

Wild Furbearer Management and Conservation in North America



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CHAPTER 57: TAYRA



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TAYRA

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The tayra (*Eira barbara*) is a member of the Order Carnivora, Family Mustelidae, and is the only extant species of the genus *Eira*. Based primarily on pelage coloration, Cabrera (1958) and Hall (1981) noted seven different phenotypes which they recognized as subspecies. Presley (2000) mentioned the yellow morph as an additional phenotype, which has not been assigned a subspecies designation. Partial DNA analysis by Ruiz-García et al. (2013) of specimens from South America indicated that in the southern distribution of the species, the five phenotypes (recognized by other authors as subspecies) present in the region include only two subspecies.

The genus for the tayra, *Eira*, comes from the common name used by indigenous peoples of Bolivia and Paraguay for this species, whereas the species, *barbara*, comes from the Greek word *barbarous*, meaning strange or foreign (Gotch 1979, Presley 2000). This species has different common names throughout its geographic distribution, including cabeza de viejo, viejo de monte (Mexico); bushdog (Belize); perico ligero (Guatemala); lepassil (Honduras); toluuco (Costa Rica); comadreja grande, gato cutarra, gato negro (Panama); guanaco (Venezuela); cocoromao, guacho, ulama, zorro ulama, zorro ulamat (Colombia); guamingo, marimonta, omayro, taira (Peru); perro de monte, tejón manco, ucate (Peru and Ecuador); cabeza de mate, humayro (Ecuador); melero (Bolivia); airá, eirá, eira, eira moro, gato eira, hurón mayor, mbaracayá eirá, taira, yrara (Paraguay); ariranha, irara, papa-mel (Brazil); and hurón mayor (Argentina).

DESCRIPTION

The tayra is a large, slender mustelid, with a long bushy tail about two-thirds the length of the body (Borrero 1967, Tello 1979, Emmons and Freer 1990). It has long legs with strong claws on forefeet and hind feet adapted for climbing and running, but not for swimming or digging (Pocock 1921, Presley 2000). The body is muscular with a slightly humped back. The ears are small and

rounded, of the same coloration as the neck and head, and do not protrude above crown (Pocock 1921). The anal glands of this species are not enlarged as in other mustelids (Presley 2000).

Forefeet and hind feet are naked underneath; the short, curved claws are interdigitally webbed to the proximal end of pads (Presley 2000; Fig. 57.1). When digital pads are not spread, they form a strongly curved line around the anterior margin of the plantar pad (Pocock 1921). Tayras have large four-lobed plantar pads, double carpal and metatarsal pads, and a hairy heel (Presley 2000; Fig. 57.1). Digits are unequal in length, and carpal vibrissae are especially well developed (Pocock 1921).

Ranges of morphometric measurements for individuals across the entire geographic distribution include: length of head and body = 559–712 mm (22.01–28.03 in); length of tail = 365–460 mm (14.37–18.11 in); length of hind foot = 90–123 mm (3.54–4.84 in); length of ear = 30–42 mm (1.18–1.65 in); and weight = 2.7–7.0 kg (6.0–15.4 lb; Emmons and Freer 1990, Presley 2000). This species is sexually dimorphic, with adult males about 30% larger (more heavily muscled around neck and shoulders) than females (Kaufmann and Kaufmann 1965, Poglayen-Neuwall 1975). Apparently, there is no variation in size throughout its geographic distribution (Presley 2000).

The skull is elongated, rostrum is short, zygomatic arch is prominent and is the widest part of the skull, and skull shape is not geographically variable (Schiaffini 2020; Fig. 57.2). Mean skull measurements for adult males ($n = 4$), females ($n = 2$), and specimens of unknown sex ($n = 5$) collected in Mexico, respectively, include: condylobasal length = 116.8 mm (4.59 in), 117.1 mm (4.61 in), and 109.9 mm (4.33 in); zygomatic breadth = 69.5 mm (2.73 in), 72.4 mm (2.85 in), and 66.5 mm (2.62 in); interorbital width = 27.1 mm (1.06 in), 31.3 mm (1.23 in), and 27.8 mm (1.09 in); and mastoid width = 53.0 mm (2.08 in), 52.9 mm (2.08 in), and 52.4 mm (2.06 in).



Fig. 57.1. Tayras (*Eira barbara*) have large four-lobed plantar pads, double carpal and metatarsal pads, and a hairy heel; digits are unequal in length, and carpal vibrissae are especially well developed. Image courtesy of Á. J. Villafaña-Trujillo, Universidad Autónoma de Querétaro, Mexico, from the Zoological Collection of Zoológico Miguel Álvarez del Toro, Mexico.



Fig. 57.2. Skull characteristics of the tayra (*Eira barbara*) in North America. Image courtesy of Skulls Unlimited International, USA.

The formula for the deciduous dentition of the tayra is $I = 3/3$, $C = 1/1$, $P = 3/3$, $M = 0/0$, for a total of 28 teeth (Poglayen-Neuwall 1978; Fig. 57.2). The formula for adult dentition is $I = 3/3$, $C = 1/1$, $P = 3/3-4$, $M = 1/1-2$, for a total of 32–34 teeth (Borrero 1967, Herán 1971, Poglayen-Neuwall 1978, Mares et al. 1989, Presley 2000, Gudinho and Weksler 2021; Fig. 57.2). This species does not have the first premolar in either the upper or lower jaw (Pocock 1921, Herán 1971), although the first upper premolar is retained in a few individuals (Herán 1971, Presley 2000).

The literature prior to the twenty-first century recognizes several subspecies of the tayra, with classifications based on phenotypic variation (e.g., differences in pelage coloration, coloration of nape and head, disruptive or homogenous coloration) coupled with geographic distribution (Presley 2000, Villafaña-Trujillo et al. 2018). Based on the information reported by Cabrera (1958) and Hall (1981), Presley (2000) described seven subspecies of the tayra: *Eira barbara barbara* (Linnaeus 1758), *Eira barbara sinuensis* (Humboldt 1812), *Eira barbara poliocephala* (Traill 1821), *Eira barbara peruana* (Nehring 1886), *Eira barbara senex* (Thomas 1900), *Eira barbara inserta* (Allen 1908), and *Eira barbara madeirensis* (Lonnberg 1913). Presley (2000) also recognized a phenotype with a homogeneous yellow pelage coloration present in Guyana that has not previously been assigned to a subspecific designation. The distributional boundaries of each subspecies are poorly known, although these boundaries have been estimated (Cabrera 1958, Hall 1981, Presley 2000; Table 57.1).

Based on the analysis of mitochondrial DNA (mtDNA) sequence obtained from hair (with follicle), skin, and teeth of specimens ($n = 68$) collected from Colombia to Argentina, Ruiz-García et al. (2013) suggested that in South America there are only two subspecies of the tayra: *Eira barbara barbara* (formed by groups *barbara*, *peruana*, *sinuensis*, and *madeirensis*) and *Eira barbara poliocephala*. Currently, it is unknown if populations of tayras from Mexico to Panama correspond to the subspecies in South America (*Eira barbara barbara*), or if they comprise unique subspecies. Consequently, there are currently four recognized subspecies of the tayra: *Eira barbara senex*, *Eira barbara inserta* (both from phenotypic descriptions), *Eira barbara barbara*, and *Eira barbara poliocephala* (both from phylogenetic analysis).

The pelage of the tayra is short and dense, the hair of the head, nape, and belly are shorter than the rest of the body, with a bushy tail. The pelage coloration of the tayra varies along their geographic distribution (Table 57.1), although the most common pelage pattern is disruptive (Presley 2000, Cheida et al. 2011, Feijó and Langguth 2013, Matos 2018), with the nape and head having a lighter coloration than the rest of the body (including the ventral part of the neck), which could be black or dark brown. In some regions, tayras have a homogeneous pelage coloration, which may be completely black (Central America) or completely white-yellowish (described by Presley [2000] as yellow morph, present in Guyana and northeastern Brazil). All phenotypes of the tayra have a throat patch (Fig. 57.3).

Table 57.1. Subjective descriptions of colorations of subspecies of tayra (*Eira barbara*) recognized by Cabrera (1958) and Hall (1981), and based on information from Presley (2000), Venturini et al. (2016), Talamoni et al. (2017), Villafañe-Trujillo et al. (2018), and Á. J. Villafañe-Trujillo and C. A. López González (unpublished data).

Subspecies	General location	Pelage coloration				Observations
		Body	Legs	Nape	Head	
<i>E. b. barbara</i>	Argentina (northern), Bolivia (northeastern), Brazil (southern), Paraguay, Peru (northeastern)	Dull brown	N/A	N/A	No distinct gray to brown	Body color lighter than <i>E. b. sinuensis</i> , darker than <i>E. b. senex</i>
<i>E. b. inserta</i>	Costa Rica (northwestern), El Salvador, Guatemala (southern), Honduras, Nicaragua	Black	N/A	N/A	Dark brown	N/A
<i>E. b. madeirensis</i>	Brazil (central), Colombia (southern), Ecuador (mid-eastern), Peru (northeastern), Venezuela (southern)	Dark chocolate brown	N/A	Slightly lighter than body	Slightly lighter than body	N/A
<i>E. b. peruana</i>	Bolivia (mid-western), Peru (eastern)	Dark chocolate brown	Darker than body	N/A	N/A	Body color similar to <i>E. b. madeirensis</i> , except limbs darker than body and tail black
<i>E. b. poliocephala</i>	Brazil (northern), French Guyana, Guyana, Suriname, Venezuela (eastern)	Dull brown	N/A	N/A	Brown	Pelage similar to <i>E. b. barbara</i> , but with darker yellow throat patch and yellow shoulder patches, which sometimes join to form a complete yellow collar
<i>E. b. senex</i>	Belize, Guatemala, Honduras, Mexico (Neotropics)	Dark brown	Dark brown	Grayish white	Grayish white	Grayish-white color extends to shoulders and fades to a dark yellow
<i>E. b. sinuensis</i>	Colombia (except southern), Costa Rica (southern), Ecuador (northwestern), Panama, Venezuela (northwestern)	Black	N/A	Darker brown than head	N/A	Body color darker than <i>E. b. senex</i>
Yellow morph ¹	Brazil (northeastern), Guyana	Beige white to yellowish	Beige white to yellowish	Beige white to yellowish	Beige white to yellowish	Face black; not albino

¹Based on museum ($n = 4$) specimens, although other ($n = 4$) specimens (not included in the table) were not completely consistent with the description. These may have been hybrid specimens between the white phenotype and another phenotype; their limbs and part of the body were a mix of white and darker hairs (Á. J. Villafañe-Trujillo and C. A. López González, unpublished data).

DISTRIBUTION

The current geographic distribution of the tayra extends from the coasts of central Mexico to northern Argentina (Presley 2000, Villafañe-Trujillo et al. 2018), including Trinidad, for a total estimated area of almost 16 million km² (6.2 million mi²; Schiaffini 2022). It occurs in the northeastern region of Brazil, although its distribution has not been specifically determined (Guedes et al. 2000, Sousa et al. 2004, Pereira and Geise 2009, Paula et al. 2011, Dias et al. 2014, Feijó et al. 2016, Matos 2018). In North America, the tayra is distributed in the Neotropics (Fig. 57.4), with the northernmost records in Mexico, in the states of Guerrero (Ruiz-Gutiérrez et al. 2017), Querétaro (López-González and Aceves-Lara 2007), and Hidalgo (Morales-García et al. 2016). Each phenotype potentially has a unique distribution, although boundaries of the distributions of phenotypes remain largely undefined.

LIFE HISTORY

Reproduction

Tayras are non-seasonal breeders with several estrous cycles each year. The genes associated with reproduction that may be involved in the non-seasonal breeding include *ETV2*, *MUC15*, *SLC38A2*, *HSD17B10*, *RBP2*, and *RNASEH2B* (Derežanin et al. 2022). The copulation of a pair of wild tayras was recorded through remote cameras in Altos de Campana National Park (Panama); the event



Fig. 57.3. All phenotypes of the tayra (e.g., *Eira barbara senex*) have a throat patch. Image courtesy of Á. J. Villafañe-Trujillo, Universidad Autónoma de Querétaro, Mexico.



Fig. 57.4. Estimated current geographic distribution of the tayra (*Eira barbara*) in North America. Based on information modified from Villafaña-Trujillo et al. (2018).

occurred diurnally and for 43 min, although in the first video, the male was already mounting the female, so the exact duration of coitus was unknown (Fuentes et al. 2021). In captivity, tayras are a non-seasonal polyestrous species, do not experience delayed implantation (Poglayen-Neuwall et al. 1989), and mating occurs diurnally (Poglayen-Neuwall 1978). However, Kaufmann and Kaufmann (1965) suspected nocturnal mating activity. The gestation period is between 63 and 67 days (Vaughan 1974, Poglayen-Neuwall 1975, Poglayen-Neuwall 1978, Presley 2000).

In males, testicles reach full development at 18 months old, at which time males should be reproductively viable (Poglayen-Neuwall 1975). The male is capable of sexual interaction at any time of the year (Brosset 1968). The first estrus in female tayras occurs at 22 months old ($n = 2$; Poglayen-Neuwall et al. 1989). The reproductive system of males is comprised of a pair of testes within a scrotum, deferent ducts, ampoule of the deferent duct, prostate, urethra, and penis with baculum and prepuce; the structure resembles those of other Carnivora, but the baculum morphology is different from those of other mustelids (Gonçalves et al. 2022).

Estrus in female tayras is readily recognizable based on behavioral patterns, such as displaying ambivalent sexual behavior toward a male, and mounting and stimulating the flanks of the male with her wrist; morphological indicators such as an inflated vulva, are an unmistakable sign of estrus (Poglayen-Neuwall 1978). Females are sexually receptive during estrus for periods of 2–3 days

(Vaughan 1974, Poglayen-Neuwall 1975, Poglayen-Neuwall et al. 1989, Presley 2000). The estrus cycle is $52.2 \text{ days} \pm 15.5 \text{ SE}$ in young females ($n = 5$) and $93.9 \text{ days} \pm 21.0 \text{ SE}$ in older females ($n = 18$); an unmated female did not experience prolonged estrus (Poglayen-Neuwall et al. 1989). Enlarged rear of abdomen and extended teats ($n = 4$) are signs of advanced pregnancy (Poglayen-Neuwall 1975). Litter size is 1–3 young, with 2 young being the most common (Encke 1968, Vaughan 1974, Poglayen-Neuwall 1975, Poglayen-Neuwall and Poglayen-Neuwall 1976, Poglayen-Neuwall 1978, Presley 2000).

The young are born blind, deaf, toothless, and completely haired; they are 209–223 mm (8.23–8.78 in) long (head to rump = 141–150 mm [5.55–5.91 in], tail = 68–73 mm [2.68–2.87 in]), and weigh approximately 100 g (3.5 oz). Auditory canals begin to open at about 22–24 days old, and are completely open at 35–36 days; eyes began to open at approximately 38 days, and are completely open at 41 days (Poglayen-Neuwall 1978). Deciduous teeth begin to emerge at 36 days, and are completely erupted by 99 days. Permanent teeth start to emerge at 115 days, and are completely emerged by 224 days (Poglayen-Neuwall 1978, Presley 2000). Adult coloration occurs by 40 days. Cubs consume solid food by 70 days, and are weaned by 100 days. In captivity, females became intolerant of males during later stages of pregnancy; there is no evidence that males remain with females through young rearing (Presley 2000).

Mortality

In captivity, tayras live ≤ 17 years (Jones 1977), and a female was reported to be 23 years old at the Sedgwick County Zoo, Wichita, Kansas, USA (A. Snyder, Sedgwick County Zoo, personal communication), but life span in the wild is unknown. There are multiple threats to the species throughout its distribution. Information about predators of the tayra is scarce, but tayras have been identified in nests of harpy eagles (*Harpia harpyja*) in Peru (Bowler et al. 2020), and in scats of jaguars (*Panthera onca*) in Argentina (Crawshaw 1995) and ocelots (*Leopardus pardalis*) in Brazil (Bianchi et al. 2010). In National Parks of Brazil, the presence of domestic dogs may be a threat to native species of wildlife, including the tayra, due to competition, predation, or pathogen transmission (Lessa et al. 2016). Free-ranging dogs near the borders of a protected area (next to human-dominated landscape) have a weak negative effect on landscape use by tayras (Bianchi et al. 2021), but the effect was stronger outside of this area. The scansorial behavior of tayras can be a strategy to reduce interactions with competitors and predators without the ability to climb trees.

Mortalities of tayras throughout their distribution have been attributed to vehicle collisions in Brazil (Wagner et al. 2003; Richini-Pereira et al. 2008, 2014, 2016; Gumier-Costa and Sperber 2009; Caceres 2011; Bovo et al. 2018; Batista et al. 2021; Silveira-Miranda et al. 2021; Gonçalves et al. 2022), Colombia (Obando 2022), and Mexico (Torres-Castro et al. 2019). Illegal trafficking and trade is another threat to the species. In Brazil, the Curupira Operation resulted in confiscation of 106 tayra specimens during 1984–1985 (Whiteman et al. 2007).

ECOLOGY

Habitat

Tayras occur in a wide variety of habitat conditions across its distribution, such as tropical and subtropical forests, secondary rain forests, gallery forests, gardens, plantations, cloud forests, and dry scrub forests (Emmons and Freer 1990; Table 57.2), which is evidence of their ecological plasticity. The species can live near human settlements (Hall and Dalquest 1963), and seems tolerant of some anthropogenic disturbance (Bianchi et al. 2021). Their range of is 0–2,400 m (0–7,870 ft; Emmons and Freer 1990), but the species is uncommon at >1,200 m (3,940 ft); records for high elevations (3,326–3,439 m [10,910–11,280 ft]) are present in high-mountain ecotone in Peruvian Central Andes between; Melo-Dias et al. 2022). Ecological information and knowledge of the trophic niche of the tayra are lacking.

Population Density and Dynamics

Many records of wild tayras have been obtained from research focused on other species, including via remote cameras (Fig. 57.5);

direct observation; public interviews; and collection of scats, tracks, or remains. Data analyses have included estimates of population abundance (Table 57.3), capture rates, and population density of tayras (Table 57.4). Capture rates (number of observations via remote cameras/ sampling effort \times 100) for tayras have fluctuated across their distribution, with values of 0.91 (Playa del Carmen, Mexico), 0.71 (Environmental Unit Management Nicté-Há, Mexico), 0.49 (Cockscomb Basin Wildlife Sanctuary, Belize), 1.42 (San Juan-La Selva Biological Corridor, Costa Rica), 0.54 (Yasuni Biosphere Reserve, Ecuador), 0.39 (Ecuador Highlands, Ecuador), 1.14 (Peruvian Amazon, Peru), 0.61 (Iguaçu National Park, Brazil), and 1.85 (Yaboti Biosphere Reserve, Argentina; Villafaña-Trujillo et al. 2021). The scansorial behavior of tayras probably increases the difficulty to detect this species (Asensio and Gómez-Marín 2002). The mechanisms that limit the population density of tayras are unclear, and may be associated with behavior, home-range characteristics, energetic requirements, or avoidance of intraspecific competition. Tayras do not seem to consistently travel on trails (Bitetti et al. 2014), further complicating the ability to detect this species.



Fig. 57.5. Baited camera stations are a primary tool for collecting data on tayras (e.g., *Eira barbara senex*) throughout their geographic distribution. Image courtesy of A. J. Villafaña-Trujillo, Universidad Autónoma de Querétaro, Mexico.

Table 57.2. Biotic and abiotic characteristics of areas of occurrence of *tayras* (*Eira barbara*) based on published literature.

Country Area	Elevation (m)	Land cover	Terrestrial ecoregion ^a	Climat ^b	Source
Argentina Yaboti Biosphere Reserve	200–500 (660–1,640 ft)	Subtropical moist broadleaf forests	Tropical and subtropical moist broadleaf forests	Warm temperate, fully humid (Cfa)	Villafaña-Trujillo et al. 2021
Belize Cockscomb Basin Wildlife Sanctuary	50–1,120 (160–3,670 ft)	Mixture of evergreen and semi-evergreen broadleaf tropical forest and mosaic of regenerating secondary forest in several stages of succession	Tropical and subtropical moist broadleaf forests	Equatorial monsoon (Am)	Villafaña-Trujillo et al. 2021
Bolivia Carretera de la muerte, Nor Yungas Province	1,670–3,049 (5,479–10,003 ft)	Highway within cloudy forest	Tropical and subtropical moist broadleaf forests	Warm temperate climate with dry winter and warm summer (Cwb), Equatorial savannah with dry winter (Aw)	Ayala et al. 2022
Brazil Almeirim-Eastern Amazonian states of Pará and Amapá	N/A	Areas of native and secondary forest	Tropical and subtropical moist broadleaf forests	Equatorial savannah with dry summer (As)	Almeida-Maués et al. 2022
Baía das Pedras Ranch, El Pantanal	0 (0 ft)	Seasonal floodplains, open grasslands, semi-deciduous forest, cerrado forest	Flooded grasslands and shrublands	Equatorial savannah with dry winter (Aw)	Villafaña-Trujillo et al. 2021
Brazilian Amazon (northeastern extreme)	N/A	Amazonian savannas interspaced with riparian forests	Tropical and subtropical grasslands, savannas and shrublands	Equatorial monsoon (Am)	Piña et al. 2019
Cerrado remnants (State of São Paulo)	N/A	Agricultural landscapes, remnants of physiognomies with heterogeneous matrix of <i>Eucalyptus</i> and sugarcane plantations, other agricultural crops, urban areas	Tropical and subtropical grasslands, savannas and shrublands	Equatorial savannah with dry winter (Aw)	Scrich et al. 2019
Floresta Nacional de São Francisco de Paula	N/A	Vegetation primarily a subtype of Atlantic forest (mixed ombrophilous forest), planted <i>Araucária</i> , <i>Pinus</i> , open fields; rivers, lakes, swamps	Tropical and subtropical moist broadleaf forests	Warm temperate climate, fully humid (Cfb)	Vera-Marques et al. 2021
Furnas do Bom Jesus State Park	1,545 (5,069 ft)	Seasonal and semi-deciduous primary forest with low secondary vegetation	Tropical and subtropical grasslands, savannas and shrublands	Equatorial savannah with dry winter (Aw)	Bianchi et al. 2021
Iguaçu National Park	200–700 (660–2,300 ft)	Semi-deciduous forest and araucaria forest	Tropical and subtropical moist broadleaf forests	Warm temperate, fully humid (Cfa)	Villafaña-Trujillo et al. 2021
Ipanema National Forest	550–971 (1,804–3,186 ft)	Mosaic of disturbed semi-deciduous Atlantic forest, secondary forest, grassland savanna, and <i>Eucalyptus</i> plantation	Tropical and subtropical grasslands, savannas and shrublands	Warm temperate, fully humid (Cfa)	Michalski et al. 2006
Lago Azul State Park	N/A	Buffer zone for the Mourão River microbasin and tributaries	Tropical and subtropical moist broadleaf forests	Warm temperate climate, fully humid with hot summer (Cfa)	Fernandes 2022
Mojú-Eastern Amazonian states of Pará and Amapá	N/A	Oil palm plantation landscape	Tropical and subtropical moist broadleaf forests	Equatorial savannah with dry summer (As)	Almeida-Maués et al. 2022
Municipalities of Minas Gerais (Cataguases and Presidente Olegário)	N/A	Unprotected forest fragments located in subtropical moist broadleaf forests and subtropical savanna ecoregions	Tropical and subtropical moist broadleaf forests	Equatorial savannah with dry winter (Aw)	Guedes et al. 2021
Paragominas (eastern Amazonian states of Pará and Amapá)	N/A	Several areas of 2,000–5,000 ha (4,900–12,400 ac), referred to as Annual Production Units	Tropical and subtropical moist broadleaf forests	Equatorial savannah with dry summer (As)	Almeida-Maués et al. 2022
Private Reserve of Natural Heritage Cata Branca	~1,300 (4,265 ft)	Seasonal semi-deciduous forest, cerrado, and campo rupestre on quartzite rock outcrops	Tropical and subtropical grasslands, savannas, and shrublands	Warm temperate climate with dry winter and hot summer (Cwa)	Vicente-Corrêa et al. 2021
Private Reserve of Natural Heritage Cata Branca (Minas Gerais)	~1,300 (4,265 ft)	Seasonal semi-deciduous forest, cerrado, and campo rupestre on quartzite rock outcrops	Tropical and subtropical grasslands, savannas, and shrublands	Warm temperate climate with dry winter and warm summer (Cwb)	Vicente-Corrêa et al. 2021
Private Reserve of Natural Heritage Córrego Seco	~1,300 (4,265 ft)	Semi-deciduous forests on the slopes, ombrophile forest in the valleys	Tropical and subtropical grasslands, savannas, and shrublands	Warm temperate climate with dry winter and hot summer (Cwa)	Vicente-Corrêa et al. 2021

Table 57.2. Continued.

Country Area	Elevation (m)	Land cover	Terrestrial ecoregion ^a	Climate ^b	Source
Brazil Private Reserve of Natural Heritage Córrego Seco (Minas Gerais)	~1,300 (4,265 ft)	Cerrados and campos rupestres, semi-deciduous forests, ombrophilous forests	Tropical and subtropical grasslands, savannas, and shrublands	Warm temperate climate with dry winter and warm summer (Cwb)	Vicente-Corréa et al. 2021
State Park Rio Canoas	N/A	Transition area of mixed ombrophilous forest, seasonal deciduous forest, and araucaria forest	Tropical and subtropical moist broadleaf forests	Warm temperate, fully humid (Cfa)	Camargo 2021
Tartarugalzinho (eastern Amazonian states of Pará and Amapá)	N/A	<i>Eucalyptus</i> plantation landscape	Tropical and subtropical moist broadleaf forests	Equatorial savannah with dry summer (As)	Almeida-Maués et al. 2022
Costa Rica Barbilla National Park	N/A	Low disturbed primary forest	Tropical and subtropical moist broadleaf forests	Equatorial rainforest, fully humid (Af)	Saenz-Bolaños et al. 2018
Earth University, Provincia de Limón	40 (13 ft)	University campus	Tropical and subtropical moist broadleaf forests	Equatorial rainforest, fully humid (Af)	Barrio-Amorós and Ojeda 2015
Reserve Sierra Zapote	260–350 (820–1,148 ft)	Secondary forest, primarily gallery forest and forest in regeneration	Tropical and subtropical moist broadleaf forests	Equatorial monsoon (Am)	Marín et al. 2022
San Juan-La Selva Biological Corridor	35–137 (115–450 ft)	Lowland tropical rainforest, agricultural plantations	Tropical and subtropical moist broadleaf forests	Equatorial rainforest, fully humid (Af)	Villafañe-Trujillo et al. 2021
Sendero Pájaro Sombriilla (within Alberto Manuel Brenes Biological Reserve)	1,035 (3,396 ft)	Premontane humid tropical forest	Tropical and subtropical moist broadleaf forests	Equatorial rainforest, fully humid (Af)	Sánchez-Porras et al. 2021
Talamanca región (southern Costa Rica)	0–3,600 (0–11,811 ft)	Forest patches	Tropical and subtropical moist broadleaf forests	Equatorial monsoon (Am)	González-Maya et al. 2015
Colombia Bosques de La Esmeralda	825–1,025 (2,707–3,363 ft)	Tropical rainforest, Andean forest, Andean high forest, sub-páramo and páramo life zone	Tropical and subtropical moist broadleaf forests	Equatorial rainforest, fully humid (Af)	Terán-Sánchez et al. 2021
Canal del Dique Basin (northern Colombia)	0–700 (0–2,297 ft)	Scarce natural vegetation; fragmented and embedded in matrix of intensive agricultural use	Tropical and subtropical moist broadleaf forests	Equatorial savannah with dry winter (Aw)	González-Maya et al. 2015
El Quimbo Hydroelectric	838–907 (2,749–2,976 ft)	Restored tropical dry forest	Tropical and subtropical moist broadleaf forests	Equatorial savannah with dry summer (As)	Arias-Carrillo 2022
Los Tlites de San Juan Civil Society Reserve	213–446 (699–1,463 ft)	Buffer zone of Los Colorados Flora and Fauna Sanctuary	Tropical and subtropical moist broadleaf forests	Equatorial savannah with dry winter (Aw)	García-T et al. 2020
Reserva Forestal Protectora Bosques de la Central Hidroeléctrica de Caldas (GHEC)	2,400–4,000 (7,874–13,132 ft)	Tropical rainforest, Andean forest, Andean high forest, sub-páramo and páramo life zones	Montane grassland and shrublands	Tundra climate (ET)	Terán-Sánchez et al. 2021
Ecuador Ecuador Highlands	1,520–3,090 (4,990–10,140 ft)	Lower montane rain forest, high-altitude cloud forest	Tropical and subtropical dry broadleaf forest	Warm temperate climate, fully humid (Cfb)	Villafañe-Trujillo et al. 2021
Provincia de Sucumbios (western Ecuadorian Amazon)	1,213 (3,980 ft)	Highway within biosphere reserve	Tropical and subtropical moist broadleaf forests	Equatorial rainforest, fully humid (Af)	Díaz 2021
Yasuni Biosphere Reserve	204–365 (670–1,200 ft)	Evergreen tropical terra-firme forest	Tropical and subtropical moist broadleaf forests	Equatorial rainforest, fully humid (Af)	Villafañe-Trujillo et al. 2021
Mexico Cloud forest (Sierra Norte of Oaxaca)	1,350–2,100 (4,429–6,890 ft)	Conservation area with little human intervention	Tropical and subtropical moist broadleaf forests	Warm temperate climate, fully humid (Cfb)	Pérez-Irineso et al. 2021
Flora and Fauna Protection Area Yum Balam	N/A	Disturbed vegetation with cornfields and cattle ranches	Mangroves	Equatorial savannah with dry winter (Aw)	Saavedra 2021
La Cruz-Corral de Piedra (southern Mexico)	2,800 (9,186 ft)	Pine (<i>Pinus</i>) -oak (<i>Quercus</i>) forest, montane cloud forest	Tropical and subtropical coniferous forest	Warm temperate climate, fully humid (Cfb), warm temperate climate with dry winter and warm summer (Cwb)	Padilla-Gomez et al. 2019
Municipalities of Ixil, Motul, and Progreso	7–9 (23–30 ft)	Fragments of secondary vegetation of disturbed low deciduous forest	Tropical and subtropical dry broadleaf forests	Equatorial savannah with dry winter (Aw)	Hernández-Hernández et al. 2019

Table 57.2. Continued.

Country	Area	Elevation (m)	Land cover	Terrestrial ecoregion ^a	Climate ^b	Source
Mexico	Playa del Carmen	0–10 (0–30 ft)	Gradient of successional stages, including induced pastures and seasonal agriculture, second-growth forests, and mature tropical forests	Tropical and subtropical moist broadleaf forests	Equatorial savannah with dry winter (Aw)	Villafaña-Trujillo et al. 2021
	Puerto de Zicatlán	580 (1,903 ft)	Patch of medium evergreen forest	Tropical and subtropical moist broadleaf forests	Warm temperate, fully humid (Cfa)	Morales-García et al. 2016
	Semi-evergreen forest (Sierra Norte of Oaxaca)	580–1,150 (1,903–3,773 ft)	Area with small human settlements and moderate but increasing fragmentation, agriculture, cattle grazing, and areas without vegetation	Tropical and subtropical moist broadleaf forests	Warm temperate climate, fully humid (Cfb)	Pérez-Irineso et al. 2021
	Sierra Gorda Biosphere Reserve	996 (3,288 ft)	Humid oak forest	Tropical and subtropical coniferous forest	Warm temperate climate with dry winter and hot summer (Cwa)	López-González and Aceves-Lara 2007
	Sierra Gorda cloud forest (north of Hidalgo)	506 (1,660 ft)	Well conserved cloud forest	Tropical and subtropical coniferous forest	Warm temperate, fully humid (Cfa)	Morales-García et al. 2016
	Tecpán de Galeana and Petatlá (municipalities in Guerrero)	2,258 (7,408 ft)	Tropical semi-evergreen forest, tropical deciduous forest, semi-deciduous forest, oak forest, pine forest, and pine-oak forest association	Tropical and subtropical coniferous forest	Equatorial savannah with dry summer (As)	Ruiz-Gutiérrez et al. 2017
	Towns of Akumal and Tulum (Quintana Roo)	N/A	Seasonal dry tropical forest, overlying limestone karst with flooded caves and/or cenotes	Tropical and subtropical moist broadleaf forests	Equatorial savannah with dry winter (Aw)	Vernes and Devos 2022
	Unit Environmental Management Nicté-Há	0–3 (0–1 ft)	Swamp vegetation, dry deciduous forest, tropical deciduous forest	Tropical and subtropical moist broadleaf forests	Equatorial savannah with dry winter (Aw)	Villafaña-Trujillo et al. 2021
Panama	Altos de Campana National Park	300–1,030 (984–3,379 ft)	Valleys, rugged hills, steep slopes surrounded by farms; fragmented due to anthropogenic activities	Tropical and subtropical moist broadleaf forests	Equatorial monsoon (Am)	Fuentes et al. 2021
	Barro Colorado Nature Monument	N/A	Nature reserve of forested islands and peninsulas	Tropical and subtropical moist broadleaf forests	Equatorial monsoon (Am)	Kaufmann and Kaufmann 1965, Esser et al. 2019
Peru	Caserío Salmuche, Cascas District,	1,476–2,016 (4,843–6,614 ft)	Mountain dry forest	Tropical and subtropical dry broadleaf forest	Steppe climate, cold arid (Bsk)	Cerna 2021
	Chapácará, Huamalíes Province	1,575 (5,167 ft)	Residual forested fragments used for commercial purposes and hunting	Tropical and subtropical moist broadleaf forests	Equatorial savannah with dry winter (Aw)	Aquino et al. 2022
	Libertad, Puerto Inca Province	2,043 (6,703 ft)	Fragments of residual forest	Tropical and subtropical moist broadleaf forests	Equatorial savannah with dry winter (Aw)	Aquino et al. 2022
	Miraflores, Pachitea Province	1,862 (6,109 ft)	Fragments of primary forest	Tropical and subtropical moist broadleaf forests	Equatorial savannah with dry winter (Aw)	Aquino et al. 2022
	Pampa Hermosa National Sanctuary	3,200–3,700 (10,499–12,139 ft)	Cloud forest, dense, steep forest vegetation, abundance of epiphytes; high Andean grasslands with herbaceous-shrub vegetation, mosses, and grasses	Tropical and subtropical moist broadleaf forests	Warm temperate climate, fully humid (Cfb), and desert climate, hot arid (BWh)	Melo-Dias et al. 2022
	Peruvian Amazon (near Ecuador border)	205–279 (670–915 ft)	Lowland tropical rainforest	Tropical and subtropical moist broadleaf forests	Equatorial rainforest, fully humid (Af)	Villafaña-Trujillo et al. 2021
Venezuela	Fundo Pecuario Masaguaral (Venezuelan llanos)	60–75 (197–246 ft)	Working cattle ranch	Tropical and subtropical grasslands, savannas, and shrublands	Equatorial savannah with dry winter (Aw)	Sunquist et al. 1989

^aBased on Olson et al. (2001).^bBased on Kottke et al. (2006).

Table 57.3. Estimates of relative abundance of *tayra* (*Eira barbara*) populations across their geographic distribution in North and South America.

Country	Area	Method	Relative abundance	Source
Bolivia				
	Andean sites in Greater Madidi-Tambopata landscape	Camera stations ^a	0.20–10.48	Viscarra et al. 2022
	Carrasco National Park			
	Undisturbed humid lowland forest	Observation of tracks ^b	0.24	Rumiz et al. 1998
	Piedmont forest	Observation of tracks ^b	0.23	Rumiz et al. 1998
	La Paz, Provincia Nor Yungas (Camino de la muerte area)	Camera stations ^c	0.12	Ayala et al. 2022
Brazil				
	Amapá			
	Savanna forest	Line transect ^d	0.013	Coelho et al. 2014
	Savanna grassland	Line transect ^d	0.020	Coelho et al. 2014
	Eastern Amazonian states of Pará and Amapá	Line transect ^e	0.32	Almeida-Maués et al. 2022
	El Pantanal	Camera stations ^f	0.3	de Souza et al. 2018
	Reserva Biológica de Una	Line transect ^g	0.03	Rocha et al. 2015
	Rio Canoas State Park	Camera stations ^h	4.51	Camargo 2021
	Northern Brazilian Amazonia			
	Maracá (protected area)	Camera stations ⁱ	0.41	de Luna et al. 2017
	Uatamá (protected area)	Camera stations ⁱ	0.20	de Luna et al. 2017
Colombia				
	National Reserve of the Civil Society Los Tífiles de San Juan	Camera stations ^e	4.92	García-T et al. 2020
	Parque Natural Regional Sisavita	Camera stations ^e	3.68	Echavarría-Becerra 2021
	Quimbo Hydroelectric (Huila)			
	Tropical dry forest	Camera stations ⁱ	9.36	Arias-Carrillo 2022
Costa Rica				
	Talamancas			
	Banana (<i>Musa</i> spp.) agroforest	Observation of tracks ^b	0.26	Guiracocha et al. 2001
	Cacao (<i>Theobroma cacao</i>) agroforest	Observation of tracks ^b	0.27	Guiracocha et al. 2001
	Forest (natural)	Observation of tracks ^b	0.07	Guiracocha et al. 2001
	Pacuare Nature Reserve	Camera stations ^k	0.18	Arroyo-Arce et al. 2017
	Pajaro Sombrilla Trail (Alberto Manuel Brenes Biological Reserve)	Camera stations ⁱ	0.50	Sánchez-Porras et al. 2021
Ecuador				
	Provincia de Sucumbios (western Ecuadorian Amazon)	Camera stations ^m	0.46	Gallo-Viracocha and Urgilés-Verdugo 2022
Mexico				
	Lacandon Jungle			
	Dry season	Camera stations ⁿ	0.002	Figuerola-de-León et al. 2017
	Wet season	Camera stations ⁿ	0.003	Figuerola-de-León et al. 2017
Surinam				
	Brownsberg Nature Park	Camera stations ^o	0.22	Ouboter and Kadosoe 2016

^aNumber of independent events/sampling effort × 100.

^bNumber of tracks/km.

^cNumber of independent events/number of camera days × 100.

^dNumber of individuals recorded/10 km on each transect.

^eNumber of records of species/total number of records of all species × 100.

^fNumber of capture events/number of camera trap days × 100.

^gNumber of records × 10/total sampling effort; sightings/10 km.

^hNumber of capture events/total number of records of all species × 100.

ⁱNumber of species individual records/100/sampling effort.

^jNumber of independent events / sampling effort × 1,000 camera days.

^kNumber of events/number of camera nights/sampling effort.

^lNumber of events/sampling effort × 100.

^mNumber of independent events/100 camera nights.

ⁿNumber of images/100 camera days.

^oNumber of capture events/number of camera days × 100.

Space Use and Movements

Home-range sizes of tayras have been estimated using data from radio-marked individuals and noninvasive identification of individuals. In the Venezuelan llanos, the home-range size for a lactating female was 2.3 km² (0.9 mi²); when the cubs were 3 months of age, home-range size increased to 9.0 km² (3.5 mi²; Sunquist et al. 1989). In Cockscomb Basin Wildlife Sanctuary in Belize, home-range sizes for males were 2.1 km² (0.8 mi²; 3-mo monitoring period) and 24.4 km² (9.4 mi²; 10 mo), whereas home-range size for a female was 16.0 km² (6.2 mi²; 13 mo). These individuals traveled on average 6.9 km/day (4.3 mi/day), and their utilization patterns within their home ranges demonstrated consistent use on an annual basis (Konecny 1989). Daily movement patterns

were predominantly unidirectional with sporadic crossing or backtracking. The average distance traveled during 60-min periods ranged from 0 to 2,704 m (0–8,871 ft) at a speed of 353 m/hr (1,158 ft/hr) for all movements. Diurnal movements averaged 398 m/hr (1,306 ft/hr), and nocturnal movements averaged 55 m/hr (180 ft/hr; Konecny 1989).

In the Ipanema National Forest in southeastern Brazil, the estimated home-range size of a female tayra was 5.3 km² (2.0 mi²) during 11 months of monitoring (Michalski et al. 2006). In the Floresta Nacional de São Francisco de Paula in Brazil, the home-range size for an adult male was 4.79 km² (1.85 mi²); this individual had an overdeveloped upper left canine, which allowed for individual identification through digital images from remote cameras that recorded 11 independent events during March–September 2012 (Vera-Marques et al. 2021).

Table 57.4. Estimates of capture rates and population densities of *Tayra* (*Eira barbara*) across their geographic distribution in North and South America.

Country	Area	Method	Estimate	Units	Source
Argentina	Yaboti Biosphere Reserve	Camera stations	1.85	Number of records/sampling effort × 100	Villafaña-Trujillo et al. 2021
Belize	Cockscomb Basin Wildlife Sanctuary	Camera stations	0.49	Number of records/sampling effort × 100	Villafaña-Trujillo et al. 2021
Bolivia	Tucavaca	Camera stations	0.003–0.005	Number of captures/1,000 camera nights	Maffei et al. 2002
Brazil	Central Brazilian Amazon	Camera stations	0.004	Number of individuals/camera night	Rocha et al. 2016
	Eastern Amazonia (Agropalma private land)	Camera stations	0.149	Number of independent photographic records × 100 functioning camera days	Mendes-Oliveira et al. 2017
	Oil palm plantation	Line transects	7.32	Number of individual species records × 10 km sampled	Mendes-Oliveira et al. 2017
	Forest	Line transects	11.29	Number of individual species records × 10 km sampled	Mendes-Oliveira et al. 2017
	Estação Ecológica de Maracá	Direct observation via line transects	0.1–0.3	Number of groups/km ²	Mendes-Pointes et al. 2010
		Direct observation via line transects	0.2–0.3	Number of individuals/km ²	Mendes-Pointes et al. 2010
	Iguaçu National Park	Camera stations	0.61	Number of records/sampling effort × 100	Villafaña-Trujillo et al. 2021
	Lago Azul State Park	Camera stations	0.14	Number of records of species/number of sites with species recorded	Fernandes 2022
	Northeastern Brazil	Camera stations	0.14	Number of individuals/10-km transect	da Silva and Mendes-Pointes 2008
	Rio Verde-Golias region	Direct observation	0.058	Number of records of species/number of records of all species × 100	Miranda 2022
	Southeastern Brazil	Camera stations	2.35	Number of records of species/number of records of all species × 100	Miranda 2022
	Private Reserves of Natural Heritage Cata Branca and Córrego Seco (Minas Gerais)	Camera stations	5.29	Number of records of species/number of records of all species × 100	Vicente-Corrêa et al. 2021
	Tapajós National Forest	Active searches from roads	2.8	Number of individuals killed via vehicle collision/km of road/day	Batista et al. 2021
Costa Rica	San Juan-La Selva Biological Corridor	Camera stations	1.42	Number of records/sampling effort × 100	Villafaña-Trujillo et al. 2021
Ecuador	Coastal Region of Ecuador (western Ecuador)	Camera stations	2.113	Number of detections/number of camera nights × 100	Solórzano et al. 2021
	Evergreen forest	Camera stations	0.08	Number of detections/number of camera nights × 100	Solórzano et al. 2021
	Dry forest	Camera stations	0.52–2.63	Number of records/100 camera nights	Canales-Pacheco 2021
	Dos Mangas and Loma Alta Communes	Line transects	0.005–0.026	Number of records/km	Canales-Pacheco 2021
	Ecuador Highlands	Camera stations	0.39	Number of records/sampling effort × 100	Villafaña-Trujillo et al. 2021
	Gran Sumaco Biosphere Reserve	Camera stations	0.0017	Number of individuals/camera night	Hodge and Arbogast 2016
	Yasuni Biosphere Reserve	Camera stations	0.54	Number of records/sampling effort × 100	Villafaña-Trujillo et al. 2021
Guyana	Iwokrama Forest	Camera stations	9	Number of individuals/km ²	Roopsind et al. 2017
Mexico	Los Tuxtlas	Habitat corridors	0.08	Sighting rate	Estrada et al. 2002
	Forests	Direct observation	0.13	Sighting rate	Estrada et al. 2002
	Playa del Carmen	Camera stations	0.91	Number of records/sampling effort × 100	Villafaña-Trujillo et al. 2021
	San Isidro Yólox	Camera stations	0.19	Number of individuals/km ²	Hernández-Sánchez et al. 2017
	Cloud forest	Camera stations	0.31	Number of individuals/km ²	Hernández-Sánchez et al. 2017
	Semi-evergreen forest	Camera stations	0.71	Number of records/sampling effort × 100	Villafaña-Trujillo et al. 2021
	Unit Environmental Management (Nicle-Há)	Camera stations	2.1	Number of independent records of each species × 100 camera days	Vermes and Devos 2022
	Yucatán Peninsula	Camera stations	1.0	Number of independent records of each species × 100 camera days	Vermes and Devos 2022
	Cenotes	Camera stations	0.05	Mean detection probability	Mena et al. 2020
	Forests	Camera stations	0.05	Mean detection probability	Mena et al. 2020
Northwestern Amazon (Colombia, Ecuador, Peru)		Camera stations	1.74 and 0.37	Number of detections/100 camera nights	Fort 2016
Panama	Cerro Hoya National Park and Serranía de Pirre	Camera stations	1.74 and 0.37	Number of detections/100 camera nights	Fort 2016
Peru	Los Amigos Conservation Concession	Camera stations	2.1–3.4	Number of images/1,000 camera nights	Tobler et al. 2008
	Pampa Hermosa National Sanctuary (Peruvian Central Andes)	Camera stations	0.0057	Number of records of species/total number of records for all species	Melo-Díaz et al. 2022
	Peruvian Amazon	Direct observation	1.0 ± 0.9	Number of individuals/km ²	Naughton-Treyes et al. 2003
		Camera stations	1.14	Number of records/sampling effort × 100	Villafaña-Trujillo et al. 2021
	Southeastern Peru	Direct observation	3.27	Number of individuals observed/km	Kirby et al. 2000
Venezuela	Gran Sabana and Canaima National Park	Camera stations and interviews	0.11	Number of detection events for species/100 camera days	Stachowicz et al. 2020

Diseases and Parasites

Information about diseases for the tayra has been limited to South America, with the exception of a single report from Panama, Central America (Table 57.5), most of which are for parasites. The clinical evolution of disease in tayras has not been described.

FOOD HABITS

The tayra has been described as an opportunistic omnivore (Presley 2000) that consumes fruits, eggs, and vertebrates, and has adapted to take advantage of anthropogenic sources of food (Table 57.6). Apparently, tayras exhibit prospective cognition due to their constant visits to a known source of food, which also implies spatial memory (Tallei et al. 2021), and that they are capable of collecting and storing immature fruits for consumption once ripe

(Soley and Alvarado-Díaz 2011). The evolution of their caching behavior may have been consequence of the presence of genes related to memory and learning (e.g., *SLC38A1* [Qureshi et al. 2019]; *CRBN* [Higgins et al. 2010]; Derežanin et al 2022). The diet of this species is not fully understood by region, season, sex, or age.

Captive tayras consume a wide variety of food items (Kaufmann and Kaufmann 1965, Poglayen-Neuwall 1978). However, food consumption in captivity may not accurately reflect food habits of wild tayras. The stomach is on the level of sixth to tenth ribs, closely located between the esophagus and the first one-third of the duodenum; the organ is simple (glandular), located on the left antimer of the abdominal cavity (saccular format with large and small curvatures), and has composite mucosa made with various gastric folds presents in regions of the cardia, fundus, and pylorus (Lima et al. 2018).

Table 57.5. Pathogens and parasites identified in tayra (*Eira barbara*) populations across their geographic distribution in North and South America.

Type of pathogen or parasite	Country	Source
Bacteria		
<i>Bacillus anthracis</i>	Unknown	Pavlin et al. 2009
<i>Brucella</i> sp.	Unknown	Pavlin et al. 2009
<i>Brucella abortus</i>	Brazil	Oliveira-Filho et al. 2012
<i>Brucella canis</i>	Brazil	Oliveira-Filho et al. 2012
<i>Coxiella burnetii</i>	Unknown	Pavlin et al. 2009
<i>Escherichia coli</i>	Trinidad and Tobago ^a	Adesiyun 1999
<i>Francisella tularensis</i>	Unknown	Pavlin et al. 2009
<i>Leptospira</i> sp.	Brazil	Fornazari et al. 2018
<i>Mycobacterium tuberculosis</i> complex	Unknown	Pavlin et al. 2009
<i>Salmonella siegburg</i>	Trinidad ^a	Gopee et al. 2000
<i>Yersinia pestis</i> (2, 32, 80, 101–105)	Unknown	Pavlin et al. 2009
Disease		
Fibrocartilaginous embolism	N/A ^a	Renner et al. 1998
Nematodes		
<i>Dirofilaria spectans</i>	Brazil	Noronha et al. 2002
<i>Filaria</i> sp.	French Guiana	de Thoisy et al. 2000
<i>Toxoplasma gondii</i>	French Guiana	de Thoisy et al. 2003a
Parasites		
<i>Amblyomma coelebs</i>	Argentina	Lamattina et al. 2018
<i>Amblyomma ovale</i> and <i>Amblyomma</i> sp.	Panama	Bermúdez et al. 2015
<i>Angiostrongylus</i> sp.	Brazil	Vieira et al. 2008
<i>Eimeria</i> sp.	Colombia	Ortiz-Pineda et al. 2019
<i>Filaria carvalhoi</i>	Brazil	Vieira et al. 2008
<i>Isoospora arctopitheci</i> Rodhain	N/A ^b	Duszynski et al. 2000
<i>Leishmania infantum</i>	Brazil	Paiz et al. 2015
<i>Molineus barbaris</i>	Brazil	Vicente-Corrêa et al. 1997
<i>Molineus major</i>	Brazil	Vicente-Corrêa et al. 1997
<i>Pachysentis gethi</i>	Brazil	Machado 1950
<i>Physaloptera</i> sp.	Brazil	Vieira et al. 2008
<i>Prosthenorchis elegans</i>	Brazil	Travassos 1917
<i>Toxocara felis</i>	Colombia	Ortiz-Pineda et al. 2019
<i>Toxascaris leonina</i>	Brazil	Noronha et al. 2002
<i>Toxascaris</i> sp.	Brazil	Vieira et al. 2008
<i>Toxoplasma gondii</i> (antibodies)	Brazil ^a	Pimentel et al. 2009
<i>Trypanosoma cruzi</i>	Brazil	Almeida and Brito-Melo 1942, Deane and Damasceno 1961
<i>Trypanosoma evansi</i>	Brazil	Santos et al. 2019
<i>Trypanosomatidae</i>	French Guiana	de Thoisy et al. 2000
Viruses		
<i>Alphavirus</i> (Togaviridae)	French Guiana	de Thoisy et al. 2003b
Highly pathogenic avian influenza (H5N1)	Unknown	Pavlin et al. 2009
Severe Acute Respiratory Syndrome ^c	Unknown	Pavlin et al. 2009
Rabies	Unknown	Pavlin et al. 2009
Yellow fever	French Guiana	de Thoisy et al. 2004
Yellow fever	Unknown ^a	Pavlin et al. 2009

^aIdentified in captive tayra.

^bNatural host.

^cIncluding SARS-like coronavirus.

Table 57.6. Diet items and foraging behavior of *tayra* (*Eira barbara*) populations across their geographic distribution in North and South America.

Country Area	Diet items	Foraging behavior	Method	Source
Argentina Jujuy province (near Calilegua National Park)	Blue-crowned trogon (<i>Trogon curucui</i> ; nestlings)	Nest predation	Camera station	Tallei et al. 2021
Belize Cockscomb Basin Wildlife Sanctuary	Arthropods, black rat (<i>Rattus rattus</i>), fruit, mamey (<i>Calocarpum mammosum</i>), hispid cotton rat (<i>Sigmodon hispidus</i>)	N/A	Scat analysis	Konecny 1989
Macal River (Cayo District)	Derby's woolly opossum (<i>Caluromys derbianus</i>)	Predation attempt	Direct observation	Ceballos 2016
Brazil Amazon (central, Cabo Frio)	Pale-throated sloth (<i>Bradypus tridactylus</i>)	Predation attempt	Direct observation	Venturini et al. 2016
Amazon (eastern)	Red-handed howler (<i>Alouatta belzebul</i>)	Predation attempt	Direct observation	Camargo and Ferrari 2007
Amazon (Xingu River)	Smooth-fronted caiman (<i>Paleosuchus trigonatus</i> ; eggs)	Nest predation	Camera station	Campos et al. 2016
Amazon (lowland terra-firme sites)	Harpy eagle (<i>Harpia harpyja</i> ; eggs)	Nest predation	Camera station	Aguilar-Silva et al. 2017
Atlantic Forest (Catiú Ecological Station)	Tapeti (<i>Sybilagus brasiliensis</i>)	Predation	Direct observation	Grotta-Neto et al. 2020
Pantanal wetlands	Caiman (<i>Caiman crocodilus yacare</i> ; eggs)	Nest predation	Camera station	Campos and Mourão 2014
Pantanal (São Francisco do Perigara Ranch)	Armadillo (<i>Dasypus</i> sp.)	Predation	Direct observation	Grotta-Neto et al. 2020
Pará State (Tapajós River)	White-nosed saki (<i>Chiropotes albinasus</i>)	Interspecific interaction	Direct observation	Barnett et al. 2018
Paraná State (Lauráceas State Park)	Grey brocket deer (<i>Mazama gouazoubira</i>)	Predation	Direct observation	Grotta-Neto et al. 2020
Pernambuco State (Atlantic rain forest)	Common marmoset (<i>Callithrix jacchus</i>), pale-throated sloth	Predation, predation attempt	Direct observation	Bezerra et al. 2009
Poco das Antas Biological Reserve	Golden lion tamarin (<i>Leontopithecus rosalia</i>)	Predation attempt	Direct observation	Stafford and Ferreira 1995
São Paulo (Caetetus Ecological Station)	Black lion tamarins (<i>Leontopithecus chrysopygus</i>)	Predation attempt	Direct observation	Grotta-Neto et al. 2020
Colombia La Calera-Cundinamarca	Red brocket deer (<i>Mazama rufina</i>)	Predation	Direct observation	Rodríguez et al. 2020
Santa Sofía Island	Common squirrel monkey (<i>Saimiri sciureus</i>)	Predation attempt	Direct observation	Gaier et al. 1976
Costa Rica Barbilla National Park	Brown-throated sloth (<i>Bradypus variegatus</i>)	Opportunistic predation	Camera station	Sáenz-Bolaños et al. 2018
Earth University, Provincia de Limón	Green iguana (<i>Iguana iguana</i>)	Predation attempt	Direct observation	Barrio-Amorós and Ojeda 2015
La Selva Biological Station	Plantain (<i>Musa x paradisiaca</i>)	N/A	Direct observation, camera station	Soley and Alvarado-Díaz 2011
La Selva Biological Station	Amazon racerunner (<i>Armeiva armeiva</i>), cacao tree (<i>Theobroma cacao</i>), plantain	N/A	Direct observation, camera station, scat analysis	Soley 2012
Mexico Los Tuxtlas, Veracruz	Mantled howler (<i>Alouatta palliata</i>)	Interspecific interaction, predation attempt	Direct observation	Asensio and Gómez-Marín 2002
Yucatán	Central American red brocket (<i>Mazama temama</i>), small animals (e.g., birds, mice, rats, squirrels, rabbits)	N/A	Direct observation	Gaumer 1917
Panama Barro Colorado Island	Mamey (fruit), snake (Colubridae), trumpet tree (<i>Cecropia mexicana</i> ; fruit)	N/A	Direct observation	Kaufmann and Kaufmann 1965
Barro Colorado Island	Central American agouti (<i>Dasyprocta punctata</i>), green iguana	Predation, predation attempt	Direct observation	Galef et al. 1976
Surinam Unknown	Red-handed tamarin (<i>Saguinus midas</i>)	Predation attempt	Direct observation	Galef et al. 1976
Venezuela Central Venezuelan Llanos	Acetuno (<i>Vitex orinocensis</i>), amatillo (<i>Ficus pertusa</i> ; fruit), café silvestre (<i>Psychotria anceps</i> ; fruit), climbing mouse (<i>Rhipidomys</i> sp.), fig (<i>Ficus trigonata</i> ; fruit), genipapo (<i>Genipa americana</i> ; fruit), green iguana, mata chinche (<i>Zanthoxylum culantrillo</i> ; fruit), speckled spiny tree-rat (<i>Echimyys semivillosus</i>), West Indian elm (<i>Guazuma tomentosa</i> ; fruit)	N/A	Scat analysis	Sunquist et al. 1989

BEHAVIOR

The tayra is a diurnally active species (Presley 2000). In some localities of their latitudinal distribution, peaks of activity occur during crepuscular periods, or exclusively during the midday; the activity of this species at the same location may also be different between the dry and rainy seasons (González-Maya et al. 2015, Albanesi and Jayat 2016, Braga et al. 2020, Joaquim 2021, Villafañe-Trujillo et al. 2021). There is also some indication of nocturnal activity by tayras (Hall and Dalquest 1963, Kaufmann and Kaufmann 1965, Defler 1980, Konecny 1989, Sunquist et al. 1989), but such activity may be very limited. In captivity, the species is almost completely diurnal (Presley 2000). In captivity, a tayra can display stereotypical behavior which alternates with other behaviors (e.g., activity, food, inactivity, locomotion, maintenance, marking; Panizzon and Azevedo Filho 2019).

Tayras are solitary. Males and females socialize only during mating, and males apparently do not contribute to parental care of young. Tayras have been observed traveling in pairs or groups of ≤ 4 individuals, which is probably a female with subadults. There is no evidence that adults form groups. Cubs stay with their mother until they are 7–10 months old (Poglayen-Neuwall and Poglayen-Neuwall 1976).

Apparently, the eyesight of the tayra may be relatively poor (Defler 1980). The presence, quantity, and variation in several genes (e.g., *ANKRD13A* [Avellino et al. 2013]; *RBP2* [D'Ambrosio et al. 2011]) implicated with lens-fiber formation and retinal vascularization suggests that tayras might have poor eyesight (Derežanin et al. 2022). The tongue of the tayra has mechanical (filiform and conical), and gustative (fungiform and circumvallated) lingual papillae (Gonçalves et al. 2020). Foraging tayras use olfaction as the primary method to detect prey (Presley 2000). Tayras hunt, but do not stalk or ambush, their prey (Presley 2000, Barrio-Amorós and Ojeda 2015, Sáenz-Bolaños et al. 2018).

GENETICS

Eurasia is the center of origin of mustelid diversity, and mustelids rapidly dispersed to North America via the Bering land bridge (Baskin 1998, Tedford et al. 2004). The genus *Eira* emerged or originated during the Late Miocene (between 5.3 and 11.2 million years ago; Koepfli et al. 2008). Based on molecular dating that the split between *Eira* and the *Gulo-Martes* group happened 7.5 million years ago, *Eira* represents the most basal taxon of the Subfamily Guloninae (Derežanin et al. 2022), and is closely related to the North American extinct taxa *Trigonictis* and *Legionarictis* (Tseng et al. 2009, Mendonça-Lopes et al. 2019). The origin of the tayra has been proposed either as North American (Ray et al. 1981), or through a common ancestor of the tayra that was distributed in South America (Koepfli et al. 2008); the fossils of six tayras in South America are restricted to the Quaternary Period (Mendonça-Lopes et al. 2019). There currently is no evidence to provide support for any single hypothesis.

The results of mtDNA analyzed by Ruiz-García et al. (2013) indicated that five subspecies (distributed in South America) recognized by Cabrera (1958) and Hall (1981) can be condensed into two subspecies (*Eira barbara barbara* and

Eira barbara poliocephala), but it is unknown if the subspecies present in Mexico south to Panama is either of these subspecies or should be considered a separate subspecies.

Based on skull morphometrics, Schiaffini (2020) concluded that none of the current subspecies of the tayra can be recognized as valid taxa because the criteria proposed within the literature (body size and pelage coloration [Cabrera 1958, Hall 1981, Presley 2000]; mtDNA [Ruiz-García et al. 2013]; geographical provenance [Schiaffini 2020]) contravenes several properties of the subspecies concept. Currently, there is no reason to believe that the known differences in genetics among designated subspecies have an effect on the management of tayras.

MANAGEMENT AND CONSERVATION

Sexing and Aging Techniques

In tayras, the primary diagnostic external feature to distinguish between adult males and females is the presence of testes in males; in addition, males are physically larger and more muscular than females (Kaufmann and Kaufmann 1965, Poglayen-Neuwall 1975, Presley 2000). Adult males can be identified noninvasively through the presence of testes (Ramírez 2011, Villafañe-Trujillo et al. 2018). Cubs attain adult size at 6 months of age, after which they are difficult to distinguish from adults (Encke 1968). The testes in males become fully developed at 18 months old (Poglayen-Neuwall 1975), making noninvasive determination of sex almost impossible when no genitals are observed because it is difficult to distinguish a female from an immature male. There currently is no method or technique to identify the age (or age class) of a specimen; cementum annuli analysis has not yet been conducted for tayras.

Population Monitoring and Survey Techniques

Due to the scarcity of research on tayras, assessing their populations consists primarily with estimating relative abundance, population density, and capture rate (Tables 57.3 and 57.4). Currently, the most complete and accurate description of population characteristics is from a wild population in the Peruvian Amazon (Villafañe-Trujillo et al. 2018). After demonstrating that the form and size of the throat patch of tayras is individually unique, and that it allows for individual identification, an analysis of 35 independent events of tayras collected during 3,068 trap-nights indicated that the population was composed of ≥ 9 individuals. Individual identification can be used to estimate abundance through capture-recapture methods (see Gese et al. 2024 [Chapter 15]).

Harvest

In Mexico, although tayras are not important for their legal commercial use, they are a harvested species (Uribe and Arita 1998). In Honduras, a government-issued permit is necessary for their exportation (Sánchez et al. 2015). Some rural communities in Cordoba, Colombia, reported consumption of tayras as food (Racero-Casarrubia and Ballesteros-Correa 2019). A Yucatecan Mayan community in Zavala, Mexico, uses tayras as an ornament (Nahuat-Cervera et al. 2021).

Subsistence hunting of tayras is common in some communities. For example, there are human communities or settlements (e.g., Huaorani people in the Ecuadorian Amazon, Awá-Guajá people in the Brazilian Amazon) that actively hunt and consume wildlife, including the tayra (Mena-Valenzuela 1999, Prado et al. 2012). The potential population-level effects of subsistence hunting have not been quantified, but the species is probably hunted and killed generally for perceived medicinal benefits to humans. Conversely, some local people (e.g., indigenous communities in southern Guyana) recognize the tayra, but they do not hunt or consume them (Fragoso et al. 2016).

Damage Management

Throughout its distribution, tayras may consume crops, poultry, and other food-related resources provided within human settlements (Presley 2000, Guiracocha et al. 2001, Soley and Alvarado-Díaz 2011, Amador-Alcalá et al. 2013, Herrera-Flores et al. 2019). However, there has been no economic assessment of potential losses caused by tayras. Peruvian farmers reported losses of domestic animals (e.g., poultry, pigs) to predators such as ocelots, hawks (Accipitridae), jaguars, jaguarundis (*Herpailurus yagouaroundi*), mountain lions (*Puma concolor*), and tayras. Losses from tayras averaged US\$54/yr/complainant, but these claims were not verified and may be overestimated (Naughton-Treves et al. 2003).

Capture and Handling

Tayras have been captured using cage traps suitable for medium-sized mammals, with traps placed along trails and roads, and near streams. Traps were baited with live domestic chickens (Konecny 1989, Foresti 2010), rats (*Rattus* spp.), or meat scraps (Sunquist et al. 1989). Tayras may frequently damage cage traps by biting them (Konecny 1989, Widmer et al. 2017), which may cause gum injuries (Widmer et al. 2017).

Tayras have been chemically immobilized using ketamine hydrochloride (20 mg of drug/kg of body weight [Konecny 1989]; 11–25 mg/kg [Sunquist et al. 1989]), Telazol® (a mixture of tiletamine hydrochloride and zolazepam hydrochloride; 6.60 mg/kg [Michalski et al. 2006]), or using a combination of ketamine-xylazine-atropine (10, 1.0, and 0.04 mg/kg, respectively [Michalski et al. 2006]); or with an intramuscular injection of tiletamine-zolazepam (5 mg/kg; Foresti 2010), and intramuscular or intravenous Zoletil™ (tiletamine, 3.3 mg/kg [Pabón-Vargas 2021]). An epidural anesthesia (lumbosacral space) on an adult male tayra (weight = 6.3 kg [13.9 lb]) presumably injured via vehicle collision prior to surgery consisted of lidocaine (4 mg/kg) and morphine (0.1 mg/kg; total volume of 0.2 mL/kg). Intramuscular methadone (0.2 mg/kg) as well as 0.2 mg/kg of subcutaneous meloxicam was provided for additional analgesia 30 min after the onset of surgery. Anesthesia was maintained with isoflurane diluted in 1.0 inspired oxygen fraction after 1 mg/kg of intravenous propofol (Justo et al. 2021).

Konecny (1989) described that tayras metabolized ketamine more rapidly than felids of similar size (e.g., jaguarundi, margay [*Leopardus wiedii*], ocelot); to maintain an acceptable

level of immobilization, dosages administered to tayras were more than double the dosages administered to felids. Kreeger and Arnemo (1996) recommended a dosage of 3.3 mg/kg tiletamine-zolazepam, with a supplement of 3.3 mg/kg ketamine, or an alternative of 15 mg/kg ketamine to immobilize tayras in the wild. In captivity, tayras has been immobilized with methoxyflurane gas followed by intramuscular injection of 0.5 ml ketamine hydrochloride for veterinary treatments (Poglayen-Neuwall 1978). Generally, tayras recovered from chemical immobilization without the use of antagonists. See Kreeger 2023 (Chapter 17) for more information about chemical immobilization of furbearing species, including tayras.

Marking

Wild tayras have been marked with Very High Frequency (VHF) radio-collars (Konecny 1989, Sunquist et al. 1989, Michalski et al. 2006); currently, there is no published literature where any other type of transmitter (e.g., implanted, tail-mounted) has been used on this species. Transmitter weight should be ≤ 180 g (6.3 oz). Due to the unique pattern of the throat patch in tayras (Villafañe-Trujillo et al. 2018), and depending on project objectives, it may not be necessary to use traditional tags (e.g., ear tags, passive integrated transponder [PIT] tags) to mark tayras for individual identification.

There may be some concerns about the use of radio-collars on tayras. For example, the persistent and tenacious behavior of the tayra, coupled with the small difference between the size of the neck and the head, may result in an individual removing the collar, potentially causing self-injury, or both. A female tayra monitored by Michalski et al (2006) removed its radio-collar, but it is unknown if injury occurred during removal. Researchers and managers should develop a capture and handling protocol for tayras and select the most appropriate type of transmitter for the species based on its size, behavior, and ecology (White and Garrott 1990). This could result in testing styles of transmitters other than collars.

Conservation

Tayras are classified as a species of Least Concern by the International Union for Conservation of Nature, but indicating their populations are decreasing (Cuarón et al. 2016). Although there is no research that supports this statement, the loss of biodiversity is cause for concern about tayra populations. The species has different protection and conservation classifications in the countries where it is distributed (Table 57.7).

Research Needs

Currently, the status of tayra populations is unknown across the Neotropics, but increases in protection of the reserves where the tayra occurs is necessary. In order to obtain ecological information of the species, it is appropriate to develop field surveys focused specifically on tayras, to obtain field data about home-range sizes, population status, habitat requirements, and other aspects that are important for informing conservation decisions and efforts.

Table 57.7. Classifications of conservation status of *tayra* (*Eira barbara*) in North and South America.

Country	Classification	Source
Argentina	Not evaluated	Ojeda et al. 2012
Belize	Vulnerable (C1)	Ministry of Natural Resources 1981
Bolivia	Not included on national list of endangered species	Ministerio de Medio Ambiente y Agua 2009
Brazil	Not included on list of threatened species of fauna	Instituto Chico Mendes de Conservação da Biodiversidade 2018
Colombia	Least concern	Cuartas-Calle and Marín-Cardona 2014
Costa Rica	Not included in national list of species in risk of extinction or with reduced populations	Ministerio de Ambiente y Energía 1997
Ecuador	Appendix III (Convention on International Trade in Endangered Species of Wild Fauna and Flora)	Tirira 2001
El Salvador	Risk of extinction	Ministerio de Medio Ambiente y Recursos Naturales 2015
French Guyana	National list of fully protected animals	Richard-Hansen and Hansen 2004
Guatemala	Vulnerable (C1)	Consejo Nacional de Áreas Protegidas 1996
Guyana	No specific classification	Government of Guyana 2016
Honduras	No specific classification	World Bank 2007
Panama	List of endangered or in risk species	Brenes et al. 1999
Paraguay	Least concern	Asociación Paraguaya de Mastozoología y Secretaría del Ambiente 2017
Peru	No specific classification	Ministerio del Ambiente 2018
Mexico	Risk of extinction	Secretaría de Medio Ambiente y Recursos Naturales 2010
Nicaragua	Not on national list of endangered species; protected by national law and permission required for export	Ministerio del Ambiente y Recursos Naturales 1996, Medina-Fitoria et al. 2018
Suriname	No specific classification	Ministry of Labour, Technological Development, and Environment 2006
Trinidad and Tobago	Not evaluated, national species inventory incomplete	Government of the Republic of Trinidad and Tobago 2013
Uruguay	Not on list of priority species for conservation	González et al. 2013
Venezuela	Not included in Red Book	Rodríguez and Rojas-Suárez 2008

The presence of tayras has been recorded outside of their known distribution, which should be considered for an updated distribution map of the species, and to identify the geographic distribution of each phenotype and genotype. Due to habitat loss throughout the Neotropics, it is necessary to develop and support conservation efforts to ensure persistence of populations of tayras through their distribution. Analysis of DNA collected from specimens throughout their distribution, especially from Mexico to Panama, is necessary to identify if those phenotypes belong to the same subspecies present in South America, or if there are different subspecies.

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LITERATURE CITED

- Adesiyun, A. A. 1999. Absence of *Escherichia coli* O157 in a survey of wildlife from Trinidad and Tobago. *Journal of Wildlife Diseases* 35:115–120. <https://doi.org/10.7589/0090-3558-35.1.115>
- Aguiar-Silva, F. H., O. Jaudoin, T. M. Sanaiotti, G. H. F. Seixas, S. Duleba, and F. D. Martins. 2017. Camera trapping at harpy eagle nests: interspecies interactions under predation risk. *Journal of Raptor Research* 51:72–78. <https://doi.org/10.3356/JRR-15-58.1>
- Albanesi, S. A., and J. P. Jayat. 2016. Patrones de actividad de mamíferos de medio y gran porte en el pedemonte de Yungas del noroeste Argentino. *Mastozoología Neotropical* 23:335–358.
- Allen, J. A. 1908. Mammals from Nicaragua. *Bulletin of the American Museum of Natural History* 24:647–670.
- Almeida, R. B., and G. Brito Melo. 1942. Contribuição ao estudo da *Tripanosomíase americana*. *Memorias do Instituto Oswaldo Cruz* 37:77–90.
- Almeida-Maués, P. C. R., A. S. Bueno, A. F. Palmeirim, C. A. Peres, and A. C. Mendes-Oliveira. 2022. Assessing assemblage-wide mammal responses to different types of habitat modification in Amazonian forests. *Scientific Reports* 12:1797. <https://doi.org/10.1038/s41598-022-05450-1>
- Amador-Alcalá, S., E. J. Naranjo, and G. Jiménez-Ferrer. 2013. Wildlife predation on livestock and poultry: implications for predator conservation in the rainforest of south-east Mexico. *Oryx* 47:243–250. <https://doi.org/10.1017/S0030605311001359>
- Aquino, R., E. Pezo, and I. Arévalo. 2022. Diversidad y amenazas de los mamíferos mayores en los bosques montanos de Huánuco, Perú. *Revista Peruana de Biología* 29(3):e22963. <https://doi.org/10.15381/rpb.v29i3.22963>
- Arias-Carrillo, C. 2022. Composición y patrones de actividad de aves del suelo y el sotobosque y mamíferos no voladores medianos y grandes en la zona Comejenes, en el área de restauración de bosque seco tropical de la Central Hidroeléctrica el Quimbo, Huila, Colombia. Thesis, Pontificia Universidad Javeriana, Bogota, Colombia.

- Arroyo-Arce, S., I. Thomson, C. Fernández, and R. Salom-Pérez. 2017. Relative abundance and activity patterns of terrestrial mammals in Pacuare Nature Reserve, Costa Rica. *UNED Research Journal* 9:15–21. <https://doi.org/10.22458/urj.v9i1.1673>
- Asensio, N., and F. Gómez-Marín. 2002. Interspecific interaction and predator avoidance behavior in response to tayra (*Eira barbara*) by mantled howler monkeys (*Alouatta palliata*). *Primates* 43:339–341. <https://doi.org/10.1007/BF02629607>
- Asociación Paraguaya de Mastozoología y Secretaría del Ambiente. 2017. Libro Rojo de los Mamíferos del Paraguay: especies amenazadas de extinción. Editorial CREATIO, Asunción, Paraguay.
- Avellino, R., S. Carrella, M. Pirozzi, M. Risolino, F. G. Salierno, P. Franco, P. Stoppelli, P. Verde, S. Banfi, and I. Conte. 2013. miR-204 targeting of Ankr13A controls both mesenchymal neural crest and lens cell migration. *PLoS ONE* 8(4):e61099. <https://doi.org/10.1371/journal.pone.0061099>
- Ayala, G. M., M. E. Viscarra, H. Ticona, and R. B. Wallace. 2022. El “Camino de la muerte” o de la vida silvestre: Relevamientos de fauna en el Parque Nacional y ANMI Cotapata (La Paz, Bolivia). *Ecología en Bolivia* 57:19–28.
- Barnett, A. A., T. de Oliveira, R. F. Soares da Silva, S. de Albuquerque Teixeira, P. Tomanek, L. M. Todd, and S. A. Boyle. 2018. Honest error, precaution or alertness advertisement? Reactions to vertebrate pseudopredators in red-nosed cuxiús (*Chiropotes albinasus*), a high-canopy neotropical primate. *Ethology* 124:177–187. <https://doi.org/10.1111/eth.12721>
- Barrio-Amorós, C., and R. A. Ojeda. 2015. *Iguana iguana* predation by tayras (*Eira barbara*). *Mesoamerican Herpetology* 2:112–114.
- Baskin, J. A. 1998. Mustelidae. Pages 152–173 in C. M. Janis, K. M. Scott, and L. L. Jacobs, editors. *Evolution of tertiary mammals of North America*. Volume 1: terrestrial carnivores, ungulates, and ungulate like mammals. Cambridge University Press, Cambridge, United Kingdom.
- Batista, G., N. Rascon, and C. Rosa. 2021. Vertebrados atropelados na BR-163, entorno da Floresta Nacional do Tapajós, Pará: influência dos padrões espaciais e climáticos. *Biodiversidade Brasileira* 12:200–219. <https://doi.org/10.37002/biobrasil.v12i1.1802>
- Bermúdez C., S. E., H. J. Esser, R. Miranda C., and R. S. Moreno. 2015. Wild carnivores (Mammalia) as hosts for ticks (Ixodida) in Panama. *Systematic and Applied Acarology* 20:13–19. <https://doi.org/10.11158/saa.20.1.2>
- Bezerra, B. M., A. A. Barnett, A. Souto, and G. Jones. 2009. Predation by the tayra on the common marmoset and the pale-throated three-toed sloth. *Journal of Ethology* 27:91–96. <https://doi.org/10.1007/s10164-008-0090-3>
- Bianchi, R. C., S. L. Mendes, and P. D. M. Júnior. 2010. Food habits of the ocelot, *Leopardus pardalis*, in two areas in southeast Brazil. *Studies on Neotropical Fauna and Environment* 45:111–119. <https://doi.org/10.1080/01650521.2010.514791>
- Bianchi, R., J. M. A. Jenkins, D. B. Lesmeister, J. A. Gouvea, C. S. Cesário, L. Fornitano, M. Y. de Oliveira, K. D. R. de Moraes, R. L. A. Ribeiro, and M. E. Gompper. 2021. Tayra (*Eira barbara*) landscape use as a function of cover types, forest protection, and the presence of puma and free-ranging dogs. *Biotropica* 53:1569–1581. <https://doi.org/10.1111/btp.13005>
- Bitetti, M. S. D., A. Paviolo, and C. D. Angelo. 2014. Camera trap photographic rates on roads vs. off roads: location does matter. *Mastozoología Neotropical* 21:37–46.
- Borrero, J. I. 1967. *Mamíferos neotropicales*. Thesis, Universidad del Valle, Cali, Colombia.
- Bovo, A. A. A., M. Magioli, A. R. Percequillo, C. Kruszynski, V. Alberici, M. A. R. Mello, L. S. Correa, J. C. Z. Gebin, Y. G. G. Ribeiro, F. B. Costa, V. N. Ramos, H. R. Benatti, B. Lopes, M. Z. A. Martins, T. R. Dimiz-Reis, P. B. de Camargo, M. B. Labruna, and K. M. P. M. B. Ferraz. 2018. Human-modified landscape acts as refuge for mammals in Atlantic forest. *Biota Neotropica* 18(2):e20170395. <https://doi.org/10.1590/1676-0611-BN-2017-0395>
- Bowler, M., D. Couceiro, R. Martinez, G. Orihuela, J. D. Shoobridge, E. Nycander, E. B. P. Miranda, and M. W. Tobler. 2020. Harpy eagles (*Harpia harpyja*) nesting at Refugio Amazonas, Tambopata, Peru feed on abundant disturbance-tolerant species. *Food Webs* 24:e00154. <https://doi.org/10.1016/j.fooweb.2020.e00154>
- Braga, K. C. L., M. Passamani, and C. Rosa. 2020. Daily tayra (*Eira barbara*, Linnaeus 1758) activity patterns and habitat use in high montane tropical forests. *Acta Oecologica* 108:103624. <https://doi.org/10.1016/j.actao.2020.103624>
- Brenes, O., A. Jimenez-Elizondo, V. Solis-Rivera, and L. Vilnitsky Strusberg. 1999. Listas de fauna de importancia para la conservación en Centroamérica y México: listas rojas, listas oficiales y especies en Apéndice CITES. International Union for the Conservation of Nature, Gland, Switzerland. <<https://portals.iucn.org/library/sites/library/files/documents/RL-72-001.pdf>>. Accessed 12 Feb 2024.
- Brosset, A. 1968. Observations sur l'éthologie du tayra *Eira barbara* (Carnivore). *La Terre et la vie* 114:29–50.
- Cabrera, A. 1958. Catálogo de los mamíferos de América del Sur. Volume 4. *Revista del Museo Argentino de Ciencias Naturales Bernardino Rivadavia*, Buenos Aires, Argentina.
- Caceres, N. C. 2011. Biological characteristics influence mammal road kill in an Atlantic Forest-Cerrado interface in south-western Brazil. *Italian Journal of Zoology* 78:379–389. <https://doi.org/10.1080/11250003.2011.566226>
- Camargo, M. R. 2021. Monitoramento da mastofauna de Médio e Grande Porte no Parque Estadual Rio Canoas no Município de Campos Novos/SC. Thesis, Universidade Federal de Santa Catarina, Florianópolis, Brazil.
- Camargo, C. C., and S. F. Ferrari. 2007. Interactions between tayras (*Eira barbara*) and red-handed howlers (*Alouatta belzebul*) in eastern Amazonia. *Primates* 48:147–150. <https://doi.org/10.1007/s10329-006-0009-y>
- Campos, Z., and G. Mourão. 2014. Camera traps capture images of predators of *Caiman crocodilus yacare* eggs (Reptilia: Crocodylia) in Brazil's Pantanal wetlands. *Journal of Natural History* 49:977–982. <https://doi.org/10.1080/00222933.2014.930757>
- Campos, Z., F. Muniz, A. L. J. Desbiez, and W. E. Magnusson. 2016. Predation on eggs of Schneider's dwarf caiman, *Paleosuchus trigonatus* (Schneider, 1807), by armadillos and other predators. *Journal of Natural History* 50:1543–1548. <https://doi.org/10.1080/00222933.2016.1155782>
- Canales-Pacheco, L. M. 2021. Patrones de actividad y abundancia de mamíferos en el bosque de las Comunas Dos Mangas y Loma Alta, Ecuador 2020–2021. Thesis, Universidad Estatal Península de Santa Elena Facultad de Ciencias del Mar, La Libertad Canton, Santa Elena Province, Ecuador.
- Ceballos, G. 2016. Observation of attempted predation of a woolly opossum (*Caluromys derbianus*) by a tayra (*Eira barbara*) during daylight in Belize. *Revista Mexicana de Mastozoología Nueva Época* 6:46–49. <https://doi.org/10.22201/ie.20074484e.2016.6.2.230>
- Cheida, C. C., E. Nakano-Oliveira, R. Fusco-Costa, F. Rocha-Mendes, and J. Quadros. 2011. Ordem carnívora. Pages 235–288 in N. R. Dos Reis, A. L. Peracchi, W. A. Pedro, and I. P. De Lima, editors. *Mamíferos do Brasil*. Second edition. Edição de autor, Londrina, Brazil.
- Cerna, C. I. G. 2021. Registro de mamíferos medianos y sus patrones de actividad en el bosque seco de montaña de Cascas, Gran Chimú, La Libertad, 2021. Thesis (Bachelor's), Universidad Nacional de Trujillo, Trujillo, Perú.
- Coelho, M., L. Juen, and A. C. Mendes-Oliveira. 2014. The role of remnants of Amazon savanna for the conservation of Neotropical mammal communities in eucalyptus plantations. *Biodiversity and Conservation* 23:3171–3184. <https://doi.org/10.1007/s10531-014-0772-9>
- Consejo Nacional de Áreas Protegidas. 1996. Lista roja de fauna silvestre para Guatemala (arañas, coleópteros, mariposas, peces, anfibios, reptiles, aves y mamíferos). *Diario de Centroamérica*. Resolución No. 27-96. Consejo Nacional de Áreas Protegidas, Nivel, Guatemala.
- Crawshaw, P. G. 1995. Comparative ecology of ocelot (*Felis pardalis*) and jaguar (*Panthera onca*) in a protected subtropical forest in Brazil and Argentina. Dissertation, University of Florida, Gainesville, Florida, USA.
- Cuarón, A. D., F. Reid, K. Helgen, and J. F. González-Maya. 2016. *Eira barbara*. The IUCN red list of threatened species 2016: e.T41644A45212151. International Union for the Conservation of Nature, Gland, Switzerland. <<https://www.iucnredlist.org/species/41644/45212151>>. Accessed 12 Feb 2024.

- Cuartas-Calle, C. A., and D. Marín Cardona. 2014. Guía ilustrada: mamíferos: Cañón del río Porce-Antioquia. Universidad de Antioquia, Medellín, Colombia.
- D'Ambrosio, D. N., R. D. Clugston, and W. S. Blaner. 2011. Vitamin A metabolism: an update. *Nutrients* 3:63–103. <https://doi.org/10.3390/nu3010063>
- da Silva, A. P., and A. R. Mendes Pontes. 2008. The effect of a mega-fragmentation process on large mammal assemblages in the highly-threatened Pernambuco Endemism Centre, north-eastern Brazil. *Biodiversity and Conservation* 17:1455–1464. <https://doi.org/10.1007/s10531-008-9353-0>
- Deane, L. M., and R. G. Damasceno. 1961. Tripanosomídeos de mamíferos da região Amazônica. II. Tripanosomas de macacos da zona do Salgado, Estado do Pará. *Revista do Instituto de Medicina Tropical de São Paulo* 3:61–70.
- Defler, T. R. 1980. Notes on interactions between the tayra (*Eira barbara*) and the white-fronted capuchin (*Cebus albifrons*). *Journal of Mammalogy* 61:156–156.
- de Luna, R. B., A. F. A. Reyes, L. R. R. de Lucena, and A. R. M. Pontes. 2017. Terrestrial mammal assemblages in protected and human impacted areas in northern Brazilian Amazonia. *Nature Conservation* 22:147–167. <https://doi.org/10.3897/natureconservation.22.17370>
- Derežanin, L., A. Blažytė, P. Dobrynin, D. A. Duchêne, J. H. Grau, S. Jeon, S. Kliver, K.-P. Koepfli, D. Meneghini, M. Preick, A. Tomarovsky, A. Totikov, J. Fickel, and D. Förster. 2022. Multiple types of genomic variation contribute to adaptive traits in the mustelid subfamily Guloninae. *Molecular Ecology* 31:2898–2919. <https://doi.org/10.1111/mec.16443>
- de Souza, J. C., R. M. da Silva, M. P. R. Gonçalves, R. J. D. Jardim, and S. H. Markwith. 2018. Habitat use, ranching, and human-wildlife conflict within a fragmented landscape in the Pantanal, Brazil. *Biological Conservation* 217:349–357. <https://doi.org/10.1016/j.biocon.2017.11.019>
- de Thoisy, B., J.-C. Michel, I. Vogel, and J.-C. Vie. 2000. A survey of hemoparasite infections in free-ranging mammals and reptiles in French Guiana. *Journal of Parasitology* 86:1035–1040. [https://doi.org/10.1645/0022-3395\(2000\)086\[1035:ASOIII\]2.0.CO;2](https://doi.org/10.1645/0022-3395(2000)086[1035:ASOIII]2.0.CO;2)
- de Thoisy, B., M. Demar, C. Aznar, and B. Carme. 2003a. Ecologic correlates of *Toxoplasma gondii* exposure in free-ranging neotropical mammals. *Journal of Wildlife Diseases* 39:456–459. <https://doi.org/10.7589/0090-3558-39.2.456>
- de Thoisy, B., J. Gardon, R. A. Salas, J. Morvan, and M. Kazanji. 2003b. Mayaro virus in wild mammals, French Guiana. *Emerging Infectious Diseases* 9:1326–1329. <https://doi.org/10.3201/eid0910.030161>
- de Thoisy, B., P. Dussart, and M. Kazanji. 2004. Wild terrestrial rainforest mammals as potential reservoirs for flaviviruses (yellow fever, dengue 2 and St Louis encephalitis viruses) in French Guiana. *Transactions of the Royal Society of Tropical Medicine and Hygiene* 98:409–412. <https://doi.org/10.1016/j.trstmh.2003.12.003>
- Dias, D. D. M., A. D. S. Ribeiro, A. Bocchiglieri, and T. C. Pereira. 2014. Diversidade de carnívoros (Mammalia: Carnivora) da Serra dos Macacos, Tobias Barreto, Sergipe. *Bioscience Journal* 30:1192–1204.
- Díaz, C. C. A. 2021. Caracterización de fauna silvestre en vías de segundo orden dentro de la Reserva de Biósfera Sumaco. Thesis, Pontificia Universidad Católica del Ecuador, Quito, Ecuador.
- Duszynski, D. W., L. Couch, and S. J. Upton. 2000. Coccidia (Eimeriidae) of Canidae and Felidae. NSF-PEET DEB, 9521687. <<http://eimeria.unl.edu/carniv1.html>>. Accessed 12 Feb 2024.
- Echavarría-Becerra, J. K. 2021. Diversidad y patrones de actividad de mamíferos medianos y grandes del Parque Natural Regional (PNR) Sisavita, Cucutilla, Colombia. Thesis, Universidad de Pamplona, Pamplona, Colombia.
- Emmons, L. H., and F. Freer. 1990. Neotropical rainforest mammals: a field guide. University of Chicago Press, Chicago, Illinois, USA.
- Encke, W. 1968. A note on the breeding and rearing of tayras *Eira barbara* at Krefeld Zoo. *International Zoo Yearbook* 8:132.
- Esser, H. J., E. A. Herre, R. Kays, Y. Liefing, and P. A. Jansen. 2019. Local host-tick coextinction in neotropical forest fragments. *International Journal for Parasitology* 49:225–233. <https://doi.org/10.1016/j.ijpara.2018.08.008>
- Estrada, A., A. Rivera, and R. Coates-Estrada. 2002. Predation of artificial nests in a fragmented landscape in the tropical region of Los Tuxtlas, Mexico. *Biological Conservation* 106:199–209. [https://doi.org/10.1016/S0006-3207\(01\)00246-4](https://doi.org/10.1016/S0006-3207(01)00246-4)
- Feijó, A., and A. Langguth. 2013. Mamíferos de médio e grande porte do nordeste do Brasil: distribuição e taxonomia, com descrição de novas espécies. *Revista Nordestina de Biologia* 22:3–225.
- Feijó, A., H. Nunes, and A. Langguth. 2016. Mamíferos da Reserva Biológica Guaribas, Paraíba, Brasil. *Revista Nordestina de Biologia* 24:57–74.
- Fernandes, G. E. 2022. Composição de mamíferos do Parque Estadual Lago Azul, Paraná. Thesis (Bachelor's), Universidade Tecnológica Federal do Paraná, Campo Mourao, Paraná, Brazil.
- Figueroa-de-León, A., E. J. Naranjo, H. Perales, A. Santos-Moreno, and C. Lorenzo. 2017. Abundance, density and habitat use of lowland paca (*Cuniculus paca*, Rodentia: Cuniculidae) in the Lacandon Rainforest, Chiapas, Mexico. *Therya* 8:199–208. <https://doi.org/10.12933/therya-17-460>
- Foresti, P. M. 2010. Avaliação da condição corporal, presença e identificação de ectoparasitos de carnívoros silvestres, com ênfase em canídeos, em áreas de influência da Usina Hidrelétrica de Barra Grande, sul do Brasil. Thesis, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil.
- Fornazari, F., H. Langoni, P. M. Marson, D. B. Nóbrega, and C. R. Teixeira. 2018. *Leptospira* reservoirs among wildlife in Brazil: beyond rodents. *Acta Tropica* 178:205–212. <https://doi.org/10.1016/j.actatropica.2017.11.019>
- Fort, J. L. 2016. Large carnivore occupancy and human-wildlife conflict in Panama. Thesis, Southern Illinois University, Carbondale, Illinois, USA.
- Fragoso, J. M. V., T. Levi, L. F. B. Oliveira, J. B. Luzar, H. Overman, J. M. Read, and K. M. Silvius. 2016. Line transect surveys underdetect terrestrial mammals: implications for the sustainability of subsistence hunting. *PLoS ONE* 11(4):e0152659. <https://doi.org/10.1371/journal.pone.0152659>
- Fuentes M., R. D., A. De Gracia C., H. Quintero-Arrieta, A. Baules, M. Miranda, and A. Batista. 2021. First mating report of tayra (*Eira barbara*) in the wild, in Panamá. *Therya Notes* 2:117–124. https://doi.org/10.12933/therya_notes-21-47
- Galef, B. G., R. A. Mittermeier, and R. C. Bailey. 1976. Predation by the tayra (*Eira barbara*). *Journal of Mammalogy* 57:760–761.
- Gallo-Viracocha, F., and C. Urgilés-Verdugo. 2022. Patrón de actividad y relaciones ecológicas del paujil nocturno en la Amazonía norte ecuatoriana. *Revista Mexicana de Biodiversidad* 93:e933991. <https://doi.org/10.22201/ib.20078706e.2022.93.3991>
- García-T, L. C., R. Guillen-M., and A. Savage. 2020. Inventario de mamíferos medianos y grandes en la reserva los Tities de San Juan, Montes de María, Bolívar, Colombia. *Mammalogy Notes* 6:154. <https://doi.org/10.47603/mano.v6n2.154>
- Gaumer, G. F. 1917. Monografía de los mamíferos de Yucatán. Departamento de talleres gráficos de la Secretaría de fomento, México. <https://doi.org/10.5962/bhl.title.15697>
- Gese, E. M., P. A. Terletzky, H. S. Cooley, F. F. Knowlton, and R. C. Lonsinger. 2024. Survey and monitoring methods for furbearers. Pages 15.1–15.44 in T. L. Hiller, R. D. Applegate, R. D. Bluett, S. N. Frey, E. M. Gese, and J. F. Organ, editors. *Wild furbearer management and conservation in North America*. Wildlife Ecology Institute, Helena, Montana, USA. <https://doi.org/10.59438/QXDE4827>
- Gonçalves, T. C., É. Branco, R. A. R. Rodrigues, S. M. Silva, E. G. Giese, L. M. Silva, R. M. Santos, and A. R. Lima. 2020. Papillary architecture in the tayra tongue. *Anatomia, Histologia, Embryologia* 49(6):351–358. <https://doi.org/10.1111/ah.12536>
- Gonçalves, T. C., D. F. de Sousa, M. P. E. Pinto, R. A. R. Rodrigues, E. G. Giese, É. Branco, and A. R. de Lima. 2022. Morphology of the male reproductive tract of *Eira barbara*. *Anatomia, Histologia, Embryologia* 51(3):390–399. <https://doi.org/10.1111/ah.12791>
- González, E. M., J. A. Martínez-Lanfranco, E. Juri, A. L. Rodales, G. Botto, and A. Soutullo. 2013. Mamíferos. Pages 175–207 in A. Soutullo, C. Clavijo, and J. A. Martínez-Lanfranco, editors. *Especies prioritarias para la conservación en Uruguay. vertebrados, moluscos continentales y plantas vasculares*. SNAP/DINAMA/MVOTMA y DICYT/MEC, Montevideo, Uruguay.

- González-Maya, J. F., D. Zárrate-Charry, I. M. Vela-Vargas, J. S. Jiménez-Alvarado, and D. Gómez-Hoyos. 2015. Activity patterns of tayra *Eira barbara* populations from Costa Rica and Colombia: evidence of seasonal effects. *Biodiversidad Neotropical* 5:96–104. <https://doi.org/10.18636/REBIONE02JD20152>
- Gopee, N. V., A. A. Adesiyun, and K. Caesar. 2000. Retrospective and longitudinal study of salmonellosis in captive wildlife in Trinidad. *Journal of Wildlife Diseases* 36:284–293. <https://doi.org/10.7589/0090-3558-36.2.284>
- Gotch, A. F. 1979. *Mammals: their Latin names explained: a guide to animal classification*. Blandford Press, Dorset, United Kingdom.
- Government of Guyana. 2016. *Wildlife conservation and management bill 2016*. Parliament of the Co-operative Republic of Guyana, Georgetown, Guyana. <<https://faolex.fao.org/docs/pdf/guy199414.pdf>>. Accessed 13 Feb 2024.
- Government of the Republic of Trinidad and Tobago. 2013. *National wildlife policy*. Convention on Biological Diversity, Ministry of Planning and Development, Port of Spain, Trinidad and Tobago. <https://www.biodiversity.gov.tt/images/stories/pdf/final_nwp.pdf>. Accessed 13 Feb 2024.
- Grotta-Neto, F., M. C. H. Mello, R. C. Mello, I. P. Bernardi, E. Carrano, and F. C. Passos. 2020. The role of tayra (*Eira barbara*) as predator of medium and large-sized mammals. *Austral Ecology* 46:329–333. <https://doi.org/10.1111/aec.12982>
- Gudinho, F. S., and M. Weksler. 2021. On the dental formulae of Brazilian terrestrial carnivora (Mammalia). *Anais Da Academia Brasileira de Ciências* 93(3):e20191384. <https://doi.org/10.1590/0001-37652021019384>
- Guedes, P. G., S. S. P. da Silva, A. R. Camardella, M. F. G. de Abreu, D. M. Borges-Nojosa, J. A. G. da Silva, and A. A. Silva. 2000. Diversidade de mamíferos do Parque Nacional de Uajará (Ceará, Brasil). *Mastozoologia Neotropical* 7:95–100.
- Guedes, J. J. M., C. L. Assis, R. N. Feio, and F. M. Quintela. 2021. The impacts of domestic dogs (*Canis familiaris*) on wildlife in two Brazilian hotspots and implications for conservation. *Animal Biodiversity and Conservation* 44.1:45–58. <https://doi.org/10.32800/abc.2021.44.0045>
- Guiracocha, G., C. Harvey, E. Somarriba, U. Krauss, and E. Carrillo. 2001. Conservación de la biodiversidad en sistemas agroforestales con cacao y banano en Talamanca, Costa Rica. *Agroforestería en las Américas* 8:7–11.
- Gumier-Costa, F., and C. F. Sperber. 2009. Atropelamentos de vertebrados na Floresta Nacional de Carajás, Pará, Brasil. *Acta Amazonica* 39:459–466. <https://doi.org/10.1590/S0044-59672009000200027>
- Hall, E. R. 1981. *The mammals of North America*. Second edition. John Wiley and Sons, New York, New York, USA.
- Hall, E. R., and W. W. Dalquest. 1963. The mammals of Veracruz. *University of Kansas Publications, Museum of Natural History* 14:165–362.
- Herán, I. 1971. Some notes on dentition in Mustelidae. *Vestník Československé Společnosti Zoologické* 35:199–204.
- Hernández-Hernández, J. C., A. Monter-Pozos, and R. Villegas-Patracá. 2019. Nuevos registros de tayra (*Eira barbara*) y ocelote (*Leopardus pardalis*) en una selva baja caducifolia de Yucatán, México. *Revista Mexicana de Mastozoología (Nueva Época)*, 9(2):55–62. <https://doi.org/10.22201/ie.20074484e.2019.9.2.289>
- Hernández-Sánchez, A., A. Santos-Moreno, and G. Pérez-Irineo. 2017. Abundance of mesocarnivores in two vegetation types in the southeastern region of Mexico. *Southwestern Naturalist* 62:101–108. <https://doi.org/10.1894/0038-4909-62.2.101>
- Herrera-Flores, B. G., D. Santos-Fita, E. J. Naranjo, and S. F. Hernández-Betancourt. 2019. Importancia cultural de la fauna silvestre en comunidades rurales del norte de Yucatán, México. *Peninsula* 14:27–55.
- Higgins, J. J., A. L. Tal, X. Sun, S. C. R. Hauck, J. Hao, B. E. Kosofosky, and A. M. Rajadhyaksha. 2010. Temporal and spatial mouse brain expression of cereblon, an ionic channel regulator involved in human intelligence. *Journal of Neurogenetics* 24:18–26. <https://doi.org/10.3109/01677060903567849>
- Hodge, A.-M. C., and B. S. Arbogast. 2016. Carnivore diversity at a montane rainforest site in Ecuador's Gran Sumaco Biosphere Reserve. *Oryx* 50:474–479. <https://doi.org/10.1017/S0030605315000101>
- Humboldt, A. V. 1812. Tableau synoptique des singes de l'Amérique. Pages 343–363 in A. V. Humboldt and A. Bonpland, editors. *Voyage aux régions équinoxiales du nouveau continent fait en 1799–1804*. Part II. Recueil d'observations de zoologie et d'anatomie comparée. Shoell, Paris, France.
- Instituto Chico Mendes de Conservação da Biodiversidade. 2018. *Livro vermelho da fauna Brasileira ameaçada de extinção*. Volume I. Diretoria de Pesquisa, Avaliação e Monitoramento da Biodiversidade, Coordenação Geral de Estratégias para Conservação, Brasília, Brazil.
- Joaquim, Y. T. 2021. Atividade de forrageamento de *Eira barbara* Linnaeus, 1758 (Carnivora: Mustelidae) em ambiente de Mata Atlântica, na encosta da Serra Geral, no sul de Santa Catarina. Course conclusion work presented to obtain the Degree of Bachelor of Biological Sciences, Universidade Do Extremo Sul Catarinense, Criciúma, Brazil.
- Jones, M. L. 1977. Longevity of mammals in captivity. *International Zoo News* 159:16–19.
- Justo, A. A., N. A. Garofalo, F. J. Teixeira-Neto, C. D. Freirias, S. L. Silva, and R. H. Pinho. 2021. Epidural anesthesia in *Eira barbara* Linnaeus, 1758 (Carnivora: Mustelidae). *Brazilian Journal of Biology* 81:495–496. <https://doi.org/10.1590/1519-6984.225891>
- Kaufmann, J. H., and A. Kaufmann. 1965. Observations of the behavior of tayras and grisons. *Zeitschrift für Säugetierkunde* 30:146–155.
- Kirkby, C. A., T. M. Doan, H. Lloyd, A. C. Farfán, W. A. Arriaga, and A. P. Marín. 2000. Tourism development and the status of Neotropical lowland wildlife in Tambopata, south-eastern Peru: recommendations for tourism and conservation. *Tambopata Reserve Society, Research and Monitoring Studies*, London, United Kingdom. <https://www.geocities.ws/chris_kirkby/kirkby_et_al_2000_tourism_and_wildlife_tambopata.pdf>. Accessed 12 Feb 2024.
- Koepfli, K.-P., K. A. Deere, G. J. Slater, C. Begg, K. Begg, L. Grassman, M. Lucherini, G. Veron, and R. K. Wayne. 2008. Multigene phylogeny of the Mustelidae: resolving relationships, tempo and biogeographic history of a mammalian adaptive radiation. *BMC Biology* 6:10. <https://doi.org/10.1186/1741-7007-6-10>
- Konecny, M. J. 1989. Movement patterns and food habits of four sympatric carnivore species in Belize, Central America. *Advances in Neotropical Mammalogy* 1989:243–264.
- Kottek, M., J. Grieser, C. Beck, B. Rudolf, and F. Rubel. 2006. World map of the Köppen-Geiger climate classification updated. *Meteorologische Zeitschrift* 15:259–263. <https://doi.org/10.1127/0941-2948/2006/0130>
- Kreeger, T. J. 2023. Chemical immobilization of furbearers. Pages 17.1–17.24 in T. L. Hiller, R. D. Applegate, R. D. Bluett, S. N. Frey, E. M. Gese, and J. F. Organ, editors. *Wild furbearer management and conservation in North America*. Wildlife Ecology Institute, Helena, Montana, USA. <https://doi.org/10.59438/ZBDW8772>
- Kreeger, T. J., and J. M. Arnemo. 1996. *Handbook of wildlife chemical immobilization*. International Wildlife Veterinary Services, Laramie, Wyoming, USA.
- Lamattina, D., J. M. Venzal, S. A. Costa, J. P. Arrabal, S. Flores, P. E. Berrozpe, D. González-Acuña, A. A. Guglielmo, and S. Nava. 2018. Ecological characterization of a tick community across a landscape gradient exhibiting differential anthropogenic disturbance in the Atlantic Forest ecoregion in Argentina. *Medical and Veterinary Entomology* 32:271–281. <https://doi.org/10.1111/mve.12295>
- Lessa, I., T. C. S. Guimarães, H. G. Bergallo, A. Cunha, and E. M. Vieira. 2016. Domestic dogs in protected areas: a threat to Brazilian mammals? *Natureza and Conservação* 14:46–56. <https://doi.org/10.1016/j.ncon.2016.05.001>
- Lima, A. L. de S. N., T. C. Gonçalves, É. R. Branco, R. A. R. Rodrigues, E. G. Giese, D. C. do Carmo, J. T. Santos, and A. R. de Lima. 2018. Morphology of the stomach of tayra (*Eira barbara*). *Acta Scientiae Veterinariae* 46(1):6. <https://doi.org/10.22456/1679-9216.84087>
- Linnaeus, C. 1758. *Systema naturae*. Tenth edition. Laurentii Salvii, Stockholm, Sweden.

- Lonnberg, E. 1913. Mammals from Ecuador and related forms. *Arkiv Zoologi* 8:1–36.
- López-González, C. A., and D. R. Aceves-Lara. 2007. Noteworthy record of the tayra (Carnivora: Mustelidae: *Eira barbara*) in the Sierra Gorda Biosphere Reserve, Querétaro, México. *Western North American Naturalist* 67:150–151.
- Machado, D. A. F. 1950. Revisão do gênero *Prosthenocheilus* Travassos, 1915 (Acanthocephala). *Memórias do Instituto Oswaldo Cruz* 48:495–544. <https://doi.org/10.1590/S0074-02761950000100020>
- Maffei, L., E. Cuéllar, and A. J. Noss. 2002. Uso de trampas-cámara para la evaluación de mamíferos en el Ecotono Chaco-Chiquitania. *Revista Boliviana de Ecología y Conservación Ambiental* 11:55–65.
- Mares, M. A., R. A. Ojeda, and R. M. Barquez. 1989. Guide to the mammals of Salta Province, Argentina. University of Oklahoma Press, Norman, Oklahoma, USA.
- Marín, P. P., A. Vega-Cambronero, L. I. López, and J. M. Mora. 2022. Riqueza, abundancia relativa y actividad de los mamíferos de una reserva en restauración en Costa Rica. *UNED Research Journal* 14(2):e4210. <https://doi.org/10.22458/urj.v14i2.4210>
- Matos, D. D. 2018. Colour variation of tayra *Eira barbara* (Carnivora, Mustelidae) in the Caatinga Biome, north-eastern Brazil. *Small Carnivore Conservation* 56:42–47.
- Medina-Fitoria, A., O. A. Saldaña T., Y. Aguirre, W. Silva, F. Díaz, S. Hernández, C. Jordan, C. Cappello, M. Salazar, M. Chávez, J. G. Martínez, A. Gutiérrez, R. Medellín, and F. Reid. 2018. Libro rojo de los mamíferos de Nicaragua. *Revista Nicaragüense de Biodiversidad* 30:1–85.
- Melo-Dias, M., J. F. A. Huatuco, M. A. Arizapana-Almonacid, M. I. Castañeda-Tinco, F. Chanamé, J. U. Ninahuamán, and M. Passamani. 2022. Living at the top of the forest line: Medium and large mammals in a high-mountain ecotone in Peruvian Central Andes. *Biota Neotropica* 22(2):e20211307. <https://doi.org/10.1590/1676-0611-BN-2021-1307>
- Mena, J. L., H. Yagui, V. Tejeda, J. Cabrera, J. Pacheco-Esquivel, J. Rivero, and P. Pastor. 2020. Abundance of jaguars and occupancy of medium- and large-sized vertebrates in a transboundary conservation landscape in the northwestern Amazon. *Global Ecology and Conservation* 23:e01079. <https://doi.org/10.1016/j.gecco.2020.e01079>
- Mena-Valenzuela, P. R. 1999. Importancia económica de los mamíferos en tres etnia del Ecuador. *Biología, sistemática y conservación de los Mamíferos del Ecuador Publicación Especial* 1:199–207.
- Mendes-Pontes, A. R., V. M. G. Layme, W. E. Magnusson, and L. C. Marigo. 2010. Mamíferos de médio e grande porte de roraima, extremo norte da Amazônia Brasileira. Pages 603–629 in R. I. Barbosa and V. F. Melo, editors. *Roraima: homem, ambiente e ecologia*. Fundação Estadual do Meio Ambiente, Ciência e Tecnologia, Boa Vista, Roraima, Brazil.
- Mendes-Oliveira, A. C., C. A. Peres, P. C. R. de A. Maués, G. L. Oliveira, I. G. B. Mineiro, S. L. S. de Maria, and R. C. S. Lima. 2017. Oil palm monoculture induces drastic erosion of an Amazonian forest mammal fauna. *PLoS ONE* 12(11):e0187650. <https://doi.org/10.1371/journal.pone.0187650>
- Mendonça-Lopes, P. R., M. C. de Castro, E. Guilherme, and A. S. Hsiou. 2019. Anatomical review of *Eira barbara* (Carnivora, Mustelidae) from the Quaternary of Southwestern Brazilian Amazonia. *Revista Brasileira de Paleontologia* 22:217–224. <https://doi.org/10.4072/rbp.2019.3.04>
- Michalski, F., P. G. Crawshaw, T. G. de Oliveira, and M. E. Fabián. 2006. Notes on home range and habitat use of three small carnivore species in a disturbed vegetation mosaic of southeastern Brazil. *Mammalia* 70:52–57. <https://doi.org/10.1515/MAMM.2006.004>
- Ministerio de Ambiente y Energía. 1997. Lista de especies de fauna silvestre con poblaciones reducidas y en peligro de extinción para Costa Rica. Ministerio de Ambiente y Energía Decreto No 26435-MINAE, San Juan, Costa Rica. <https://leap.unep.org/en/countries/cr/national-legislation/decreto-n-26435-minae-reglamento-la-ley-de-conservaci-n-de-la>. Accessed 13 Feb 2024.
- Ministerio de Medio Ambiente y Agua. 2009. Libro rojo de la fauna silvestre de vertebrados de Bolivia. Ministerio de Medio Ambiente y Agua, La Paz, Bolivia. <https://www.nationalredlist.org/publication/libro-rojo-de-la-fauna-silvestre-de-vertebrados-de-bolivia>. Accessed 13 Feb 2024.
- Ministerio de Medio Ambiente y Recursos Naturales. 2015. Acuerdo número 74. Gobierno de El Salvador, San Salvador, El Salvador. https://www.mag.gov.sv/wp-content/uploads/2021/06/12acuerdo_no_74_listado_oficial_de_especies_de_vida_silvestre_amenazadas.pdf. Accessed 13 Feb 2024.
- Ministerio del Ambiente. 2018. Listado de especies de fauna silvestre CITES-Perú. Dirección General de Diversidad Biológica, Lima, Perú. https://cdn.www.gob.pe/uploads/document/file/475307/Listado_Flora_CITES_Per%C3%BA_2018.pdf?v=1617631144. Accessed 13 Feb 2024.
- Ministerio del Ambiente y Recursos Naturales. 1996. Listado de especies Nicaragüenses de fauna amenazadas o en peligro de extinción y que son objeto de regulación especial por parte del Estado (Apéndices CITES). Ministerio del Ambiente y Recursos Naturales, Managua, Nicaragua.
- Ministry of Labour, Technological Development, and Environment. 2006. National biodiversity strategy. Ministry of Labour, Technological Development and Environment, Paramaribo, Suriname. <https://www.cbd.int/doc/world/sr/sr-nbsap-01-en.pdf>. Accessed 13 Feb 2024.
- Ministry of Natural Resources. 1981. Wildlife Protection Act, 1981. Ministry of Natural Resources, Republic of Belize, Belmopan, Belize. https://www.sica.int/busqueda/busqueda_archivo.aspx?Archivo=leys_7193_1_28032006.pdf. Accessed 13 Feb 2024.
- Miranda, J. S. D. 2022. Mamíferos neotropicais (médio e grande porte) no sudoeste Goiano: registro do padrão de atividades diárias, em fragmentos do cerrado. Thesis, Instituto Federal de Educação, Ciência e Tecnologia Goiano, Rio Verde, Goiás, Brazil.
- Morales-García, J. J., A. D. Morales-García, and J. M. Chame-Cruz. 2016. Registros del tayra (*Eira barbara* Linneaus 1758) en el estado de Hidalgo, México. *Revista Mexicana de Mastozoología Nueva época* 6:24–28. <https://doi.org/10.22201/ie.20074484e.2016.6.1.218>
- Nahuat-Cervera, P. E., I. A. Estrada-Riaño, F. Peraza-Romero, M. O. Uitzil-Colli, R. A. Basora-Dorantes, and S. de los Á. Buenfil-Morales. 2021. Conocimiento y aprovechamiento tradicional de vertebrados silvestres en la comunidad maya de Zavala, municipio de Sothuta, Yucatán, México. *Estudios de Cultura Maya* 57:275–304. <https://doi.org/10.19130/iifl.ecm.57.2021.18660>
- Naughton-Treves, L., J. L. Mena, A. Treves, N. Alvarez, and V. C. Radeloff. 2003. Wildlife survival beyond park boundaries: the impact of slash-and-burn agriculture and hunting on mammals in Tambopata, Peru. *Conservation Biology* 17:1106–1117. <https://doi.org/10.1046/j.1523-1739.2003.02045.x>
- Nehring, A. 1886. Beitrage zur kenntniss der Galictis-arten. *Zoologische Jahrbuch* 1:177–212.
- Noronha, D., J. J. Vicente, and R. M. Pinto. 2002. A survey of new host records for nematodes from mammals deposited in the Helminthological Collection of the Oswaldo Cruz Institute (CHIOC). *Revista Brasileira de Zoologia* 19:945–949. <https://doi.org/10.1590/S0101-81752002000300032>
- Obando, T. J. M. 2022. Configuración espacial y ecológica del atropellamiento de fauna silvestre en vías periurbanas de los Andes colombianos (Envigado, Valle de Aburrá, Colombia). Thesis, Universidad Nacional de Colombia, Bogotá, Colombia.
- Ojeda, R. A., V. Chillo, and G. D. Isenrath, editors. 2012. Libro rojo de mamíferos amenazados de la Argentina. Sociedad Argentina para el Estudio de los Mamíferos, Argentina. <https://www.nationalredlist.org/publication/libro-rojo-de-los-mamiferos-amenazados-de-la-argentina>. Accessed 13 Feb 2024.
- Oliveira-Filho, E. F., J. W. P. Júnior, M. M. A. Souza, V. L. A. Santana, J. C. R. Silva, R. A. Mota, and F. B. Sá. 2012. Serologic survey of brucellosis in captive neotropical wild carnivores in northeast Brazil. *Journal of Zoo and Wildlife Medicine* 43:384–387.
- Ortiz-Pineda, M. C., M. O. Pulido-Medellín, and D. J. García-Corredor. 2019. Identificación de parásitos gastrointestinales en mamíferos del Zoológico Guatika (Tibasosa, Colombia). *Pensamiento y Acción* 26:31–34.
- Ouboter, P. E., and V. S. Kadosoe. 2016. Three years of continuous monitoring of the large terrestrial mammals of Brownsberg Nature Park, Suriname. *Academic Journal of Suriname* 7:643–660.

- Pabón-Vargas, M. D. 2021. Protocolo de seguridad en caso de escape de mamíferos por medio de restricción física y química en el CA-CEARFS de la CDMB. Thesis, Universidad Cooperativa de Colombia, Bucaramanga, Colombia.
- Padilla-Gómez, E., J. Santiago-Velazco, M. Lavariega, and A. Ramírez-Bautista. 2019. Noteworthy records of jaguar (*Panthera onca*), tayra (*Eira barbara*), and paca (*Cuniculus paca*) from southern Mexico. *Notas Sobre Mamíferos Sudamericanos* 1(1):1–10. <https://doi.org/10.31687/saremNMS.19.0.13>
- Paiz, L. M., F. Fornazari, B. D. Menozzi, G. C. Oliveira, C. J. Coiro, C. R. Teixeira, V. M. C. da Silva, M. R. Donalizio, and H. Langoni. 2015. Serological evidence of infection by *Leishmania (Leishmania) infantum* (Synonym: *Leishmania (Leishmania) chagasi*) in free-ranging wild mammals in a nonendemic region of the State of São Paulo, Brazil. *Vector-Borne and Zoonotic Diseases* 15:667–673. <https://doi.org/10.1089/vbz.2015.1806>
- Panizzon, P., and W. S. Azevedo-Filho. 2019. Estudo comportamental de *Eira barbara* (Carnivora: Mustelidae) em condições de cativeiro. *Revista Interdisciplinar de Ciência Aplicada* 4(8):23–30.
- Paula R. C., C. B. Campos, and R. G. Morato. 2011. Mastofauna da Bacia Hidrográfica do Rio São Francisco. Pages 266–281 in *Diagnóstico do macrozoneamento ecológico-econômico da Bacia Hidrográfica do Rio São Francisco*. Ministério do Meio Ambiente, Brasília, Brazil.
- Pavlin, B. I., L. M. Schloegel, and P. Daszak. 2009. Risk of importing zoonotic diseases through wildlife trade, United States. *Emerging Infectious Diseases* 15:1721–1726. <https://doi.org/10.3201/eid1511.090467>
- Pereira L. G., and L. Geise. 2009. Non-flying mammals of Chapada Diamantina (Bahia, Brazil). *Biota Neotropica* 9:185–196.
- Pérez-Irineo, G., A. Hernández-Sánchez, and A. Santos-Moreno. 2021. Effect of anthropogenic activity on mammal activity patterns in two ecosystems. *Mammalia* 85:336–344. <https://doi.org/10.1515/mammalia-2020-0084>
- Pimentel, J. S., S. M. Gennari, J. P. Dubey, M. F. V. Marvulo, S. A. Vasconcelos, Z. M. Morais, J. C. R. Silva, and J. Evêncio-Neto. 2009. Inquérito sorológico para toxoplasmose e leptospirose em mamíferos selvagens neotropicais do Zoológico de Aracaju, Sergipe. *Pesquisa Veterinária Brasileira* 29:1009–1014. <https://doi.org/10.1590/S0100-736X2009001200010>
- Piña, T. E. N., W. D. Carvalho, L. M. C. Rosalino, and R. R. Hilário. 2019. Drivers of mammal richness, diversity and occurrence in heterogeneous landscapes composed by plantation forests and natural environments. *Forest Ecology and Management*, 449:117467. <https://doi.org/10.1016/j.foreco.2019.117467>
- Pocock, R. I. 1921. On the external characters and classification of the Mustelidae. *Proceedings of the Zoological Society of London* 91:803–837. <https://doi.org/10.1111/j.1096-3642.1921.tb03292.x>
- Poglayen-Neuwall, I. 1975. Copulatory behavior, gestation and parturition of the tayra. *Zeitschrift für Säugetierkunde* 40:176–189.
- Poglayen-Neuwall, I. 1978. Breeding, rearing and notes on the behaviour of tayras. *International Zoo Yearbook* 18:134–140. <https://doi.org/10.1111/j.1748-1090>
- Poglayen-Neuwall, I., and I. Poglayen-Neuwall. 1976. Postnatal development of tayras (Carnivora: *Eira barbara* L., 1758). *Zoologische Beiträge* 22:345–405.
- Poglayen-Neuwall, I., B. S. Durrant, M. L. Swansen, R. C. Williams, and R. A. Barnes. 1989. Estrous cycle of the tayra, *Eira barbara*. *Zoo Biology* 8:171–177. <https://doi.org/10.1002/ZOO.1430080208>
- Prado, H. M., L. C. Forline, and R. Kipnis. 2012. Hunting practices among the Awá-Guajá: towards a long-term analysis of sustainability in an Amazonian indigenous community. *Boletim do Museu Paraense Emílio Goeldi. Ciências Humanas* 7:479–491. <https://doi.org/10.1590/S1981-81222012000200010>
- Presley, S. J. 2000. *Eira barbara*. *Mammalian Species* 636:1–6. [https://doi.org/10.1644/1545-1410\(2000\)636<0001:EB>2.0.CO;2](https://doi.org/10.1644/1545-1410(2000)636<0001:EB>2.0.CO;2)
- Qureshi, T., C. Sørensen, P. Berghuis, V. Jensen, M. B. Dobszay, T. Farkas, K. T. Dalen, C. Guo, B. Hassel, T. P. Utheim, Ø. Hvalby, T. Hafting, T. Harkany, M. Fyhn, and F. A. Chaudhry. 2019. The glutamine transporter Slc38a1 regulates GABAergic neurotransmission and synaptic plasticity. *Cerebral Cortex* 29:5166–5179. <https://doi.org/10.1093/cercor/bhz005>
- Racero-Casarrubia, J., and J. Ballesteros-Correa. 2019. Percepción y uso de mamíferos silvestres por las comunidades locales en el entorno al embalse de la central hidroeléctrica Urrá i, Córdoba, Colombia. *Revista Etnobiología* 17:20–32. <https://revistaetnobiologia.mx/index.php/etno/article/view/64/62>. Accessed 13 Feb 2024.
- Ramírez, O. E. B. 2011. Nuevos registros de tayra (*Eira barbara* Linnaeus 1758) en Puebla, centro de México. *Acta Zoológica Mexicana* 27:883–886.
- Ray, C. E., E. Anderson, and S. D. Webb. 1981. The Blancan carnivore *Trigonictis* (Mammalia: Mustelidae) in the eastern United States. *Brimleyana* 5:1–36.
- Renner, M. S., W. Bryant, and G. A. Kennedy. 1998. Fibrocartilaginous emboli in a tayra (*Eira barbara*): a case report. *Journal of Zoo and Wildlife Medicine* 29:470–473.
- Richard-Hansen, C., and E. Hansen 2004. Hunting and wildlife management in French Guiana: current aspects and future prospects. Pages 400–410 in K. M. Silvius, R. E. Bodmer, and J. M. V. Fragoso, editors. *People in nature: wildlife conservation in South and Central America*. Columbia University Press, New York, New York, USA. <https://doi.org/10.7312/silv12782-025>
- Richini-Pereira, V. B., S. de M. Gimenes-Bosco, J. Griesse, R. Cordeiro-Theodoro, S. A. da Graça-Macoris, R. J. da Silva, L. Barrozo, P. M. e Silva-Tavares, R. M. Zancopé-Oliveira, and E. Bagagli. 2008. Molecular detection of *Paracoccidioides brasiliensis* in road-killed wild animals. *Medical Mycology* 46:35–40. <https://doi.org/10.1080/13693780701553002>
- Richini-Pereira, V. B., P. M. Marson, E. Hayasaka, C. Victoria, R. C. da Silva, and H. Langoni. 2014. Molecular detection of *Leishmania* spp. in road-killed wild mammals in the central western area of the State of São Paulo, Brazil. *Journal of Venomous Animals and Toxins including Tropical Diseases* 20:27. <https://doi.org/10.1186/1678-9199-20-27>
- Richini-Pereira, V. B., P. M. Marson, R. C. da Silva, and H. Langoni. 2016. Genotyping of *Toxoplasma gondii* and *Sarcocystis* spp. in road-killed wild mammals from the central western Region of the State of São Paulo, Brazil. *Revista da Sociedade Brasileira de Medicina Tropical* 49:602–607. <https://doi.org/10.1590/0037-8682-0270-2016>
- Rocha, J. S., F. C. Gonçalves-Bomfim, and C. S. São Bernardo. 2015. Importância da reserva biológica de una na conservação de mamíferos da Mata Atlântica do Sul da Bahia. XII Congresso de Ecologia Do Brasil, São Lourenço, Brasil. <https://www.seb-ecologia.org.br/revistas/indexar/anais/xiiceb/pdf/539.pdf>. Accessed 13 Feb 2024.
- Rocha, D. G., E. E. Ramalho, and W. E. Magnusson. 2016. Baiting for carnivores might negatively affect capture rates of prey species in camera-trap studies. *Journal of Zoology* 300:205–212. <https://doi.org/10.1111/jzo.12372>
- Rodríguez, J. P., and F. Rojas-Suárez, editors. 2008. *Libro rojo de la fauna Venezolana. Tercera Edición*. Provita y Shell Venezuela, S.A., Caracas, Venezuela. <https://indico.ictp.it/event/a08145/session/58/contribution/37/material/3/0.pdf>. Accessed 13 Feb 2024.
- Rodríguez, O., J., J. S. Bohórquez, O. G. Raigozo, and A. Clavijo. 2020. Evento de depredación de Venado Soche (Mazama Rufina, Pucheran, 1851) por taira (*Eira barbara* Linnaeus, 1758) en el Parque Nacional Natural Chingaza, Colombia. *Mammalogy Notes* 6(2):169. <https://doi.org/10.47603/mano.v6n2.169>
- Roopsind, A., T. T. Caughlin, H. Sambhu, J. M. V. Fragoso, and F. E. Putz. 2017. Logging and indigenous hunting impacts on persistence of large Neotropical animals. *Biotropica* 49:565–575. <https://doi.org/10.1111/btp.12446>
- Ruiz-García, M., N. Lichilín-Ortiz, and M. F. Jaramillo. 2013. Molecular phylogenetics of two Neotropical carnivores, *Potos flavus* (Procyonidae) and *Eira barbara* (Mustelidae): no clear existence of putative morphological subspecies. Pages 37–84 in L. H. Soibelzon, H., F. Prevosti, M. Ruiz, and J. Shostell, editors. *Molecular population genetics, evolutionary biology, and biological conservation of Neotropical carnivores*. Nova Science Publishers, Hauppauge, New York, USA.
- Ruiz-Gutiérrez, F., E. Vázquez-Arroyo, and C. Chávez. 2017. Range expansion of a locally endangered mustelid (*Eira barbara*) in southern Mexico. *Western North American Naturalist* 77:408–413. <https://doi.org/10.3398/064.077.0301>

- Rumiz, D. I., C. Eulert, and R. Arispe. 1998. Evaluación de la diversidad de mamíferos medianos y grandes en el Parque Nacional Carrasco (Cochabamba-Bolivia). *Revista Boliviana de Ecología y Conservación Ambiental* 4:77–90.
- Saavedra, S. D. T. 2021. Análisis de diversidad de mamíferos medianos y grandes en la reserva de Yum Balam y su área de influencia en Quintana Roo, México. Thesis (Bachelor's), Universidad Michoacana de San Nicolás de Hidalgo, Morelia, Michoacán, México. <https://labc-inirena.mx/wp-content/uploads/2022/08/Tesis_Diana-2021_pg.pdf>. Accessed 16 Feb 2024.
- Sáenz-Bolaños, C., V. Montalvo, E. Carrillo, and T. K. Fuller. 2018. *Tayra (Eira barbara)* predation of a brown-throated three-toed sloth (*Bradypus variegatus*) in Costa Rica. *Edentata* 19:70–73. <http://dx.doi.org/10.2305/IUCN.CH.2018.Edentata-19-1.10.en>
- Sánchez, O., M. A. Pineda., H. Benítez., H. Berlanga, and E. Rivera-Téllez. 2015. Guía de identificación para las aves y mamíferos silvestres de mayor comercio en México protegidos por la CITES, 2a. Edición, Volumen 2: MAMÍFEROS. Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT)-Comisión Nacional Para el Conocimiento y Uso de la Biodiversidad (CONABIO), Ciudad de México, México.
- Sánchez-Porras, R., L. Brenes-Cambonero, K. Chavarría-Esquível, and Y. Mejías-Vásquez. 2021. Abundancia relativa, diversidad y patrones de actividad de mamíferos terrestres medianos y grandes, sendero Pájaro Sombrilla, Reserva Biológica Alberto Manuel Brenes, Alajuela, Costa Rica. *Pensamiento Actual* 21(36):37–57. <https://doi.org/10.15517/PA.V21136.47014>
- Santos, F. M., W. T. G. Barreto, G. C. de Macedo, J. H. da S. Barros, S. C. das C. Xavier, C. M. Garcia, G. Mourão, J. de Oliveira, A. R. Rimoldi, G. E. de O. Porfírio, G. B. de Andrade, L. Perles, M. R. André, A. M. Jansen, and H. M. Herrera. 2019. The reservoir system for *Trypanosoma* (Kinetoplastida, Trypanosomatidae) species in large neotropical wetland. *Acta Tropica* 199:105098. <https://doi.org/10.1016/j.actatropica.2019.105098>
- Schiaffini, M. I. 2020. Are subspecies (of *Eira barbara*) real? *Journal of Mammalogy* 101:1410–1425. <https://doi.org/10.1093/jmammal/gyaa105>
- Schiaffini, M. I. 2022. Distribution patterns of South American mustelids (Carnivora: Mustelidae). *Journal of Mammalogy* 103:900–919. <https://doi.org/10.1093/jmammal/gyac020>
- Secretaría de Medio Ambiente y Recursos Naturales. 2010. Norma Oficial Mexicana NOM-059-ECOL-2001, Protección ambiental-Especies nativas de México de flora y fauna silvestres-categorías de riesgo y especificaciones para su inclusión, exclusión o cambio-Lista de especies en riesgo. Diario Oficial de la Federación, Ciudad de México, México. <<https://www.biodiversidad.gob.mx/pdf/NOM-059-ECOL-2001.pdf>>. Accessed 13 Feb 2024.
- Scrich, V. M., M. C. Pônzio, N. Pasqualotto, T. F. Rodrigues, R. M. Paolino, and A. G. Chiarello. 2019. Occurrence of tayras (*Eira barbara* Linnaeus, 1758) with anomalous coloration in Cerrado remnants in the state of São Paulo, Brazil. *Biota Neotropica* 19(3). <https://doi.org/10.1590/1676-0611-bn-2018-0680>
- Silveira-Miranda, J. E., A. dos Santos, W. Fernandes de Souza, and D. Blamires. 2021. Atropelamento de animais silvestres na rodovia go-060 entre Iporá e Arenópolis, estado de Goiás. *Brazilian Journal of Development*, 7:51664–51671.
- Soley, F. 2012. Notes on the flexibility of foraging behaviour in tayras *Eira barbara*. *Small Carnivore Conservation* 46:33–35.
- Soley, F. G., and I. Alvarado-Díaz. 2011. Prospective thinking in a mustelid? *Eira barbara* (Carnivora) cache unripe fruits to consume them once ripened. *Naturwissenschaften* 98:693–698. <https://doi.org/10.1007/s00114-011-0821-0>
- Solórzano, C. B., L. Intriago-Alcívar, and J. Guerrero-Casado. 2021. Comparison between terrestrial mammals in evergreen forests and in seasonal dry forests in western Ecuador: should efforts be focused on dry forests? *Mammalia* 85:306–314. <https://doi.org/10.1515/mammalia-2020-0145>
- Sousa, M. A. N., A. Langguth, and E. G. Amaral. 2004. Mamíferos dos brejos de altitude de Paraíba e Pernambuco. Pages 229–254 in K. C. Porto, J. J. P. Cabral, and M. Tabarelli, editors. Brejos de altitude em Pernambuco e Paraíba: história natural, ecologia e conservação. Ministério do Meio Ambiente Universidade, Federal de Pernambuco, Brasília, Brazil. <<https://www.terrabrasil.org.br/ecotecadigital/pdf/brejos-de-altitude-em-pernambuco-e-paraiba-.pdf>>. Accessed 13 Feb 2024.
- Stachowicz, I., J. R. Ferrer-Paris, M. Quiroga-Carmona, L. Moran, and C. Lozano. 2020. Baseline for monitoring and habitat use of medium to large non-volant mammals in Gran Sabana, Venezuela. *Therya* 11:169–179. <https://doi.org/10.12933/therya-20-891>
- Stafford, B. J., and F. M. Ferreira. 1995. Predation attempts on callitrichids in the Atlantic coastal rain forest of Brazil. *Folia Primatologica* 65:229–233.
- Sunquist, M. E., F. Sunquist, and D. E. Daneke. 1989. Ecological separation in a Venezuelan llanos carnivore community. *Advances in Neotropical Mammalogy* 1997:197–232.
- Talamoni, S., P. I. M. Viana, C. G. Costa, L. Palú, R. B. Oliveira, and L. M. Pessôa. 2017. Occurrence of leucism in *Eira barbara* (Carnivora, Mustelidae) in Brazil. *Biota Neotropica* 17:e20170328. <https://doi.org/10.1590/1676-0611-bn-2017-0328>
- Tallei, E., A. Schaaf, L. Rivera, and N. Politi. 2021. Tayra behavior preying on a cavity nest in the subtropical forest of the Southern Yungas. *Food Webs* 27:e00190. <https://doi.org/10.1016/j.fooweb.2021.e00190>
- Tedford, R. H., L. B. Albright III, A. D. Barnosky, I. Ferrusquia-Villafranca, R. M. Hunt, Jr., J. E. Storer, C. C. Swisher III, M. R. Voorhies, S. D. Webb, and D. P. Whistler. 2004. Mammalian biochronology of the Arikarean through Hemphillian interval (late Oligocene through early Pliocene epochs). Pages 169–231 in M. O. Woodburne, editor. Late Cretaceous and Cenozoic mammals of North America. Columbia University Press, New York, New York, USA. <https://doi.org/10.7312/wood13040-008>
- Tello, J. 1979. Mamíferos de Venezuela. Fundación La Salle de Ciencias Naturales, Caracas, Venezuela.
- Terán-Sánchez, S., A. Díaz-Arango, H. F. Arias-Monsalve, and H. E. Ramírez-Chaves. 2021. New records of mammals of the Coffee Region, Central Andes of Colombia using citizen science. *Neotropical Biology and Conservation*, 16:27–43. <https://doi.org/10.3897/neotropical.16.e57932>
- Thomas, O. 1900. The geographical races of the tayra (*Galictis barbara*), with notes on abnormally coloured individuals. *Annals and Magazine of Natural History* 7:145–148.
- Tirira, S. D., editor. 2001. Libro rojo de los mamíferos del Ecuador. 1ra ed. Serie libros rojos del Ecuador, Tomo 1. SIMBIOE/EcoCiencia/ Ministerio del Ambiente/UICN, Quito, Ecuador. <https://www.researchgate.net/profile/Diego-Tirira/publication/315793476_Libro_Rojo_de_los_mamiferos_del_Ecuador/links/58e573de45851547e17f7c07/Libro-Rojo-de-los-mamiferos-del-Ecuador.pdf>. Accessed 13 Feb 2024.
- Tobler, M. W., S. E. Carrillo-Percastegui, R. Leite-Pitman, R. Mares, and G. Powell. 2008. An evaluation of camera traps for inventorying large- and medium-sized terrestrial rainforest mammals. *Animal Conservation* 11:169–178. <https://doi.org/10.1111/j.1469-1795.2008.00169.x>
- Torres-Castro, M. A., R. A. Medina-Pinto, H. R. Noh-Pech, F. I. Puerto, and R. I. Rodríguez-Vivas. 2019. Molecular identification of *Toxoplasma gondii* in roadkill wild animals in Yucatan, Mexico. *Veterinaria México* 6:1–9. <https://doi.org/10.22201/fmvz.24486760e.2019.1.511>
- Tseng, Z. J., X. Wang, and J. D. Stewart. 2009. A new immigrant mustelid (Carnivora, Mammalia) from the middle Miocene Temblor Formation of central California. *PaleoBios* 29:13–23. <https://doi.org/10.5070/P9291021804>
- Trill, T. S. 1821. Account of the *Lutra vittata*, and of the *Viverra poliocephalus*. *Memoirs of the Wernerian Natural History Society* 3:437–441.
- Travassos, L. 1917. Contribuições para o conhecimento da fauna helmintológica brasileira: VII espécies brasileiras do gênero *Thelazia* Bosc, 1819. *Revista do Museu Paulista* 10:215–230.

- Uribe, J., and H. T. Arita. 1998. Distribución, diversidad y conservación de los mamíferos de Importancia Cinegetica en México. *Acta Zoológica Mexicana (Nueva Serie)* 75:45–71. <https://doi.org/10.21829/azm.1998.75751707>
- Vaughan, R. 1974. Breeding the tayra (*Eira barbara*) at Antelope Zoo, Lincoln. *International Zoo Yearbook* 14:120–122.
- Venturini, T. S., A. L. Gonçalves, and L. S. dos Santos. 2016. Predation attempt and abnormal coat coloration of the tayra (*Eira barbara*) in the Brazilian Central Amazon. *Studies on Neotropical Fauna and Environment* 51:231–234. <https://doi.org/10.1080/01650521.2016.1227137>
- Vera-Marques, R., A. S. Fernández-Montejo, and Á. J. Villafaña-Trujillo. 2021. Abnormal tooth and home range size of a male tayra (*Eira barbara*) in Atlantic Rain Forest, South Brazil. *Therya Notes* 2:171–175. https://doi.org/10.12933/therya_notes-21-57
- Vernes, K., and F. Devos. 2022. Use of cenotes and the cave environment by mammals on the Yucatán Peninsula, Mexico. *Biotropica* 54:881–892. <https://doi.org/10.1111/btp.13111>
- Vicente, J. J., H. D. O. Rodrigues, D. C. Gomes, and R. M. Pinto. 1997. Nematóides do Brasil. Parte V: nematóides de mamíferos. *Revista Brasileira de Zoologia* 14:1–452. <https://doi.org/10.1590/S0101-81751997000500001>
- Vicente-Corrêa, T. C., L. Modesto-Mendes, K. J. V. de Melo-Barbosa, and F. Rodrigues de Melo. 2021. Medium and large-sized mammals in Private Natural Heritage Reserves in the Quadrilátero Ferrífero of Minas Gerais, Brazil. *Neotropical Biology and Conservation* 16:383–396. <https://doi.org/10.3897/neotropical.16.e62189>
- Vieira, F. M., J. L. Luque, and L. C. Muniz-Pereira. 2008. Checklist of helminth parasites in wild carnivore mammals from Brazil. *Zootaxa* 1721:1–23. <https://doi.org/10.5281/zenodo.181136>
- Villafaña-Trujillo, Á. J., C. A. López-González, and J. M. Kolowski. 2018. Throat patch variation in tayra (*Eira barbara*) and the potential for individual identification in the field. *Diversity* 10(7):1–23. <https://doi.org/10.3390/d10010007>
- Villafaña-Trujillo, Á. J., J. M. Kolowski, M. V. Cove, E. P. Medici, B. J. Harmsen, R. J. Foster, M. G. Hidalgo-Mihart, S. Espinosa, G. Ríos-Alvear, C. Reyes-Puig, J. P. Reyes-Puig, M. Xavier da Silva, A. Paviolo, P. Cruz, and C. A. López-González. 2021. Activity patterns of tayra (*Eira barbara*) across their distribution. *Journal of Mammalogy* 102:772–788. <https://doi.org/10.1093/jmammal/gyaa159>
- Viscarra, M. E., G. M. Ayala, H. Ticona, and R. B. Wallace. 2022. Relative abundance and activity patterns of mesomammals in central Andes. *Therya* 13:265–275. <https://doi.org/10.12933/therya-22-1175>
- Wagner, F. A., M. B. Ramos-Neto, L. Silveira, and A. T. Jacomo. 2003. Human transportation network as ecological barrier for wildlife on Brazilian Pantanal-Cerrado corridors. Pages 181–194 in C. L. Irwin, P. Garrett, and K. P. McDermott, editors. *Proceedings of the 2003 International Conference on Ecology and Transportation*. Center for Transportation and the Environment, North Carolina State University, Raleigh, North Carolina, USA.
- White, G. C., and R. A. Garrott. 1990. *Analysis of wildlife radio-tracking data*. Academic Press, San Diego, California, USA.
- Whiteman, C. W., E. R. Matushima, U. E. C. Confalonieri, M. das D. C. Palha, A. do S. L. da Silva, and V. C. Monteiro. 2007. Human and domestic animal populations as a potential threat to wild carnivore conservation in a fragmented landscape from the eastern Brazilian Amazon. *Biological Conservation* 138:290–296. <https://doi.org/10.1016/j.biocon.2007.04.013>
- Widmer, C. E., M. L. L. Perilli, E. R. Matushima, and F. C. C. Azevedo. 2017. Live-trapping ocelots (*Leopardus pardalis*): traps, baits, injuries, immobilization and costs. *Biota Neotropica* 17(1):e20150125. <https://doi.org/10.1590/1676-0611-BN-2015-0125>
- World Bank. 2007. Republic of Honduras, country environmental analysis. World Bank, Sustainable Development Department, Latin America and the Caribbean Region, Tegucigalpa, Honduras.