

# New species of Hero Shrew found in equatorial Africa

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Scientists at Chicago's Field Museum and international collaborators have described a new species of Hero Shrew – the mammal with the most bizarre lower spine on Earth. The interlocking vertebrae of the Hero Shrew render the spine four to five times more robust relative to body mass, a condition not found in any other mammal. The spine has been an enigma to evolutionary biologists, with no known adaptive significance.

This new species of Hero Shrew, named *Scutisorex thori*, possesses features that may represent intermediate character states between the only other known Hero Shrew species (*Scutisorex somereni*), and other shrews. In addition, a novel hypothesis for the function of the animal's expanded lower spine has been proposed. The study will be published July 24, 2013 edition of *Biology Letters*.

First discovered in 1910, the Hero Shrew's most notable feature was not revealed for another seven years, when a specimen was dissected to reveal the most peculiar backbone of any [mammal](#). The remarkable spine of the Hero Shrew is unique among mammals, in that the lower [vertebrae](#) have multiple lateral processes that interlock with the processes of neighboring vertebra. The arrangement, along with surrounding [musculature](#), affords the animal extraordinary strength, so much so that the Hero Shrew has traditionally been worn as a talisman.

"This shrew first came to light when explorers came to the eastern part of the Democratic Republic of Congo," said Bill Stanley, Director of

Collections and zoologist at the Field Museum. "The explorers watched in amazement as a full-grown man stood on the back of the Hero Shrew, and the animal walked away, unharmed."

Until now, there have been no other species of this bizarre shrew. The new species described in this study represents a possible intermediate between the original Hero Shrew and other shrews, since it possesses an interlocking spine, but with fewer lower vertebrae and lateral processes than the first Hero Shrew species.

"You and I have five lumbar vertebrae," said Stanley. "And so do most other mammals, but the Hero Shrew at least 10. *Scutisorex thori* has eight vertebrae, and fewer lateral processes than the original species."

The specimen of the new Hero Shrew species was collected in the lowland forest near the Tshuapa River in the Democratic Republic of Congo. Based on the observations of one of the co-authors on the study, the authors present a novel hypothesis for the functional significance of the spine of *Scutisorex thori*; they suggest that these shrews position themselves between the trunk and leaf bases of Palms, and use their unique spine to exert force and gain access to concentrated sources of beetle larvae that are otherwise protected from predation. The same adaptation may allow these animals to lift logs or rocks to access invertebrates – a food resource that remains unavailable to many other mammals.

The specimen of *Scutisorex thori* now residing at The Field Museum is a holotype, meaning that it will be the standard for identifying other members of the species. The new [species](#) is named in honor of Thorvald "Thor" Holmes, Jr. of the Humboldt State University Vertebrate Museum, at the suggestion of Bill Stanley, who did his graduate work there. The suggested common name is "Thor's Hero Shrew", appropriately invoking Thor, the god of strength in Norse mythology.

"The Age of Discovery is not over," said Stanley. "In fact, discoveries such as these happen in natural history collections, like the ones that we have at The Field Museum. In addition, hypotheses such as the one that we've generated concerning the functional significance of the Hero Shrew's [spine](#) fuel the scientific machine. We can't wait to see the results of further scientific studies that test the ideas presented in this article."

Provided by Field Museum

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