

New species of extremely leggy millipede discovered in a cave in California

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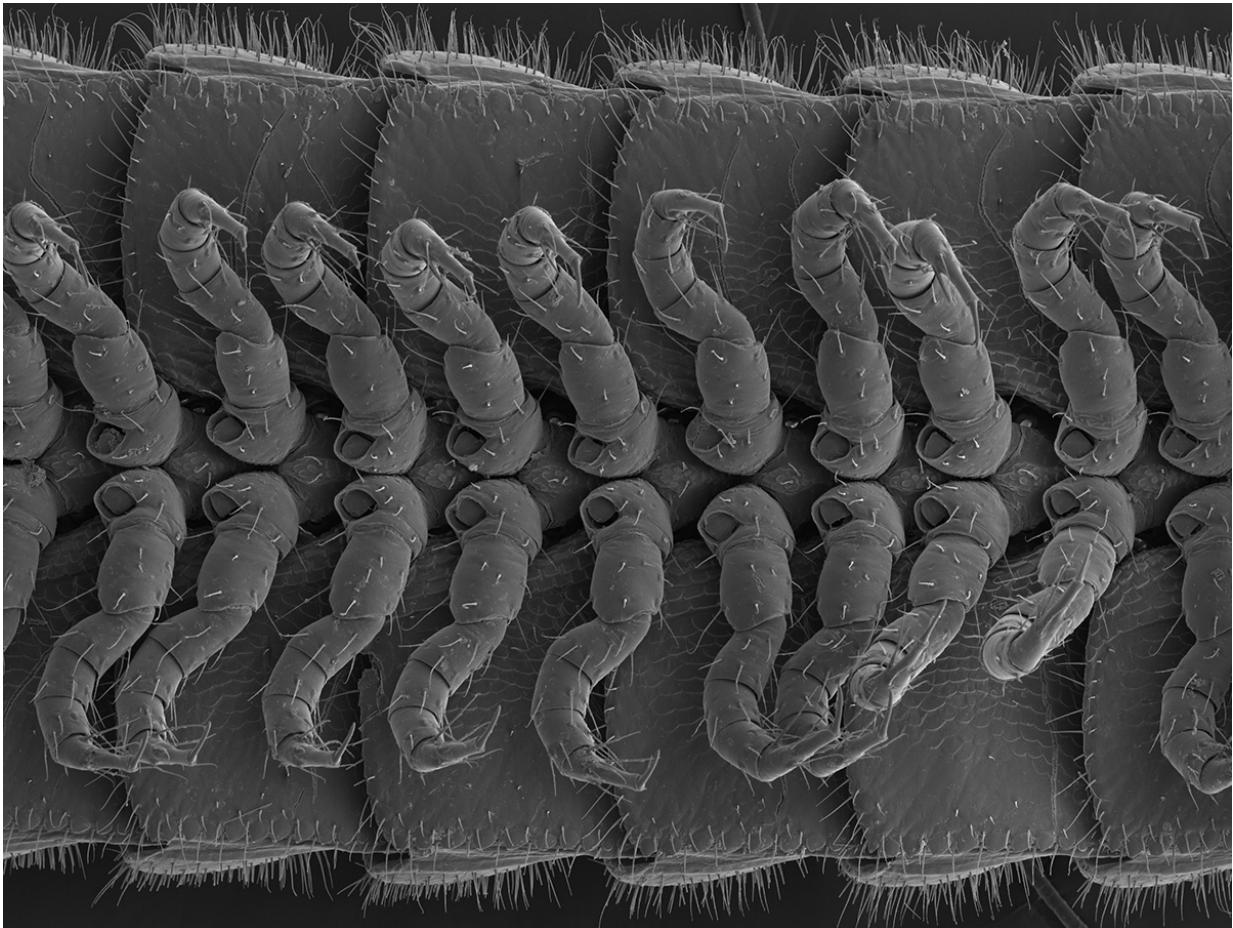
The new species (*Illacme tobini*) of extremely leggy millipede from a Sequoia National Park cave. Credit: Paul Marek, Virginia Tech

Along with many spiders, pseudoscorpions, and flies discovered and catalogued by the cave explorers, a tiny threadlike millipede was found in the unexplored dark marble caves in Sequoia National Park.

The enigmatic millipede was sent to diplopodologists (scientists who specialize in the study of millipedes) Bill Shear and Paul Marek, who immediately recognized its significance as evolutionary cousin of the leggiest animal on the planet, *Illacme plenipes*. The new species may possess "only" 414 legs, compared to its relative's 750, yet, it has a similar complement of bizarre anatomical features, including a body armed with 200 poison glands, silk-secreting hairs, and 4 penises. The study was published in the open access journal *ZooKeys*.

This new millipede, named *Illacme tobini* after cave biologist Ben Tobin of the National Park Service, is described by its discoverer Jean Krejca, at Zara Environmental LLC, and millipede taxonomists Paul Marek at Virginia Tech and Bill Shear, Hampden-Sydney College.

"I never would have expected that a second species of the leggiest animal on the planet would be discovered in a cave 150 miles away," says Paul Marek, Assistant Professor in the Entomology Department at Virginia Tech. It's closest relative lives under giant sandstone boulders outside of San Juan Bautista, California.

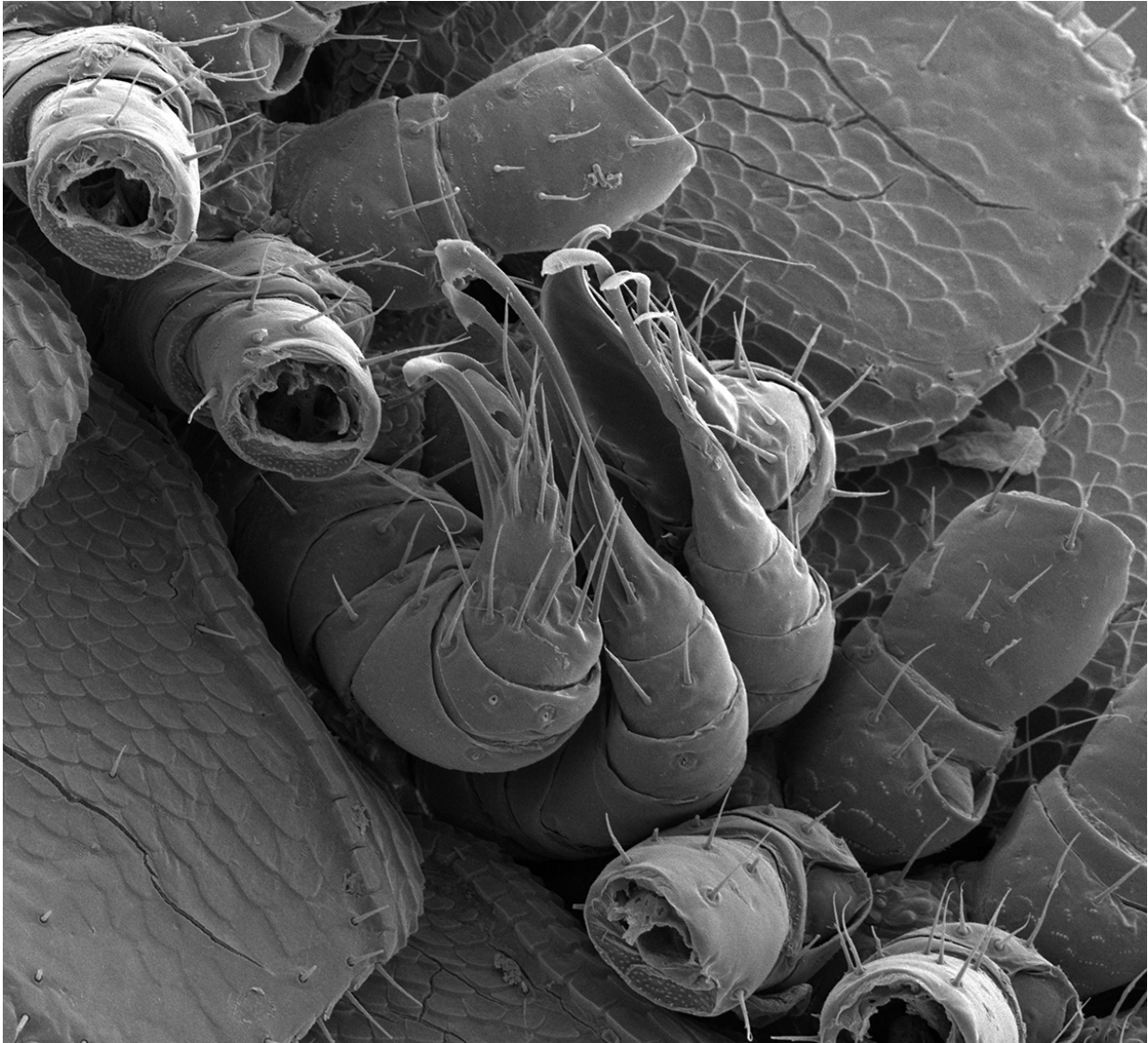


Underside of the new millipede species, showing its legs. Credit: Paul Marek, Virginia Tech

In addition to the new [millipede](#)'s legginess, it also has bizarre-looking mouthparts of a mysterious function, four legs that are modified into penises, a body covered in long silk-secreting hairs, and paired nozzles on each of its over 100 segments that squirt a defense chemical of an unknown nature.

In conclusion, the authors note that by exploring our world and documenting the biodiversity of this planet we can prevent anonymous

extinction, a process in which a species goes extinct before we know of its role in the ecosystem, potential benefit to humanity, or its beauty.



The new millipede's four penises. The ninth and tenth pair of legs of *Illacme tobini* are used as copulatory devices to transfer sperm to the female. Credit: Paul Marek, Virginia Tech

More information: Paul E. Marek et al, A new species of *Illacme* Cook & Loomis, 1928 from Sequoia National Park, California, with a world catalog of the Siphonorhinidae (Diplopoda, Siphonophorida), *ZooKeys* (2016). [DOI: 10.3897/zookeys.626.9681](https://doi.org/10.3897/zookeys.626.9681)

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