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SCIENTIFIC NOTE

Observation of an Andean bear swimming in a paramo lagoon in Píntag, Pichincha, Ecuador

Observación de un oso andino nadando en una laguna en Píntag, Pichincha, Ecuador

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ABSTRACT

There are no specific reports of Andean bears (Tremarctos ornatus) swimming in the literature. In this scientific note, I document an event recorded at the Secas Lagoon, in the Píntag Parish, Pichincha, Ecuador, during which an Andean bear swam for five minutes. This report marks the first observation of swimming behavior for the species in Ecuador, highlighting the adaptation of this species to wetland ecosystems.

Keywords: Paramo, Secas Lagoon, unusual record.

RESUMEN

No existen reportes específicos de natación del oso andino (*Tremarctos ornatus*) en la literatura. En esta nota científica, documento un evento de natación registrado en la laguna de Secas, parroquia de Píntag, Pichincha, Ecuador. Este suceso, con una duración de nado de cinco minutos, marca el primer reporte de natación publicado para la especie en Ecuador, lo que destaca su adaptación a este tipo de ecosistemas.

Palabras clave: Laguna de Secas, registro inusual, páramo.

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The physical forces experienced by mammals that swim differ significantly from those faced by those that run or climb trees (Dejours, 1987). These differences have influenced many of the morphological adaptations that occurred during the transition from terrestrial to aquatic locomotion (García Barros et al., 2021). Although members of the Ursidae family are primarily terrestrial, they also incorporate aquatic life into their daily foraging routine; the polar bear (*Ursus maritimus*) stands out among these species for its ability to swim long distances (Garshelis, 2009). Other bears, such as the black bear (*Ursus americanus*) and the grizzly bear (*Ursus arctos horribilis*) are also capable of swimming, although not as efficiently as the polar bear (Juárez Casillas & Varas, 2011).

The Andean bear (*Tremarctos ornatus*) is a widely distributed species along the Andes The Andean bear is a widely distributed species along the Andes mountain range in South America between Venezuela and Bolivia, with historical records reaching Panama and Argentina (Garshelis, 2009; Kattán, et al., 2004; Tirira, 2017). In Ecuador, the Andean bear is present in the Sierra, high Amazon, and in the foothills on both sides of the Andes mountain range (Tirira, 2017), with records in 15 provinces (Zapata Ríos et al., 2019). It occupies a variety of habitats including paramos and subtropical, temperate, and high Andean forests (Peralvo et al., 2005; Rodríguez et al., 2022).

In Ecuador, the species is found between 900 and 4300 m of elevation (Tirira, 2017), with a notable record in the southeast of the country at 290 m of elevation located east of the Kutukú mountain range in piedmont rainforest in the Morona Santiago Province (Zapata Ríos et al., 2006).

In this scientific note I describe the event of a young male Andean bear (*Tremarctos ornatus*) observed while swimming in the Secas Lagoon (00°26'53" S, 78°19'42" W, 3459 m altitude) in the northeastern Andes of Ecuador, within a paramo ecosystem near the Jocotoco Private Reserve in the northeastern Metropolitan District of Quito, in the parish of Píntag in the Pichincha Province.

The paramo ecosystem where the Secas Lagoon is located corresponds to a high montane lacustrine grassland environment (MAE, 2013), typical of tropical and subtropical regions (Hofstede et al., 2023). Characteristic vegetation of this ecosystem includes grasslands, scrub (such as chuquiragua), shrubs, and low trees such as *Polylepis*, in addition to some species of bromeliads and mosses (Llambí et al., 2012).

At 16:10 on January 10, 2024, an eyewitness recorded a video of an Andean bear swimming in the lagoon (Figure 1). The individual continued swimming towards the opposite shore over a distance of about 50 m for five minutes. The lagoon has an estimated average depth of 12 to 15 m (Arevalo et al., 2017).

There are no published reports that highlight specific details of the swimming ability of the Andean bear. The only information found in the literature indicates “They are very good swimmers, and have been observed swimming across large lakes” (Castellanos et al., 2016; Velez-Liendo et al., 2020), without indicating events or localities. In unpublished reports,

Figure 1. Andean bear swimming in Secas Lagoon, Píntag, Ecuador. Photograph by David Guamán. See the complete video at the following link: https://youtu.be/pwT1ki318ac

there is anecdotal information that an Andean bear swam across the Cuicocha Lagoon, in the province of Imbabura in northern Ecuador (S. Molina, pers. comm.); there is also a report published via a social network that shows a swimming event of an Andean bear in the Tapo Caparo National Park, Táchira state, Venezuela [link to video]. Therefore, this report records a little-known behavior of the Andean bear.

The lack of documented evidence on the swimming habits of this species may indicate the lack of interest in reporting these events, so I consider it necessary to invite colleagues and the public to document this type of behavior. This will help us to understand better the ecological habits and the adaptive capacity of the species with a view towards improving the conservation of their natural habitat.

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