

= Voalavo antsahabensis =

*Voalavo antsahabensis*, also known as the eastern voalavo, is a rodent in the family Nesomyidae which occurs in the Anjozorobe forest of eastern Madagascar. Although surveys before 2002 failed to record the species, it is common in some places. However, it is threatened by habitat loss because of slash-and-burn agriculture. The species was formally described in 2005 and is most closely related to the only other species of *Voalavo*, *Voalavo gymnocaudus* from northern Madagascar.

The two species of *Voalavo* are only subtly different in morphology. With a body mass of 20 g to 22 g (0.73 to 0.8 oz), *V. antsahabensis* is a small rodent. It has a longer tail than *V. gymnocaudus*, as well as a longer rostrum (front part of the skull) and diastema (gap between the incisors and molars), but shorter molar rows. The two species also differ in details of the configuration of the palate.

= Taxonomy =

*Voalavo antsahabensis* was first recorded in 2002, when three individuals were captured in Madagascar's Anjozorobe forest. In 2005, the species was formally described by Steven Goodman and colleagues as *Voalavo antsahabensis*, the second species in the genus *Voalavo*. The only previously known species, *Voalavo gymnocaudus*, occurs further to the north, in the Northern Highlands. The sequences of the cytochrome b gene differ by about 10% in these two species. The specific name, *antsahabensis*, derives from the name of the village of Antsahabe, which is near the place where the holotype was found. The common name "Eastern Voalavo" has been used for this species.

= Description =

Species of *Voalavo* are small rodents with a delicate skull and without a tuft at the tip of the tail (as present in the closely related genus *Eliurus*). *V. antsahabensis* is similar to *V. gymnocaudus* and differs only in subtle characters. The tail is shorter in *V. antsahabensis*, but the head and body is slightly longer, as is the ear. However, the latter two apparent contrasts may be the result of differences in measurement technique. In both species, the final 25 to 30 mm (1 to 1.2 in) of the tail are covered with white hairs. In three specimens of *V. antsahabensis*, head and body length ranges from 88 to 91 mm (3.5 to 3.6 in), tail length is 106 to 114 mm (4.2 to 4.5 in), hindfoot length 19 to 20 mm (0.75 to 0.79 in), ear length 15 to 16 mm (0.59 to 0.63 in), and body mass 20 g to 22 g (0.73 to 0.8 oz).

In the skull, *Voalavo antsahabensis* has a significantly longer rostrum (the front part of the skull) and diastema (the gap between the incisors and the molars). Furthermore, *V. antsahabensis* has shorter molar rows in both the upper and lower jaws. The back end of the incisive foramina (openings in the front part of the palate), which is located in front of the first molars, is rounded in *V. antsahabensis*, but angular in *V. gymnocaudus*. The sutures of the maxillary and palatine bones (the line where the two bones, part of the skull, join) are straight and parallel to each other, the toothrows, and the midline of the skull in *V. antsahabensis*; in *V. gymnocaudus*, in contrast, they are more curved. Statistical analysis of measurements of the skull and teeth clearly separates the two species of *Voalavo*.

= Distribution and ecology =

*Voalavo antsahabensis* is only known from the forests at Anjozorobe, on the eastern margin of Madagascar's Central Highlands. Among the specimens found in 2002, two were captured at 1425 m (4680 ft) altitude on a *Uapaca densifolia* branch, about 1 m (4 ft) over the ground, in moist montane forest, and a third was caught on the ground at 1275 m (4180 ft).

altitude . This last specimen , a male , had its testicles located in the scrotum , and therefore was reproductively mature , even though its skull bones were not completely fused , indicating it was not yet osteologically mature . Before it was collected in 2002 , the species was not recorded in earlier biological surveys of Anjozorobe , taking place in 1977 ? 1986 and 1996 ; whether this is because the animal is difficult to collect , because its abundance varies from year to year , or because its distribution is patchy is unknown . Goodman and colleagues argued on the basis of this example that rapid surveys may not necessarily yield complete inventories of the fauna of an area . Later surveys in 2005 and 2006 did find it at several other sites in the region , at some of which it was abundant . Anjozorobe is about 450 km ( 280 mi ) from the nearest occurrence of *V. gymnocaudus* , and most of the intervening area contains montane forest . However , this forest zone is bisected by the low @-@ lying Mandritsara Window , which may serve as a barrier between the two species of Voalavo .

= = Conservation status = =

*Voalavo antsahabensis* is listed as " Endangered " on the IUCN Red List because of its small , vulnerable range ; the Anjozorobe forest is threatened by the practice of slash @-@ and @-@ burn agriculture ( tavy ) . However , its habitat has been designated as a protected area , the Couloir Forestier d 'Anjozorobe @-@ Angavo .