

Three new chigger mite species discovered in Taiwan

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Gahrliopia (Gateria) *lienii* is one of three new species of mites found in Taiwan.
Credit: Entomological Society of America

Three new species of trombiculid mites, also known as "chiggers," have been discovered in Taiwan, according to a new paper published in the *Journal of Medical Entomology*. Furthermore, 23 other species that are new records for Taiwan were found, more than doubling the number of previously-known species on the island.

Chiggers are tiny mites that feed on skin in the larval stage. They feed by excreting a chemical that dissolves the skin into liquid form, which they then ingest. While this can cause skin irritation to the host, chiggers can have a more serious consequence: they are known vectors of pathogens that can cause scrub typhus.

Scrub typhus is a disease that is endemic to East and Southeast Asia and Northern Australia. It was first scientifically reported from Japan in 1899. Symptoms include headaches, fever, chills, a rash, and swollen lymph nodes. According to Hsi-Chieh Wang, one of the authors of the paper, there are 300-500 confirmed cases of scrub typhus in Taiwan each year.

The new chigger species were found on shrews and rodents in rural areas where scrub typhus is prevalent. The researchers sampled grasslands, fields, and a single mountainous site. A surprising part of the study was how easily the new chiggers were found on in the mountains.

"After a two-night sampling of 21 rodents in forests of a single mountainous site of 1948 meter height, we discovered two new chigger species and nine newly recorded species," Wang said. "Such information suggests that many more chigger species are awaiting discovery in Taiwan, particularly in mountainous regions."

The three new species all belong to the genus *Gahrliepia* and the subgenus *Gateria*. The first new species is named *Gahrliepia* (*Gateria*) *lieni*. It is named after Professor Jih-Ching Lien, "an authoritative

researcher in medical entomology, and the first scholar to initiate chigger studies in Taiwan."

The second new species is named *Gahrliepia* (*Gateria*) *minuta*.

"The specific name is derived from the particularly small scutum and shorter idiosomal setae of the species," the authors write. "The word 'minuta' means small."

Finally, the third new species was given the name *Gahrliepia* (*Gateria*) *yilanensis* in honor of Yilan County, the county where the specimens were collected.

With the three [new species](#) and the 23 new records from Taiwan, there are now 47 known chigger species in Taiwan. The authors believe that many more chigger species are awaiting discovery in Taiwan, particularly in the mountainous regions.

More information: *Journal of Medical Entomology*,
[jme.oxfordjournals.org/lookup/ ... i/10.1093/jme/tjv139](http://jme.oxfordjournals.org/lookup/...i/10.1093/jme/tjv139)

Provided by Entomological Society of America

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