

Two New Spider Mites (Tetranychidae) from Death Valley, California (Acarina).

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That temperatures much above 100° F. are frequently fatal to plant-feeding arthropods is well known. It is of special interest, therefore, to report two new species of thriving plant-feeding mites from the Death Valley of California. The mites were taken in the month of August, 1925, at Furnace Creek Ranch, by Mr. Bruce Drummond and transmitted to the Bureau of Entomology by Walter T. Swingle, of the Bureau of Plant Industry. In transmitting the specimens Mr. Swingle states:

"I would not be surprised if this would turn out to be an interesting new species and undoubtedly this mite must be able to withstand extraordinary heat conditions, since Weather Bureau recording thermometers show the temperature to go as high as 134° F. in the shade at Furnace Creek Ranch. Mr. Drummond reports that the temperature went up to 124° F. on July 17 and that a dozen or more birds that tried to fly dropped dead on the ground."

Tetranychus thermophilus, new species.

♀.—Bright red; shape typical for the genus. Palpi shorter than femur I, stout. Palpal claw medium, strongly curved. Thumb broader than long, yet slightly surpassing the palpal claw; finger of thumb (terminal spine) as broad as long and evenly rounded distally; dorsal pectinate spine equal to the finger in length. Mandibular plate evenly rounded in front; chelicerae very slender, yet about typical for the genus. Abdomen stout; setae moderate, simple. Legs of moderate length, but clothed with large setae, those on the posterior tibiae being the longest. Tenent hairs of tarsi of moderate length, with a flattened knob at tip of each, inner two considerably longer than the outer two. Tarsal claw six-cleft, the two inner prongs close together and apparently stouter than the others; prongs of claw exceedingly fine toward tip and about as long as the outer tenent hairs. Length, 0.57 mm.; width, 0.32 mm.

♂.—About half as large as female, yellowish to orange. Dorsal palpal spine very sharp and situated on conspicuous tubercle. Tarsal claw I over half as long as tenent hairs, two-cleft to base with one of the elements a little smaller and differently curved from the other; tarsal claw II same as I; tarsal claws III and IV similar to those of female, but prongs shorter. Penis short, stout; without basilar lobe and without terminal

barb; inner lobe straight, as in *telarius*; shaft twice as stout as inner lobe and terminated with a sharply downcurved and somewhat procurved hook which is drawn to a very fine point. Length, 0.37 mm.; width, 0.16 mm.

Type locality.—Death Valley, California.

Type slide.—Cat. No. 957, U.S.N.M.

Described chiefly from male and female on type slide, but in part from several specimens. All material taken at Furnace Creek Ranch, Death Valley, California, August 20, 1925, on greasewood, *Covillia* sp., by Mr. Bruce Drummond. The female of this species is similar to red representatives of *Tetranychus telarius* Linneus. The males have the tarsal claws of legs I and II similar to those of *Tetranychus borealis* Ewing, but the genital armature is of an entirely different type from that of any described species of the genus.

Petrobia drummondi, new species.

General appearance similar to *Bryobia*; color yellowish brown. Palpi very long, almost as long as femur I; segment I twice as long as broad; segment II almost twice as long as broad; thumb very small; claw rudimentary. Mandibular plate large, long, broadest at the middle and rounded in front; notch wanting. The chelicerae arise almost at the front margin of the mandibular plate and extend backward for about two-thirds the length of the same, then bend downward and forward. Dorsal surface of body sparsely clothed with stout, pectinate, slightly curved, and in some instances slightly clavate, setae; four of these on the posterior margin are conspicuous. Anterior legs much longer than the others; patella over one-half as long as femur; tibia slightly longer than patella; tarsus equal to tibia. Legs II and III equal and shorter than IV. Femur of leg IV slightly enlarged. Length, 0.39 mm.; width, 0.23 mm.

Type locality.—Death Valley, California.

Type (Holotype).—Cat. No. 958, U.S.N.M.

A single specimen included with those of *Tetranychus thermophilus*, new species, hence collection data the same as for that species. This species, which is the fourth to be reported for the genus *Petrobia* (*Tetranychina*), in North America, is nearest *P. tritici* (Ewing). It differs from *P. tritici* in having shorter front legs, much longer (over twice as long) palpi, and larger and stouter dorsal setae.



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