

SIX NEW FALSE SPIDER MITES FROM SOUTHERN  
FLORIDA (ACARINA: TENUIPALPIDAE)

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The genus *Tenuipalpus* has twenty-five recognized species including those described below; ten species have been collected only in Florida, and two others primarily tropical in distribution also occur here. More than half the members seem to be host specific, but further collecting may reveal wider host acceptance. Nearly all the species are greatly flattened and a few are nearly as wide as long. Those I have collected appress themselves to the leaf when feeding so that at first sight, except sometimes for color, they look like young unarmoured scale insects; when moving, they have a peculiar fluttering motion.

*Tenuipalpus tetrazygiae*, n. sp.

*T. tetrazygiae* belongs to the group of species in this genus having one pair of anterior medioventrals and one pair of posterior medioventrals. It is distinguished from all other members of the group reviewed by Baker and Pritchard (1953)<sup>1</sup> chiefly by the small, elliptic to obovate mediodorsal hysterosomals and by the irregularly ridged dorsal surface of the body.

FEMALE: Red; dorsal surface covered by irregular folds or ridges. Rostral shield broadly cleft, mediolateral lobe small; no lateral lobe. First and second dorsal propodosomals small, elliptic<sup>2</sup>; third dorsal propodosomal short (17 microns) narrow-elliptic, spiculate; humeral seta narrow-elliptic to obovate, spiculate, about half the length of third propodosomal; mediodorsal hysterosomals elliptic, first pair slightly less in length than half the distance between bases, second and third pair equal to or slightly less than transverse distance between bases; first three dorsolateral opisthosomals narrow-elliptic, spiculate, and shorter than, to about as long as, distance between adjacent bases; fourth flagelliform, exceptionally long, about as long as hysterosoma; fifth similar in shape to third but slightly smaller. Pore present. Podosoma with one pair of anterior and one pair of posterior medioventrals. Ventral hysterosomals bare. Palpus with sensory seta on terminal segment, preceding segment with barbulate seta near distal end. Femora I and II with elliptic to setiform types of setae; patellae I and II each usually with two setiform setae anteromedially; patellae III and IV bare; tibia IV usually lacking anteromedial setae; tarsi I and II each with posterodistal sensilla. Length, including rostral shield, 291 microns; width 157 microns.

<sup>1</sup> Baker, E. W. and A. E. Pritchard. 1953. A review of the false spider mites of the genus *Tenuipalpus* Donnadieu (Acarina: Phytoptipalpidae). Ann. Ent. Soc. Amer. 46 (3): 317-336.

<sup>2</sup> Elliptic is used to describe setae widest at the mid-section and lanceolate to describe those widest near the base.

MALE: Resembles female, except ridges of dorsum not as numerous or as pronounced.

NYMPH AND LARVA: Lack irregularly ridged dorsum, third dorsal propodosomal setiform and proportionally longer than in adult.

EGG: Red to orange; dorsal surface with longitudinal ridges; length 105 microns, width 79 microns.

*Holotype*: Female, west of Perrine, Florida, 15 November 1954 (D. De Leon) from *Tetrazygia bicolor*. *Paratypes*: Five females, three males, ten nymphs, seven larvae; same data as for holotype.

*Tenuipalpus metopii*, n. sp.

*T. metopii* belongs to the group of species in this genus which bears one pair of anterior medioventrals and one pair of posterior medioventrals; the mediadorsal hysterosomals are minute. *Metopii* has many of the characters given by Baker and Pritchard (*loc. cit.*) for *T. knorri* Baker and Pritchard from Argentina, but it differs from *knorri* among other characters by the absence of setae posteromedially on patellae I and II, by the absence of setae on patellae III, and by a strong carina extending longitudinally forward from the base of dorsolateral opisthosomal one.

FEMALE: Usually red (some specimens mostly greyish), translucent; dorsum rather smooth, a few weak striae extending diagonally down from third propodosomal; a carina or fold just behind second pair of mediadorsal hysterosomals; a longitudinal carina extending forward from base of first dorsolateral opisthosomal, carina becoming less distinct anterior to pore. Some specimens show a second carina arising from third dorsolateral opisthosomal and extending forward to where it nearly touches carina from first dorsolateral, both then continuing towards anterior margin of hysterosoma. Rostral shield deeply cleft; a small mediolateral lobe, and a small lateral lobe from the upper, outer edge of which the third dorsal propodosomal seta arises; first and second dorsal propodosomals minute, third short (25 microns in length), narrow-elliptic, spiculate; humeral seta about one third the length of third dorsal propodosomal, narrow-elliptic, and about as long as distance between adjacent bases, fourth flagelliform, fifth, half as long as third. One pair of anterior and one pair of posterior medioventrals. Ventral hysterosomals bare. Palpus apparently two-segmented, a seta at end of last segment; all ventral coxal setae barbate; femora I, II, and III with both narrow-elliptic and setiform types of setae on anterior margin, posteromarginal seta of femur II narrow-elliptic; tarsi I and II each with posterodistal sensilla. Length of body, including rostral shield, 291 microns, width 192 microns.

MALE: Not known.

NYMPH AND LARVA: Body weakly striate; third dorsal propodosomal proportionally longer, and dorsolateral opisthosomals one, two, three, and five more slender than in adult; fourth flagelliform.

EGG: Red to orange; longitudinal ridges on upper surface; length 105 microns, width 69 microns.

HOLOTYPE: Female, Coral Gables, Florida, 13 September 1955 (D. De Leon) from *Metopium toxiferum*. *Paratypes*: 18 females, 28 nymphs, 13 larvae; same data as for holotype.

*Tenuipalpus bucidae*, n. sp.

*T. bucidae* belongs to the group of species in this genus which bears one pair of anterior medioventral and one pair of posterior medioventral setae. The minute mediodorsal hysterosomals and the large dorsolateral opisthosomals, place it in the *micheli-podocarpi* complex. *Bucidae* has many of the characters given for the South African species *podocarpi* Lawrence by Baker and Pritchard (*loc. cit.*), but differs from their description and drawing (after Lawrence) in other characters including the location of the third dorsal propodosomal, the lack of a conical body-projection anterior to coxa III, and the absence of an enlarged seta on coxa III.

**FEMALE:** Body, in live specimens, translucent, iridescent, pale yellow with tinge of green. Dorsum of body shagreened, without distinct striations except for a few extending diagonally in from lateral lobe. Rostral shield deeply cleft; a small mediolateral lobe and a more pronounced lateral lobe. First and second dorsal propodosomals minute, second adjacent to eye; third arising from about middle of outer edge of lateral lobe, very narrow, almost setiform, spiculate, about 42 microns in length and about a third as long as distance between its base and caudal margin of propodosoma; humeral seta oval, spiculate, about one third the length of third dorsal propodosomal; mediodorsals minute. First, second and third dorsolateral opisthosomals elliptic, spiculate and appreciably longer than distance between adjacent bases; fourth flagelliform, fifth narrow-elliptic to obovate, spiculate, and slightly smaller than third. Podosoma with one pair of anterior and one pair of posterior medioventrals; all ventral body-setae bare. Palpus apparently 1-segmented with a long, spiculate setae distad. Femora I and II each with setiform and elliptic types of setae, patellae I and II each with only anteromedial seta, tarsi I and II each with posterodistal sensilla, patella III bare. Length, including rostral shield, 270 microns, width 203 microns.

**MALE:** Not known.

**DEUTONYMPH:** Pale orange-yellow; third dorsal propodosomal setiform, proportionally longer than in adult; dorsolateral opisthosomals narrow, elliptic, except the fourth which is flagelliform.

**LARVA:** Resembles nymph, but body-setae setiform.

**EGG:** Pale orange, shining, with faint longitudinal ridges dorsally. Length 84 microns, width 59 microns.

**Holotype:** Female, Fairchild Tropical Garden, Coconut Grove, Florida, 4 August 1955 (D. De Leon), from *Bucida buceras*. **Paratypes:** Three females, three nymphs, four larvae; same data as for holotype.

This mite is sometimes so numerous on *Bucida buceras*, a common street tree in Coral Gables, that it causes discoloration of the leaves.

*Tenuipalpus hastaligni*, n. sp.

*T. hastaligni* belongs to the group of mites in this genus having one pair of anterior medioventrals, one pair of posterior medioventrals and the mediodorsals minute. The third dorsal propodosomal is long and the first three dorsolateral opisthosomals are large. The mite appears to be closely related to *T. micheli* Lawrence from South Africa, but it differs among other characters from the description and drawing (after Lawrence)

given for *micheli* by Baker and Pritchard (*loc. cit.*) in that the third dorsal propodosomal arises from the base of the lateral lobe which is large; the posteromedial seta of femur II is ovate and extends only to about the distal end of patella II; the projection anterior to coxa III is triangular in outline, and patella IV is bare.

**FEMALE:** Body translucent, iridescent, pale yellowish with a tinge of green in live specimens; legs, especially basally, orange. Dorsum smooth with a few weak striae extending diagonally down from the lateral lobe. Rostral shield narrowly cleft; mediolateral lobe small; lateral lobe prominent, extending beyond base of femur II, broadly rounded at apex; a triangular body-projection anterior to coxa III. First and second dorsal propodosomals minute, third narrow-lanceolate, arising from base of lateral lobe, 66 microns in length and about half as long as distance between its base and posterior margin of propodosoma; mediodorsals minute; first, second, and third dorsolateral opisthosomals broadly elliptic, spiculate, and more than twice as long as the distance between adjacent bases, fourth flagelliform, fifth narrow-elliptic, nearly half the length of third; outer anteroventral propodosomal seta long (ending beyond apex of lateral lobe), barbulate; podosoma with one pair of anterior and one pair of posterior medioventrals, the posterior pair unusually long, extending beyond bases of the two pairs of genital setae; medioventral hysterosomals bare; anterior ventrolateral hysterosomal seta barbulate. Palpus with terminal sensory seta, preceding segment with barbulate seta near distal end; posteromedial setae of femur II ovate, extending to about distal end of patella; patella IV without seta, tarsi I and II each with a posterodistal sensilla. Length of body including rostral shield, 327 microns, width 262 microns.

**MALE:** Not known.

**NYMPH:** Third dorsal propodosomal narrow-lanceolate, shorter than half the distance between its base and caudal margin of propodosoma, and arising from base of a pronounced anteriorly directed lobe; no lobe anterior to coxa III.

**EGG:** Glassy white, elongate, with dorsal longitudinal ridges. Length 133 microns, width 59 microns.

**Holotype:** Female, Coral Gables, Florida, 13 September 1955 (D. De Leon), from *Ocotea coriacea*. **Paratypes:** Ten females, six nymphs; same data as for holotype.

*Tenuipalpus coccolobicolus*, n. sp.

*T. coccolobicolus* belongs to the group of species in this genus with two pairs of anterior medioventrals and one pair of posterior medioventrals. In Baker and Pritchard's key to the genus (*loc. cit.*) it keys to *carolinensis* Baker on the basis of its minute mediodorsal hysterosomals, but it differs from the description and illustration of that species chiefly by its being nearly as wide as long, by its third dorsal propodosomal seta arising from a prominent lateral lobe, and by its broad sub-quadrate lateral body-projection anterior to coxa III.

**FEMALE:** Body, in live specimens, translucent, shining, pale yellow with tinge of green. Dorsum sparsely shagreened, with a few weak more

or less transverse grooves medially. Rostral shield broadly cleft; mediolateral lobe pronounced and lateral lobe prominent; large sub-quadrate body-projection anterior to coxa III. First and second dorsal propodosomal setae minute (about six microns in length), elliptic; third dorsal propodosomal about 43 microns in length, narrow-elliptic, arising from the outer edge of lateral lobe, and about one-third as long as distance between its base and posterior margin of propodosoma; humeral seta one-third the length of third dorsal propodosomal, narrow-elliptic and arising from near base of sub-quadrate projection and behind its anterior edge; mediodorsal hysterosomals minute; dorsolateral opisthosomals one, two, and three narrow-elliptic, sub-equal in length, about twice as long as distance between adjacent bases; fourth flagelliform, fifth narrow-elliptic, about two-thirds the length of three. Pore present. Podosoma with two pairs of anterior and one pair of posterior medio-ventrals. Ventral hysterosomals bare. Terminal segment of palpus with sensory seta at distal end; preceding segment enlarged at base, barbulate seta arising from near distal end. Legs I and II each with narrow-elliptic and setiform types of setae; one pair of setae anteromedially on each of patellae and tibiae I and II; patella IV without seta, tarsi I and II each with sensilla posterodistally. Length, including rostral shield, 334 microns, width 308 microns.

MALE: Resembles female in general characters, but setae less robust.

NYMPH: Pale yellow; lateral lobe of propodosoma not developed; third dorsal propodosomal setiform, proportionally longer than in adult; sub-quadrate lobe anterior to coxa III not developed; fourth dorsolateral opisthosomal flagelliform.

EGG: Pale yellow; faintly ridged longitudinally. Length 100 microns, width 60 microns.

*Holotype*: Female, Coral Gables, Florida, 27 July 1955 (D. De Leon), from *Coccolobis laurifolia*. *Paratypes*: Five females, three males, two nymphs; same data as for holotype.

*Tenuipalpus chiococcae*, n. sp.

*T. chiococcae* belongs to the group of species in this genus which has two pairs of anterior medioventrals and one pair of posterior medioventrals; the mediodorsal hysterosomals are enlarged, but they are shorter than the transverse distance between pairs. In the key to the species by Baker and Pritchard (*loc. cit.*) it runs to *pigrus* Pritchard and Baker, but differs among other characters from *pigrus* by its third dorsal propodosomal being about a fifth longer than the first and elliptic to obovate, by its first three dorsolateral opisthosomals being shorter than the distance between adjacent bases, and by the absence of a pronounced body-projection anterior to coxa III.

FEMALE: Body, in live specimens, apricot. Dorsum raised centrally forming a prominent longitudinal ridge full length of body, near caudal margin narrow, declivous. Except at hysterosomal suture, dorsum strongly striate, striae convoluted forming intricate patterns. Rostral shield broadly cleft; mediolateral lobe small, acute; lateral lobe small, not extending beyond distal end of coxa II. First and second dorsal propodosomals oval to obovate, sub-equal in length, about half as long as width of

coxa II, each arising from a conical protuberance; third elliptic to obovate, ten microns in length, slightly shorter than width of coxa II; humeral seta elliptic to oblanceolate, about as long as first dorsal propodosomal, and situated on a tubercle above a small anterolateral lobe of hysterosoma; dorsolateral metapodosomal seta oblanceolate about as long as humeral; mediodorsal hysterosomals narrow, oval and shorter than transverse distance between pairs; dorsolateral opisthosomals one, two, and three narrow-elliptic to oblanceolate, sub-equal in length, shorter than or equal to distance between adjacent bases, fourth flagelliform, fifth similar to two. Pore present. Podosoma with two pairs of anterior medioventrals and one pair of posterior medioventrals; ventral hysterosomals bare. Palpus with second segment strongly enlarged basad, barbulate seta arising from near distal end; terminal segment with sensory seta on distal end. Femora I and II with both narrow-elliptic and setiform types of setae, patellae I and II each with pair of setae medially on inner margin and one seta on outer margin, tarsi I and II each with posterodistal sensilla, patella IV and femur IV bare. Length, including rostral shield, 328 microns, width 174 microns.

**MALE:** Resembles female, but lateral lobe more pronounced, second palpal segment with a small projection near inner distal end, tarsi I and II each with two sensillae.

**NYMPH:** Third dorsal propodosomal setiform and proportionally longer than for female; first dorsolateral opisthosomal setiform.

**LARVA:** Resembles nymph.

**EGG:** Length 128 microns, width 86 microns; apricot; longitudinally ridged dorsally. In each species these longitudinal ridges are formed by a thin membrane that apparently covers only the upper surface of the egg. When mounted in Hoyer's Medium the membrane usually sloughs off. The eggs of both species of *Tuckerella* are similarly ridged.

**Holotype:** Female, west of Perrine, Florida, 28 September 1955 (D. De Leon), on *Chiococca pinetorum*. **Paratypes:** Three females, one male, nine nymphs, one larva; same data as for holotype.

The types of these six species have been deposited in the U. S. National Museum; paratypes in the University of Florida Collections, Gainesville.