

= *Thomasomys ucucha* =

*Thomasomys ucucha* , also known as the *ucucha thomasomys* , is a rodent in the genus *Thomasomys* of the family Cricetidae . Found only in the Cordillera Oriental of Ecuador , a mountain range , it lives in forests and grasslands at 3 @, @ 380 to 3 @, @ 720 m ( 11 @, @ 090 to 12 @, @ 200 ft ) above sea level . It may occur with seven other species of *Thomasomys* . First collected in 1903 , *Thomasomys ucucha* was formally described in 2003 and most closely resembles *T. hylophilus* , which occurs further to the north . Habitat destruction may threaten *T. ucucha* , so that it is listed as " Vulnerable " on the IUCN Red List .

Medium @-@ sized , dark @-@ furred , and long @-@ tailed , *Thomasomys ucucha* can be distinguished from all other species of *Thomasomys* by its large , broad , procumbent upper incisors . Head and body length is 94 to 119 mm ( 3 @. @ 7 to 4 @. @ 7 in ) and body mass is 24 to 46 g ( 0 @. @ 85 to 1 @. @ 62 oz ) . The tail is scarcely furred . The front part of the skull is flat , short , and broad . The incisive foramina , openings at the front of the palate , are short , and the palate itself is broad and smooth . The root of the lower incisor is contained in a prominent capsular process .

= = Taxonomy = =

The first three specimens of *Thomasomys ucucha* were collected in 1903 at Tablón in Pichincha Province , Ecuador , by L. Söderström . It was not found again until Robert S. Voss of the American Museum of Natural History collected a total of forty @-@ three specimens at nearby Papallacta , Napo Province , in 1978 and 1980 . Papallacta is in a remote area that is difficult to access , and the mammal fauna of the region remains poorly known . In 2003 , he formally described the animal as a new species , *Thomasomys ucucha* , in a publication in *American Museum Novitates* in which he also reviewed the mammal fauna of Papallacta . The generic name , *Thomasomys* , honors English zoologist Oldfield Thomas , who named about 2 @, @ 900 taxa of mammals , and the specific name , *ucucha* , is the local Quechua word for " mouse " . *T. ucucha* most closely resembles *T. hylophilus* , which is found further north in Colombia and Venezuela . Both are members of *Thomasomys* , a diverse genus that occurs in the northern Andes , from Bolivia to Venezuela . Together with *Rhipidomys* and a few other , smaller genera , *Thomasomys* forms the tribe Thomasomyini , which includes over fifty species found in South America and Panama . Thomasomyini in turn is part of the subfamily Sigmodontinae of the family Cricetidae , along with hundreds of other species of mainly small rodents .

= = Description = =

*Thomasomys ucucha* is a medium @-@ sized *Thomasomys* with a relatively long tail . The dense , fine , and soft fur is dark brown on the upperparts , changing gradually into the grey underparts . The mystacial vibrissae ( whiskers above the mouth ) are long and extend beyond the ears when laid back against the head . Sparse short , dark hairs are present on the ears . The digits and metapodials ( bones of the centers of the hand and feet ) of the hands and feet are covered with dark hairs , but the ungual tufts at the bases of the claws consist of longer , gray hairs . The fifth digit of the foot is long , with the tip of its claw almost reaching the base of the claw of the fourth digit . The tail is dark and hardly furred , except for a pencil of long hairs at the end ; some animals have a white tail tip . Females have six mammae . In thirty @-@ six specimens , head and body length is 94 to 119 mm ( 3 @. @ 7 to 4 @. @ 7 in ) , averaging 110 mm ( 4 @. @ 3 in ) ; tail length is 122 to 151 mm ( 4 @. @ 8 to 5 @. @ 9 in ) , averaging 140 mm ( 5 @. @ 5 in ) ; hindfoot length is 26 to 30 mm ( 1 @. @ 0 to 1 @. @ 2 in ) , averaging 28 mm ( 1 @. @ 1 in ) ; ear length is 17 to 20 mm ( 0 @. @ 67 to 0 @. @ 79 in ) , averaging 18 mm ( 0 @. @ 71 in ) ; and weight is 24 to 46 g ( 0 @. @ 85 to 1 @. @ 62 oz ) , averaging 36 g ( 1 @. @ 3 oz ) .

The front ( rostral ) part of the skull is short ? shorter and broader than in *T. hylophilus* ? and flat and the notches in the zygomatic plates at the sides are poorly developed . The plates themselves are broad . The zygomatic arches ( cheekbones ) spread broadly and are rounded in shape . The

narrow interorbital region ( between the eyes ) is hourglass @-@ shaped . The braincase is robust .

The incisive foramina , which perforate the palate between the incisors and the molars , are short and do not reach near the first molars ; they are longer in *T. hylophilus* . They are widest where the premaxillary and maxillary bones meet . The palate itself is also short , not extending beyond the third molars , and is broad and lacks ridges or grooves . There are simple posterolateral palatal pits at the back of the palate , near the third molars . The mesopterygoid fossa , an opening located behind the end of the palate , is broad and its roof is either fully ossified or perforated by small sphenopalatine vacuities where the presphenoid and basisphenoid bones meet . An alisphenoid strut separates two foramina ( openings ) at the base of the skull , the buccinator @-@ masticatory foramen and the foramen ovale accessorium . The pattern of grooves and foramina on the head indicates that the circulation of the arteries in the head of *T. ucucha* follows the primitive pattern . The tegmen tympani , the roof of the tympanic cavity , overlaps the suspensory process of the squamosal bone . At the back of the mandible ( lower jaw ) , there is a capsular process to receive the root of the lower incisor , which is absent in *T. hylophilus* .

The large upper incisors are orthodont , with their cutting edge at about a right angle to the upper molars , and heavily pigmented with orange . Those of *T. hylophilus* are narrower , less procumbent , and less pigmented . The orthodont upper incisors suffice to distinguish *T. ucucha* from all other members of the genus but *T. australis* and *T. daphne* , which have much shorter and narrower incisors . The left and right molar rows are parallel . The molars are more hypsodont ( high @-@ crowned ) than in other *Thomasomys* . The anterocone , the cusp at the front of the first upper molar , is divided into distinct cuspules at the lingual ( inner ) and labial ( outer ) sides by an anteromedian flexus . The accessory ridges on the upper molars , the anterolophs and mesolophs , are less well @-@ developed than in *T. hylophilus* . The third upper molar is reduced relative to the second , much more so than in *T. hylophilus* . The lower molars are generally similar to the uppers , but the anteroconid ( the equivalent of the anterocone on the first lower molar ) is often undivided and the third molar is unreduced .

The glans penis is rounded , short , and small and is superficially divided into left and right halves by a trough at the top and a ridge at the bottom . Most of the glans is covered with penile spines , except for an area near the tip .

#### = = Distribution and ecology = =

*Thomasomys ucucha* occurs only in the Cordillera Oriental of Ecuador in the provinces of Pichincha and Napo . At Papallacta , *Thomasomys ucucha* was collected in a variety of habitats at 3 @, @ 380 to 3 @, @ 720 m ( 11 @, @ 090 to 12 @, @ 200 ft ) altitude , including páramo ( high @-@ mountain grassland with shrubs and forest patches ) and subalpine rainforest . Most were taken in runways ( paths through vegetation made by animals ) and a few alongside small streams or on a low tree . Other muroid rodents found at the same places as *T. ucucha* include two akodontines ( grass mice ) , *Akodon latebricola* and *Akodon mollis* ; two ichthyomyines ( water rats ) , *Anotomys leander* and *Neusticomys monticolus* ; two oryzomyines ( rice rats ) , *Microryzomys altissimus* and *M. minutus* ; the thomasomyine *Chilomys instans* ; and five other species of *Thomasomys* , *T. aureus* , *T. baeops* , *T. cinnamomeus* , *T. erro* , and *T. paramorum* . Other species have been recorded nearby , and Voss wrote that *T. ucucha* may occur sympatrically with seven other species of *Thomasomys* . With *Akodon latebricola* and *Thomasomys erro* , *T. ucucha* is one of three species that are known only from the northeastern Andes of Ecuador .

#### = = Conservation status = =

*Thomasomys ucucha* is locally common , but has a very limited known distribution . Its conservation status has been assessed as " Vulnerable " by the IUCN because of its small distribution ; it may be threatened by the destruction of its habitat for agricultural purposes , but occurs near two protected areas .