

to the Brazilian Atlantic Forest, where it is restricted to the states of Paraná, São Paulo, Rio de Janeiro and the extreme south of Minas Gerais. The most north-western population in São Paulo state occurs in the Barreiro Rico Environmental Protection Area, a 30,142-ha area including the Barreiro Rico Ecological Station and seven other fragments with a total of 3,818 ha of forest. Intensive agricultural activities (sugar cane, eucalyptus, citrus) and pasture have significantly altered the landscape between the Tietê and Piracicaba Rivers, causing forest fragmentation. Yet despite these environmental changes, the Protection Area has a rich biodiversity and is home to five sympatric primates: the buffy tufted-ear marmoset *Callithrix aurita*, the brown-howler monkey *Alouatta guariba*, the black-fronted titi monkey *Callicebus nigrifrons*, the black-horned capuchin *Sapajus nigritus* and the southern murrelet *Brachyteles arachnoides*.

The murrelet population at Barreiro Rico is considered a top priority for the species because of its extreme geographical location and isolation (Strier et al., 2017, *PLOS One*, 12, e0188922). The population was first estimated at 50–60 individuals by Aguirre (1971, *Academia Brasileira de Letras*) and subsequent estimates recorded population growth during the 1970s to the early 2000s (Milton, 1984, *International Journal of Primatology*, 5, 491–514; Martins, 2005, *Biodiversity and Conservation*, 14, 2321–2329). However, in 2012 and 2018, two large fires destroyed parts of three forest fragments and one entire fragment, reducing the size and quality of the forest. In a 2022 census commissioned by the Fundação Florestal (carried out by environmental consulting company Hileia Consultoria Ambiental) only 45 murrelets were estimated to remain, in an area of 2,250 ha. These results must be interpreted with caution because of the low rate of sightings.

With funding from the Fundação do Amparo à Pesquisa do Estado de Minas Gerais and Re:wild, and logistical support from the Fundação Florestal do Estado de São Paulo, we used a drone equipped with an infrared and a colour camera to search for southern murrelets in the Barreiro Rico Environmental Protection Area during January–August 2024. In 127 flight hours covering 2,947 km we recorded only 12 southern murrelets, in two groups in two fragments: the Barreiro Rico Ecological Station, a federal conservation unit of 293 ha, and a private property of 926 ha. We noted other primate species including the black-horned capuchin *Sapajus nigritus* and brown howler monkey *Alouatta guariba* in other fragments, suggesting that our failure to locate murrelets in these areas was not because of poor visibility or flight conditions. Our results highlight the precarious status of this unique *Brachyteles arachnoides* population and emphasize the urgent need for conservation and management actions to rescue it.

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New record of *Leopardus guigna* in Chile expands its range northwards

The guinea *Leopardus guigna* is the smallest felid in the Americas. The species is categorized as Vulnerable on the IUCN Red List, with a restricted distribution limited to the central and southern regions of Chile, some off-shore islands and some areas of south-west Argentina. Two subspecies are recognized: *Leopardus guigna tigrillo* (in central and north-central Chile) and *Leopardus guigna guigna* (in south Chile and south-west Argentina). It inhabits sclerophyll forests and Mediterranean matorral in its northern range, and temperate rainforest in its southern range in Chile (particularly *Nothofagus* spp. forest) and Andean Patagonia Forest in Argentina. Threats to the guinea include habitat loss and fragmentation, and direct persecution by people.

Although some individuals of the Chilean endemic *L. guigna tigrillo* have recently been reported in the Coquimbo region (Napolitano et al., 2020, *Revista Chilena de Historia Natural*, 93, 7), there are no previous records north of Cerro Palo Colorado.

On 21 May 2024, during camera-trap surveys to monitor carnivores, we recorded the species for the first time in Huentelauquén, in the Coquimbo region, in a native forest patch on the southern bank of the Choapa River. The site is close to agricultural crops and c. 300 m from the Ramsar site Las Salinas de Huentelauquén. Although the diverse coastal ecosystems of this Ramsar site support a range of biodiversity, there are no previous records of the species in the area and this new record extends the range of *L. guigna tigrillo*.



Camera-trap image of *Leopardus guigna* on 21 May 2024, expanding its known range northwards.

c. 43 km northwards. The main threats to the guiña in this area are habitat loss and fragmentation caused by agriculture (primarily avocado crops), and rural poultry farms and domestic pets.

During our surveys we also recorded the pampas cat *Leopardus colocolo* and culpeo fox *Lycalopex culpaeus*. We noticed alopecic patches on one fox, an indicator of sarcoptic mange.

A genetic study described the guiña population at the northernmost limit of the species' distribution range as

genetically unique and isolated from other groups (Napolitano et al., 2014, *Conservation Genetics*, 15, 631–653). Further research must focus on this border population to determine appropriate conservation actions.

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