

= *Lagidium ahuacaense* =

Lagidium ahuacaense is a rodent in the mountain viscacha genus (*Lagidium*) that occurs in southern Ecuador . First observed in 2005 and formally described in 2009 , it occurs more than 500 km (310 mi) north of the nearest previously known population of mountain viscachas in central Peru . Only a single population is known , found on rocky habitats on Cerro El Ahuaca , an isolated granite mountain in southern Ecuador , and there may be as little as a few dozen individuals . The species is threatened by fires and grazing cattle , and the discoverers recommended its conservation status be assessed as " Critically Endangered " .

= = Taxonomy = =

Lagidium ahuacaense was first observed in July 2005 , when the only known population was encountered at Cerro El Ahuaca , Ecuador , over 500 km (310 mi) north of the northernmost previously known population of mountain viscachas (*Lagidium*) in central Peru . The find was published in a 2006 note by Florian Werner , Karim Ledesma , and Rodrigo Hidalgo , who provisionally identified the population as representing the Peruvian species *Lagidium peruanum* , but did not discount the possibility that it might represent a distinct species . Three years later , Ledesma , Werner , Ángel Spotorno , and Luis Albuja described the population as a new species , *Lagidium ahuacaense* , on the basis of morphological and DNA sequence differences . The specific name , *ahuacaense* , refers to Cerro de Ahuaca . They suggested the English common name of " Ecuadorean mountain viscacha " .

Lagidium ahuacaense was the fourth species of the genus *Lagidium* to be described , after *L. peruanum* , *L. viscacia* , and *L. wolffsohni* of the central and southern Andes , although more species may eventually be recognized within *L. peruanum* and *L. viscacia* and *L. wolffsohni* is poorly differentiated from *L. viscacia* . Together with the plains viscacha (*Lagostomus maximus*) and the chinchillas (*Chinchilla*) , *Lagidium* forms the rodent family Chinchillidae . Within *Lagidium* , *L. ahuacaense* differs by at least 7 @. @ 9 % from all other species in DNA sequences of the mitochondrial cytochrome b gene . A cladistic analysis placed the Ecuadorian species as the sister group to all other *Lagidium* , but support for this placement was not strong . Morphometric analysis also confirmed the Ecuadorian population is different from other *Lagidium* species .

= = Description = =

Lagidium ahuacaense is a medium @- @ sized *Lagidium* with woolly , gray @- @ brown fur and a very long tail . There is a black stripe on the middle of the back . The thick , long mystacial vibrissae (whiskers above the mouth) are mostly dark brown and the few superciliary vibrissae (above the eyes) are also thick and brown . The ears are covered with dark skin . The underparts are creamy white . The forefeet are brown @- @ furred and much shorter than the hind feet , which are in covered in part by a mixture of brown and cream hairs and in part by dark brown hairs . The fore and hind feet both have four digits , which end in small , curved claws , and three black pads . The palms and soles are naked . The tail is hairy with the hairs on the upper side longer than those below . The upper side is gray @- @ brown at the base , light to medium brown intermixed with cream in the middle , and reddish brown at the tip , and the lower side is dark brown . In the single measured specimen , head and body length is 403 mm (15 @. @ 9 in) , tail length is 400 mm (16 in) , hindfoot length is 85 mm (3 @. @ 3 in) , ear length is 60 mm (2 @. @ 4 in) , and body mass is 2 @. @ 03 kg (4 @. @ 5 lb) .

The skull is long and compact . The premaxillary bones extend slightly in front of the upper incisors and the zygomatic arches (cheekbones) are broad . The suture between the premaxillary and frontal bones is more strongly curved than in *L. peruanum* and the rostrum (front part of the skull) is wider and the interorbital region (between the eyes) is narrower than in *L. viscacia* and *L. wolffsohni* . The incisive foramina (openings in the front part of the palate) are long and narrow . The palate extends back to a point close to the upper third molar . The sides of the mesopterygoid

fossa (the opening behind the back margin of the palate) are more strongly divergent than in other *Lagidium* species . The mandible (lower jaw) is strong . The dental formula is $1 \frac{1}{1} 0 \frac{1}{1} 1 \frac{1}{1} 3 \times 2 = 20$ (one incisor , one premolar , and three molars on each side of the upper and lower jaws) . The incisors are large , white , and distinctly grooved . The molars are low crowned and rootless (continuously growing) .

= = Ecology and conservation status = =

Lagidium ahuacaense is known only from Cerro El Ahuaca , a steep granite inselberg near Cariamanga in Loja Province , southern Ecuador , where it occurs at an altitude of 1 950 to 2 480 m (6 400 to 8 140 ft) , but only near rocky surfaces . The vegetation is dominated by the molasses grass (*Melinis minutiflora*) . They eat plants and traces of their feeding are visible on the mountain . Its habitat on Cerro El Ahuaca covers an area of about 120 hectares (300 acres) , and the total population there may not contain more than a few dozen individuals . Except for some small outcrops close to the Cerro , no nearby habitat is suitable , but more populations may exist elsewhere in southern Ecuador or nearby northern Peru .

The species is threatened by fires , used to maintain crop fields in the vicinity , which frequently get out of control and destroy part of the viscacha 's habitat on the Cerro , and by competition for food with grazing cattle . However , the species is unknown to the local people and is not hunted . In view of its small range and population , Ledesma and colleagues recommended the species be assessed as " Critically Endangered " under the IUCN Red List criteria and recommended immediate conservation action to protect the Cerro El Ahuaca population and further research into its biology .