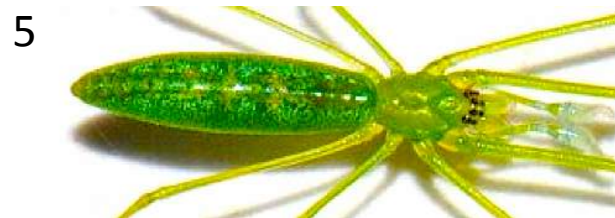


Kaua'i Island, Hawaii, USA

Native Hawaiian *Tetragnatha* spiders from Kaua'i

The long jawed spiders (Genus *Tetragnatha*; Tetragnathidae) have undergone a spectacular diversification in the Hawaiian islands. They have a total of 37 described species, which corresponds approximately to the 11% of the world's diversity. There are two main groups: (1) Spiny leg clade, active hunters, which do not spin webs and (2) Web builder clade, spinning web spiders with more species. There is one more species, *T. hawaiiensis*, which is not part of any of these two groups. The Spiny leg clade presents 4 different ecomorphologies, which match the microenvironment where the spider lives. The origin of colonization for these organisms is somewhere in North America and it occurred about 5 million years ago.



- 1.- *T. kauaiensis* (Simon, 1900):** Green ecomorph of the Spiny leg clade. The only representative of this ecomorph on the island.
- 2.- *T. kauaiensis* (Simon, 1900):** Melanic form. As adults get older, their bodies turn darker making them look somewhat similar to *T. pilosa*.
- 3.- *T. pilosa* (Gillespie, 1992):** Big brown ecomorph of the Spiny leg clade. Its name makes reference to the abundant hairs present on the femur of the 3rd pair of legs. This characteristic not present in any other Hawaiian *Tetragnatha*.
- 4.- *T. maka* (Gillespie, 1984):** The name of this species means "point" in Hawaiian and refers to the shape of its abdomen.
- 5.- *Doryonychus raptor* (Simon, 1900):** This spider has an extremely restricted distribution been present only in the North-west corner of the island.
- 6.- *D. raptor's* claw:** The species name makes reference to the elongated claws present in the first two pairs of legs. This and other morphological differences justified the creation of a separate genus for this species.

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Map by: Forest Starr and Kim Starr

O'ahu Island, Hawaii, USA

Native Hawaiian *Tetragnatha* spiders from O'ahu

The long jawed spiders (Genus *Tetragnatha*; Tetragnathidae) have undergone a spectacular diversification in the Hawaiian islands. They have a total of 37 described species, which corresponds approximately to the 11% of the world's diversity. There are two main groups: (1) Spiny leg clade, active hunters, which do not spin webs and (2) Web builder clade, spinning web spiders with more species. There is one more species, *T. hawaiiensis*, which is not part of any of these two groups. The Spiny leg clade presents 4 different ecomorphologies, which match the microenvironment where the spider lives. The origin of colonization for these organisms is somewhere in North America and it occurred about 5 million years ago.



- 1.- *T. polychromata* (Gillespie, 1992): Green ecomorph of the Spiny leg clade. The name refers to the diverse amount of red pigmentation that can be found across individuals.
- 2.- *T. polychromata* (Gillespie, 1992): Melanic form. As adults get older, they turn darker making them easy to misidentified with *T. perreirai*.
- 3.- *T. tantalus* (Gillespie, 1992): Green ecomorph of the Spiny leg clade. It was originally described in Mt. Tantalus, but the species is present across the Ko'olau mountains.
- 4.- *T. perreirai* (Gillespie, 1992): Maroon ecomorph of the Spiny leg clade. This species was name after the entomologist W.D. Perreira, who collected the holotype.
- 5.- *T. uluhe* (Gillespie, 2003): This spider can be commonly found living in the uluhe fern in areas of mesic forest.
- 6.- *T. lena* (Gillespie, 2003): This species is named after its color. "Lena" means "yellowish" in Hawaiian.
- 7.2 *T. limu* (Gillespie, 2003): The name of this species means "moss" or "lichen" in Hawaiian and it refers to where it can be found.

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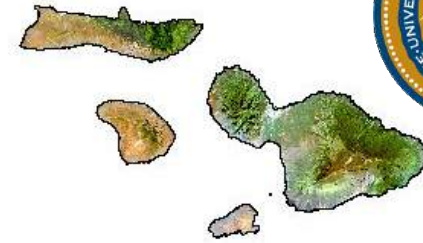
Reviewed by: Rosemary G. Gillespie (gillespie@berkeley.edu)

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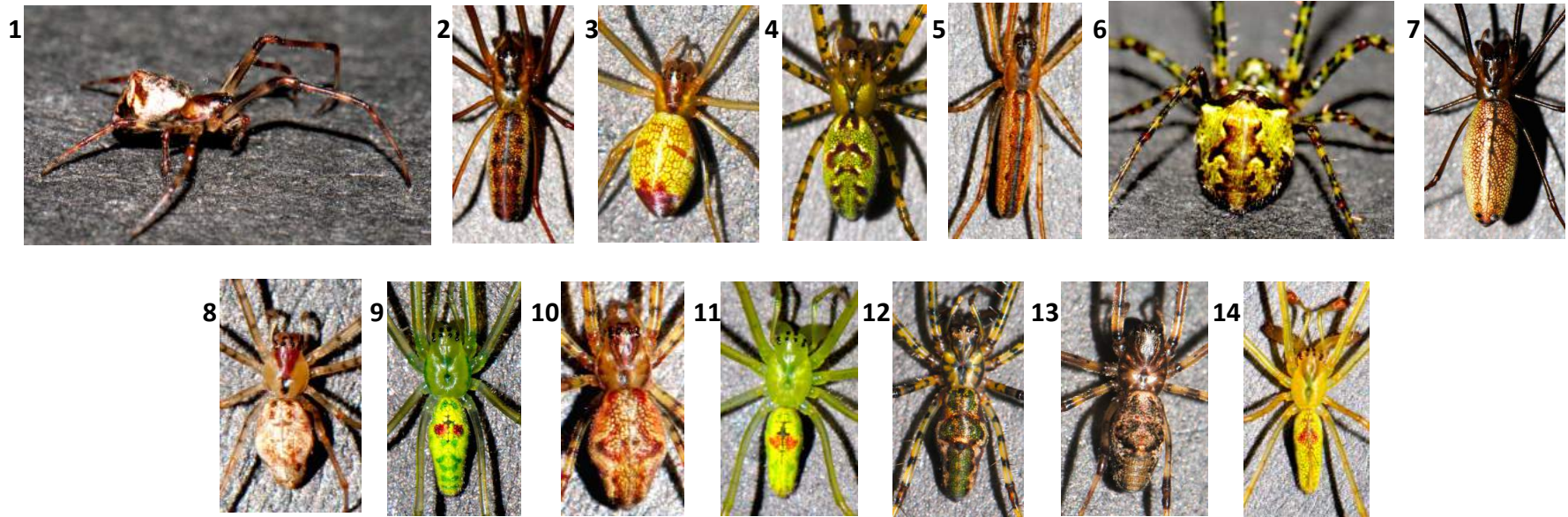
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Maui Nui Island, Hawaii, USA

Native Hawaiian *Tetragnatha* spiders from Maui Nui



The long jawed spiders (Genus *Tetragnatha*; Tetragnathidae) have undergone a spectacular diversification in the Hawaiian islands. They have a total of 37 described species, which corresponds approximately to the 11% of the world's diversity. There are two main groups: (1) Spiny leg clade, active hunters, which do not spin webs and (2) Web builder clade, spinning web spiders with more species. There is one more species, *T. hawaiiensis*, which is not part of any of these two groups. The Spiny leg clade presents 4 different ecomorphologies, which match the microenvironment where the spider lives. The origin of colonization for these organisms is somewhere in North America and it occurred about 5 million years ago.



- 1.- *T. acuta* (Gillespie, 1992): The name comes from the pointy shape of the abdomen.
- 2.- *T. eurychasma* (Gillespie, 1992): Dark brown carapace, no spines in the legs. The center of the abdomen has a very similar color that the carapace, while on the sides there is a dark yellow pigmentation.
- 3.- *T. filiciphilia* (Gillespie, 1992): Yellow abdomen with strong red pigmentation in the posterior area. Its name comes from the fact that it lives on ferns.
- 4.- *T. paludicola* (Gillespie, 1992): This robust spider is part of the web builder clade and it tends to live in very wet places. If the spider is scared it will turn into a darker coloration.
- 5.- *T. stelarobusta* (Gillespie, 1992): Long and robust abdomen with black line in the center. The same as *T. eurychasma*, there are some black dots in the limit between the yellow and brown.
- 6.- *T. trituberculata* (Gillespie, 1992): The three bumps in the posterior part of the abdomen give the name to this species.
- 7.- *T. hawaiiensis* (Simon, 1990): It is the most wide spread species present in all the islands from low to high elevations. It is easy to recognize by the wave shape on the side of the abdomen.
- 8.- *T. kikokiko* (Gillespie, 2002): Small brown ecomorph of the Spiny leg clade. There is a strong red pigmentation with a triangle shape in the the carapace. The abdomen is less pigmented than *T. kamakou*.
- 9.- *T. brevignatha* (Gillespie, 1992): Green ecomorph of the Spiny leg clade. Shiny green. Some variants have red spots. In comparison to *T. waikamoi* it has short chelicera.
- 10.- *T. kamakou* (Gillespie, 1992): Maroon ecomorph of the Spiny leg clade. Very colorful with red and gold pigmentation. The same pattern as *T. quasimodo*, but with other colors
- 11.- *T. macracantha* (Gillespie, 1992): Green ecomorph Spiny leg clade. In comparison to the other green ecomorph species it has long spines in the tibia of the first pair of legs.
- 12.- *T. quasimodo* (Gillespie, 1992): Big brown ecomorph of the Spiny leg clade. It has a hump in the abdomen and coloration that resembles camouflage. It ranges from predominantly green to red.
- 13.- *T. restricta* (Simon, 1990): Small brown of the Spiny leg clade. The posterior part of the abdomen seems to have a series of parallel lines.
- 14.- *T. waikamoi* (Gillespie, 1992): Green ecomorph Spiny leg clade. Shiny green. Some variants have red spots. In comparison to *T. brevignatha* it has a darker line in the ventral part of the abdomen.

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Hawai'i island, USA

Native Hawaiian *Tetragnatha* spiders from Hawai'i island



1.- *T. acuta* (Gillespie, 1992): The name comes from the pointy shape of the abdomen.

2.- *T. perkinsi* (Simon, 1990): This spider was named after the British naturalist Robert Cyril Layton Perkins, who studied the birds, plants and terrestrial invertebrates of the islands during the mid-19th century.

3.- *T. anuenu* (Gillespie, 2002): Small brown ecomorph of the Spiny leg clade. Its name comes from the Hawaiian word for "rainbow", making reference to its colors.

4.- *T. brevignatha* (Gillespie, 1992): Green ecomorph of the Spiny leg clade. Shiny green. Some variants have red spots. In comparison to *T. waikamoi* it has short chelicera.

5.- *T. quasimodo* (Gillespie, 1992): Big brown ecomorph of the Spiny leg clade. It has a hump in the abdomen and coloration that resembles camouflage. It ranges from predominantly green to red, there are some white variants too.

6.- *T. restricta* (Simon, 1990): Small brown ecomorph of the Spiny leg clade. The posterior part of the abdomen seems to have a series of parallel lines.

7.- *T. hawaiiensis* (Simon, 1990): It is the most wide spread species present in all the islands from low to high elevations. It is easy to recognize by the wave shape on the side of the abdomen.

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Permits and Access

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