla* (Carnivora: Felidae) from the Talamanca Range in Santa Fe National Park, Panama

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Abstract

We report new records of the clouded tiger cat *Leopardus pardinoides oncilla* from Santa Fe National Park, Panama, representing the easternmost confirmed occurrence of the species in the cordillera Talamanca. Setting camera traps between October 2024 and February 2025, we detected two individuals, one melanistic and one non-melanistic, at approximately 1700 meters above sea level, from just below the continental divide of Central America. These findings confirm the presence of undocumented populations of *L. pardinoides oncilla* in Central Panama and highlight the importance of protecting montane cloud forest habitat for conserving this elusive species.

Key words: Camera trapping, Central America, cloud forest, elusive species

Resumen

Reportamos nuevos registros del tigrillo nebuloso *Leopardus pardinoides oncilla* del Parque Nacional Santa Fe, Panamá, que representan la presencia más oriental de la especie en la cordillera de Talamanca. Durante nuestro muestreo con cámaras trampas entre octubre 2024 y febrero 2025, registramos dos individuos, uno melánico y otro no-melánico, a una altura aproximada de 1700 msnm, próximo a la división continental de América Central. Nuestros hallazgos confirman la presencia no antes documentada de poblaciones de *L. pardinoides oncilla* en la región Central de Panamá, y resalta la importancia de proteger hábitats de bosques nubosos premontanos para conservar esta especie elusiva.

Palabras clave: foto trampeo, América Central, bosques nubosos, especies elusivas

The clouded tiger cat *Leopardus pardinoides* is a recently recognized species of small felid (de Oliveira et al. 2024) that occurs from Costa Rica in the north, to Bolivia and Argentina in the South. This species inhabits mountainous, often rugged areas from Central America and the Andes of South America. Because research is challenging in the habitats occupied

by *L. pardinoides*, it is likely the least studied felid species in the Americas, and amongst the least studied in the world (Cepeda-Duque et al. 2023; Ramírez-Fernández et al; 2024).

The Central American subspecies *L. p. oncilla*, often known by the common name oncilla or tigrillo, is known from the cordillera Talamanca, central volcanic cordillera, and cordillera Tilarán of Costa Rica, as well as the cordillera Talamanca of Panama. It typically occurs only at elevations above 1.400 masl, and is most commonly recorded from the central cordillera Talamanca on both sides of the Costa Rica-Panama border where large areas of high elevation habitat above 2.000 masl occur (de Oliveira et al; 2024, Ramírez-Fernández et al. 2024), with the highest records occurring above 3000 masl near some of the highest summits in Costa Rica and Panama (González-Maya & Schipper 2008; Rodgers & Kapheim 2017). In Panama, the cordillera Talamanca extends far to the east, however outside of Chiriquí province, elevations are lower (<2.500 masl), yet a potential isolated camera trap record of *L. p. oncilla* exists at just above 800 masl from the far southwestern corner of Santa Fe National Park in Veraguas province (Lester A. Fox-Rosales personal communication; de Oliveira et al. 2024). This outlier, both geographically, and in terms of elevation, may be from a dispersing individual with an unknown population of origin, as this elevation is far below the typical elevation range for the species, however this record has not been independently verified, as the photograph in question is not publicly available

We recorded the Central American clouded tiger cat *L. p. oncilla* with camera traps from a new location in Santa Fe National Park, Panama (Figure 1). This record represents the easternmost record from the cordillera Talamanca mountains. Two distinct individual clouded tiger cats were detected from two different camera traps in Santa Fe National Park above an area known as Chitra in Calobre District, in the tallest mountains of Veraguas Province, Panama. The location of these detections was just below the continental divide of Central America, in dense montane cloud forest habitat. The first camera (manufacturer: Zecre, model: PH770_5S) was set at latitude 8.56931, longitude -80.87865 at an elevation of 1.680 masl. This camera detected a single, non-melanistic individual of *L. pardinoides oncilla* on 01 December 2024 at 08h02 (Figure 2a, 2b). The second camera, (manufacturer: Reconyx, model: pc900 hyperfire professional) was set at latitude 8.56877, longitude -80.87734 at an elevation of 1.714 masl. This camera detected a single, melanistic, clearly male individual of *L. p. oncilla* on 17 December 2024 at 13h39 (Figure 2c, 2d). The first camera was active from 22 October 2024 to 28 December 2024, and the second camera was active from 22 October 2024 to 16 February 2025, for a total of 184 camera days.

These cameras also detected several other mammal and bird species. The most commonly detected mammals included Common Opossum (*Didelphis marsupialis*), Collared Peccary (*Dicotyles tajacu*), Red-tailed Squirrel (*Sciurus granatensis*), and Spiny Pocket Mice from the genus *Heteromys*, the latter two of which are likely prey for *L. p. oncilla*. We also detected two other small carnivores, Tayra (*Eira barbara*), and Striped Hog-nosed Skunk (*Conepatus semistriatus*) which is rare from central Panama (Esser et al. 2012; Sosa-Bartuano et al. 2016). We also detected avian species, including Black Guan (*Chamaepetes unicolor*), Slaty-backed Nightingale-Thrush (*Catharus fuscater hellmayri*), Black-breasted Wood-Quail (*Odontophorus leucolaemus*), Purplish-backed Quail-Dove (*Zentrygon lawrencii*), Chiriqui Quail-Dove (*Zentrygon chiriquensis*), Buff-fronted Quail-Dove (*Zentrygon costaricensis*), *and* Highland Tinamou (*Nothocercus bonapartei frantzii*), all but the first of which are likely prey for *L. p. oncilla.*

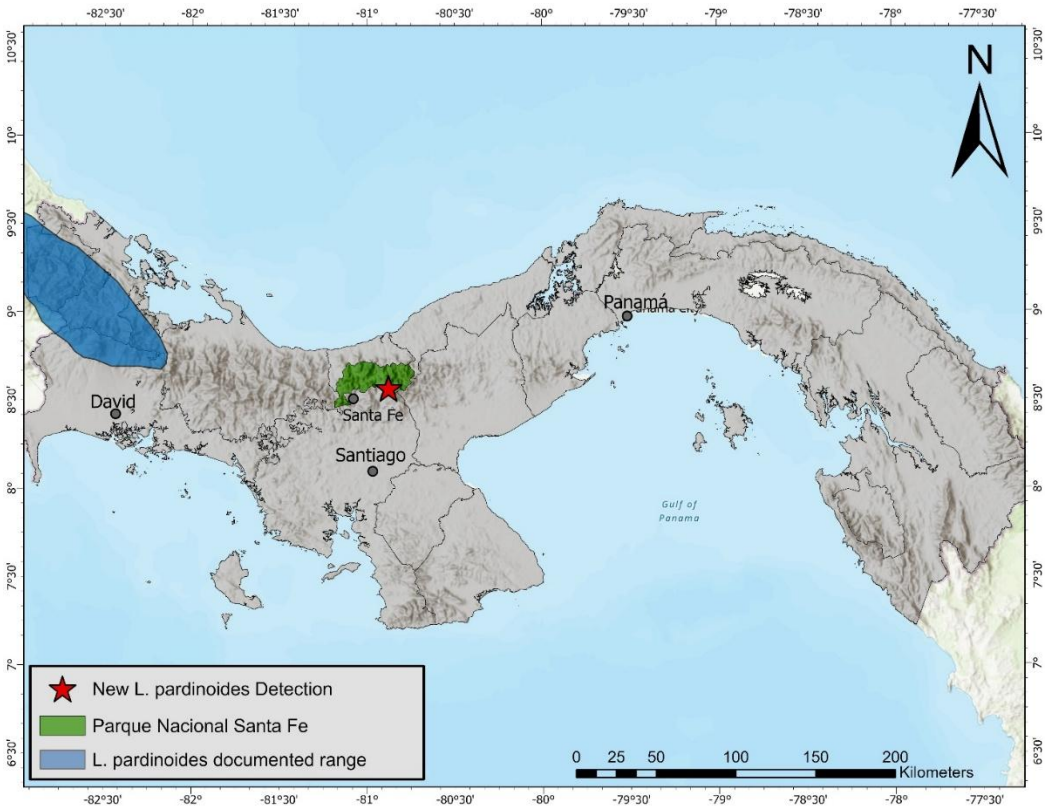


Figure 1. Location of camera trap records of *Leopardus pardinoides oncilla* from Santa Fe National Park, Veraguas, Panama.

Aside from the single previous potential low elevation *L. p. oncilla* record from the SW corner of Santa Fe national park approximately 28 km southwest from our records, our new records are far from other confirmed records of the species. The nearest other records are from Volcán Barú National Park in Chiriquí province approximately 180 km away to the West (Rodgers & Kapheim 2017; de Oliveira et al. 2024), and from Cerro Chucantí in Darien province approximately 265 km away to the East (Méndez-Carvajal & Gutiérrez-Pineda 2024). However, given our findings, it seems likely that the species may also occur in the higher elevation habitat of the cordillera Talamanca to the west of our records, including the indigenous territory Comarca Ngäbe Buglé between the provinces of Chiriquí and Veraguas, where some areas exceed 2.000 masl. It is also possible that the species occurs slightly further east in the cordillera Talamanca of western Cocle province, where there are still some mountains that exceed 1.500 masl before the mountains drop considerably in elevation towards the Panama Canal zone. This is because these areas contain habitats that are similar and adjacent to the location of our detection, however to our knowledge, surveys for *L. p. oncilla* have not been conducted in these areas.



Figure 2. Camera trap photographs of *Leopardus pardinoides oncilla* from Santa Fe National Park, Veraguas, Panama.

Our new records of *L. pardinoides oncilla* from Santa Fe National Park represent a significant eastward extension of the species known range within the cordillera Talamanca. These findings not only fill a distributional gap but also suggest the possibility of undocumented populations persisting in isolated mountainous regions of Veraguas, Coclé, and the Ngäbe Buglé Comarca of Central Panama. Further research is needed to determine the full distribution of the species in the eastern cordillera Talamanca. Our findings highlight the critical role of protected areas like Santa Fe National Park in safeguarding mammalian diversity and provide new insight into the distribution of this elusive small felid species.

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