Spider Mites from Northwestern and North Central Mexico (Acarina: Tetranychidae)

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SMITHSONIAN CONTRIBUTIONS TO ZOOLOGY • NUMBER 171
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SMITHSONIAN INSTITUTION PRESS
City of Washington
1974
ABSTRACT

Tuttle, D. M., E. W. Baker, and M. Abbatiello. Spider Mites from Northwestern and North Central Mexico (Acarina: Tetranychidae). *Smithsonian Contributions to Zoology*, number 171, 18 pages, 28 figures, 1974.—Eighteen genera of spider mites were collected by the authors during July and August in 1970. Two of these are proposed and described as new, *Crotonella* and *Atetranychus*. A total of sixty-nine species are reported, including thirteen new species. Descriptions and figures of new species are as follows: *Mcgregorella lantanae, Paraplonobia (Langella) mexicana, Petrobia (Petrobia) waltheria, Crotonella mazatlana, Mononychellus wainsteinii, M. waltheri, M. tephrosiae, M. hyptis, Esteranychus abutilon, E. brickiella, Atetranychus estebanensis, Oligonychus, (Homonychus) constegei, and Tetranynchus (Tetranychus) flechtmani.*
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Introduction

This survey was undertaken by the authors to determine the distribution of the spider mites of the southwestern United States into Mexico and to check for potential pest species. Tuttle and Baker (1964; 1968) and Baker and Tuttle (1972) have published on the spider mites of Arizona and the southwestern United States, and this survey is a continuation of these studies. As expected, most of the mites collected proved to be known species, mostly from the Southwest. Two new genera and thirteen new species were found.

The collections were made by D. M. Tuttle, M. Abbatiello, and E. W. Baker unless otherwise stated; collections were made in the states of Sonora, Sinaloa, Nayarit, Jalisco, Zacatecas, Coahuila, and Chihuahua. Unless otherwise stated, all collections were made in 1970.

We gratefully acknowledge the plant determinations made for us by Dr. Charles T. Mason, Jr., and Mrs. Caryl L. Sagar, Department of Botany, University of Arizona.

The systematic arrangements are those of Tuttle and Baker (1968).

Genus Pseudobryobia McGregor


Pseudobryobia canescens Baker and Tuttle


A female and nymph were collected on Atriplex canescens (Pursh) Nuttall, 80 miles south of Ciudad Juarez, 8 August.

Pseudobryobia curiosa (Summers)


A female and three nymphs were taken on Zuluania triloba (Orton) Persoon, Zacatecas, 2 August.

Pseudobryobia drummondi (Ewing)

Petribia drummondi Ewing, 1926:143.

Pseudobryobia drummondi was collected from the following host plants: Larrea tridentata (De Candolle) Coville, Hermosillo, 17 July, Torreon, 5 August, Rancho Grande, 5 August, and 10 miles east of Torreon, 5 August; Prosopis juliflora
This mite was collected on *Brickellia veronicaefolia* (Humboldt, Bonpland, and Kunth) Gray, Zacatecas, 2 August.

**Genus *Monoceronychus* McGregor**


*Monoceronychus californicus* McGregor


A collection of *M. californicus* was collected from *Monanthochloa littoralis* Engelmann, Los Mochis, 24 July.

**Genus *Mcgregorella* Baker and Tuttle**


*Mcgregorella incana* Baker and Tuttle


Records of this species from Mexico include: *Aloysia wrightii* (Gray) Heller, Chihuahua, 8 August; *Coldenia canescens* De Candolle, Chihuahua, 8 August; and *Sida diffusa* Humboldt, Bonpland, and Kunth, Chihuahua, 8 August.

*Mcgregorella lantanae*, new species

**Figures 1-4**

This species differs from *M. incana* Baker and Tuttle in having lightly spinate dorsal body setae and a different pattern of leg setae. The dorsal body setae are much longer than those of *M. trifida* Baker and Tutle.

**Female.**—Rostrum short; stylophore somewhat elongate and slightly edentate anteriorly; peritreme anastomosing distally. Dorsal body surface with light reticulate pattern; propodosoma and hysterosoma separated by transverse striae; eyes appear to be single; anterior to second pair of DC setae another series of transverse striae. All dorsal body setae, except short anterior propodosomal setae, long, strong, lightly serrate, and set on strong elon-
Figures 1-4.—Mcgregorella lantanae, new species: 1, dorsum of female; 2, dorsum of male; 3, leg I of male; 4, leg I of female.

gate tubercles as figured. Most leg setae short; tibial setae longer than others; dorsal femoral and genual setae short, stout, and serrate; tarsus III with distal set of duplex setae, short and subequal in length, the solenidion distal; tarsus IV similar but duplex setae longer. Setal formula as follows:

1. 2-1-6-4-7 + 1-3 posterior to duplex
2. 2-1-5-4-6-3 posterior to duplex
3. 1-1-2-3-5-4 posterior to duplex
4. 1-1-2-3-5-4 posterior to duplex

Length of body 383μ; including rostrum 478μ.

M ALE.—Similar to female but body setae rela-
tively shorter; anterior propodosomal setae relatively longer; body divided by transverse suture anterior to first pair of DC setae and posterior to third pair. Eyes double. Duplex setae on tarsi 1–IV. Length of body 519μ; including rostrum 415μ.

Holotype.—Female, USNM 3537, ex Lantana velutina Martens and Galeottit, Mazatlan, 26 July.

Paratypes.—Six females and one male with the above data.

Genus Paraplonobia Wainstein


Subgenus Paraplonobia (Paraplonobia) Wainstein

Paraplonobia (Paraplonobia).—Tuttle and Baker, 1968:50.

Paraplonobia (Paraplonobia) hilaria Tuttle and Baker


Specimens of this species were taken on Hilaria mutica (Buckley) Bentham, Torreon, 5 August.

Paraplonobia (Paraplonobia) trident Tuttle and Baker

Paraplonobia (Paraplonobia) trident Tuttle and Baker, 1968:50.

This species was collected from Hilaria mutica (Buckley) Bentham, Torreon, 5 August; and Tidestromia lanuginosa (Nuttall) Stanley, Cuencame, 4 August, and Torreon, 5 August.

Paraplonobia (Langella) armisima Baker and Tuttle


This mite was taken from Artemisia ludoviciana Nuttall, Chihuahua, 8 August; and Flourensia cernua De Candolle, Chihuahua, 8 August.

Paraplonobia (Langella) euphorbii Tuttle and Baker


Mites of this species were collected from Acacia greggii Gray, 10 miles east of Torreon, 5 August; Scleropogon brevifolius Philippi, Chihuahua, 5 August; and Tidestromia lanuginosa (Nuttall) Standley, Cuencame, 4 August, and Torreon, 5 August.

Paraplonobia (Langella) mexicana, new species

Figure 5

This species appears to be closely related to P. (L.) bouloua Tuttle and Baker, differing only in the setal count of all legs, in having somewhat larger dorsal body setae, and in having the propodosomal shield striae shorter and much more strongly tuberculate.

Female.—Rostrum short and broad; stylophore broadly rounded anteriorly; peritremes anastomosing distally. Dorsal body setae, except for the first pair of propodosomals, broadly rounded, small and serrate; first pair of propodosomals more elongate. Propodosomal shield with longitudinal design of somewhat wrinkled, short striae with obvious tubercles or lobes. Striae of hysterosoma transverse, widely separated, wrinkled, and without tubercles or lobes. Legs typical for genus, leg I longer than others. The leg setal count is as follows:

1. 2–1–5–5–11+1–12+1
2. 2–1–5–4–7–6+2
3. 1–1–2–4–7–9+1
4. 1–1–5–5–6–9+1

In contrast, the setal counts of the legs of P. bouloua Tuttle and Baker are:

1. 2–1–4–5–8+1–12+2
2. 2–1–4–5–7–6
3. 1–1–3–2–8–10
4. 1–1–3–2–8–8+15

Subgenus Paraplonobia (Langella) Wainstein

FIGURES 5–10.—Paraplonobia (Langella) mexicana, new species: 5, dorsum of female. Petrobia (Petrobia) waltheria, new species: 6, dorsum of female; 7, hysterosomal striae and lobes. Crotonella mazottana, new species: 8, dorsum of female; 9, peritreme; 10, tubercle and base of seta DQ.
The outer coxal setae of legs I and II of *P. boutelouae* are much stouter than those of the new species. Length of body 472μ; including rostrum 542μ.

**Male.**—Not known.

**Holotype.**—Female, USNM 3538, ex *Prosopis pubescens* Bentham, Los Mochis, 24 July.

**Paratype.**—Female with the same data.

*Paraplonobia (Langella) prosopsis* (Tuttle and Baker)


*Paraplonobia (Langella) prosopsis*—Tuttle and Baker, 1968:56.

Specimens were taken from the following plant hosts in Mexico: *Cercidium microphyllum* (Torrey) Rose and Johnson, Alamos, 21 July; and *Prosopis juliflora* (Swartz) De Candolle, Ciudad Obregon, 22 July, 2 miles south of Zacatecas, 2 August, 10 miles south of Chihuahua, 7 August, and 80 miles south of Ciudad Juarez, 8 August.

*Paraplonobia (Langella) species*

A single nymph was collected on *Acacia vernicosa* Standley, Fresnillo, 3 August. The dorsal striae pattern is distinctive in forming starlike crenulated lobes.

**Genus Georgiobia** Wainstein


This species was collected from *Ambrosia confertiflora* (De Candolle) Rydberg, Hermosillo, 17 July.

*Georgiobia haplopoppi* Tuttle and Baker


*Georgiobia haplopoppi* was collected from the following host plants in Mexico: *Ambrosia confertiflora* (De Candolle) Rydberg, Hermosillo, 17 July; *Parthenium hysterophorus* Linnaeus, Los Mochis, 24 July; *Ruellia nudiflora* (Engelmann and Gray) Urban, Torreon, 5 August; and *Gaillardia pulchella* Fougeroux, Ciudad Juarez, 9 August.

**Genus Petrobia** Murray

*Petrobia* Murray, 1877:118.—Wainstein, 1960:133.

**Subgenus Petrobia (Petrobia) Murray**


*Petrobia (Petrobia) waltheria, new species*

**Figures 6, 7**

This species is distinctive in having short, broad serrate dorsal body setae. This mite would key out to *P. latens* (Müller) in Pritchard and Baker (1955), but differing in the type of setae.

**Female.**—Rostrum short and broad; stylophore narrowing anteriorly and rounded; peritremes slightly anastomosing distally. Propodosomal shield pebbled; hysterosoma with irregular transverse striae bearing rounded lobes. Dorsal body setae short, distinctly broadening distally, serrate and about equal in length except for the P1 and DC3 setae; humeral setae smaller. Leg I as long as body; II and III shorter; IV longer than II and III but not as long as I. Leg setae short, slender, proximal setae stronger and distinctly serrate. Length of body 300μ; including rostrum 351μ.

**Male.**—Not known.

**Holotype.**—Female, USNM 3539, ex *Waltheria americana* Linnaeus, Mazatlan, 26 July.

**Paratype.**—Female with the above data.

Specimens were also collected in Mazatlan, 26 July on *Cynodon dactylon* (Linnaeus) Persoon and *Sida* species.

**Genus Neotrichobia** Tuttle and Baker


*Neotrichobia arizonensis* Tuttle and Baker

This species was collected in Mexico on *Allionia incarnata* Linnaeus, Hermosillo, 18 July, 10 miles south of Chihuahua, 7 August; *Boerhaavia* species, Torreon, 4 August; *Palaoxia linearis* (Cavara) Lagasca, 8 miles east of Torreon, 5 August; and *Scleropogon brevifolius* Philippi, Chihuahua, 8 August.

**Genus Crotonella, new genus**

The dorsal striae form spicules; the dorsal setae are marginal except for DC$_1$-3; the empodia are split distally; and the duplex setae are distal, and approximate on tarsus I.

**Type-Species.**—*Crotonella mazatlana*, new species.

**Crotonella mazatlana**, new species

**Figures 8-10**

**Female.—** Rostrum short and broad; stylophore slightly edentate anteriorly; peritremes slightly hooked distally. Dorsum of body covered with spicules formed by the striae; dorsum divided into three units by transverse striae between propodosoma and hysterosoma, and posterior to DC$_1$ and humeral setae. Venter of body with normal striae; ventral body setae long, slender, and simple. Dorsal body setae, other than DC$_1$-3, marginal and on prominent tubercles which basally possess finger-like projections except for propodosomal setal bases which have blunt processes. Setae broad at base and tapering distally, with strong blunt serrations basally.

Leg I setal pattern as follows: tarsus with 2 setae proximal to duplex setae; tibia with 3 slender setae; genu with 3 strong and 1 slender setae; femur with 2 strong and 2 slender setae; trochanter with 1 slender seta; and coxa with 2 slender setae. Leg II pattern as follows: tarsus with 1 slender seta proximal to duplex setae; tibia with 2 strong and 2 slender setae; genu with 2 strong and 2 slender setae; femur with 1 strong and 2 slender setae; trochanter with 1 long slender seta; and coxa with 2 long slender setae.

Length of body 287μ; including rostrum 238μ.

**Holotype.**—Female, USNM 3540, ex *Croton* species, Mazatlan, 26 July.

**Paratype.**—Female, broken, with the above data.

**Genus Allonychus** Pritchard and Baker


*Allonychus littoralis* (McGregor)


This species was taken from *Quercus reticulatus* Humbold and Bonpland, Zapotlanejo, 30 July. A male and a female were found. The ventral hairs of empodium I of the male form a clawlike structure; the ventral hairs of empodia II-IV of the male and I-IV of the female are free. The aedeagus appears to be slender and sigmoid.

**Genus Mononychellus** Wainstein

*Mononychus Wainstein, 1960:198 [preoccupied].*  
*Mononychellus Wainstein, 1971:589.*

*Mononychellus wainsteini*, new species

**Figures 11-13**

This species is distinctive in that the dorsal body setae reach to or about to the bases of the setae of the next row; the setae are subequal in length. The head of the aedeagus is rounded and equally hooked.

**Female.—** Rostrum short and strong; stylophore rounded anteriorly; peritreme ending in simple bulb. Dorsal body setae reaching about to or to the bases of setae of next row; setae subequal in length, strong, serrate, parallel sided, and tapering to point distally. Striae with broad lobes, longitudinal between DC$_3$ and V-like posterior to DC$_4$. Ventral body setae normal and slender. Length of body 363μ, including rostrum 447μ.

**Male.—** Dorsal body setae similar to those of female, but shorter. Aedeagus typical for genus but head with equal angulations dorsally and ventrally. Specimen broken and not measurable.

**Holotype.**—Female, USNM 3541, ex *Eysenhardtia* species, Zapotlanejo, 30 July.

**Paratypes.**—One male and seven females with the above data.
This species is similar to *Mononychellus siccus* (Pritchard and Baker), which was collected from a leguminous shrub at Phoenix, Arizona. It differs in that the setae are shorter and much stouter, and that the head of the aedeagus of *Af. siccus* appears to be rounded or knoblike.

*Mononychellus walltheria*, new species

*Figures 14, 15*

This mite was first believed to be *Mononychellus planki* (McGregor) (McGregor, 1950:300; Pritchard and Baker, 1955:148). However, the dorsal body setae of the female broaden distally, whereas in *M. planki* these setae narrow distally, and the mite is well out of the known range of *M. planki*. It is here described as new.

**Female.**—In general, very closely allied to *M. planki* in having the stylophore rounded anteriorly, the peritreme knobbed distally, and in having a similar reticulate dorsal striation pattern. The dorsal body setae of *M. planki* are slender and nar-
rowing distally; those of the new species are obviously broadened distally, although about equal length to those of \textit{M. planki}. Length of body 319\mu; including rostrum 408\mu.

**Holotype.**—Female, USNM 3542, ex \textit{Waltheria americana} Linnaeus, Mazatlan, 26 July.

**Paratypes.**—Ten females with the above data.

One female was also taken on bean leaf, La Calera, Nicaragua, 12 January 1960 by F. A. Estrada.

\textit{Monomychellus tephrosiae}, new species

\textbf{Figures 16}

This species is close to \textit{M. tanajoa} (Bondar) (Bondar, 1938:41; Flechtmann and Baker, 1970:160), differing in that the dorsocentral hysterosomal setae are at least more than one-half as long as the distance to the bases of the setae of the next row.

**Female.**—Rostrum short and broad; stylophore broadly rounded anteriorly; peritreme ending in a simple bulb. Dorsal striation pattern as figured, being longitudinal between DC\textsubscript{3} setae. All dorsal body setae long, expanded distally, and reaching half the distance or more to the bases of the setae of the next row; all setae of about equal length. Length of body 319\mu; including rostrum 402\mu.

**Holotype.**—Female, USNM 3543, ex \textit{Tephrosia talpa} Sereno Watson, Tequila, 26 July.

**Paratypes.**—Nine females with the above data.

Other specimens studied are from \textit{Olneya tesota} Gray, Hermosillo, 17 July, and from \textit{Solarium rostratum} Dunal, Guadalajara, 31 July.

\textit{Monomychellus hyptis}, new species

\textbf{Figures 17, 18}

This species has the short setae of \textit{M. caribbeanae} (McGregor), but these dorsal body setae are much stronger, and the males are present. Climatically, the mite is found on the dry west coast of Mexico.

**Female.**—Sensillum of palpus small, about as long as broad. Peritremes slightly hooked distally. Tarsus I with clawlike empodium; other empodia with free hairs. Setal count of legs as follows:

1. 2-1-8-5-8+3-4+4+1 (proximal to duplexes)
2. 2-1-7-5-8-1+1
3. 1-1-4-5-1+1
4. 1-1-4-6-5+1

Aedeagus sharp sigmoid, curving ventrally. Length of body 223\mu; including rostrum 287\mu.

**Male.**—With characters of \textit{Eotetranychus perplexus} (McGregor). Tibia II with eight setae; tarsus I with four setae proximal to duplex setae. Peritreme slightly hooked. Sensillum of palpal tarsus about 2 times as long as broad. Striae of genital plate and area anterior to plate transverse. Setal count of legs as follows:
Eotetranychus brickellia, new species

This species is similar to *Eotetranychus perplexus* (McGregor) except that the head of the aedeagus is much smaller.

**Male.**—Terminal sensillum of palpus minute; peritreme with simple knob distally. Tibia I with 9 tactile setae; tibia II with 8 tactile setae. The aedeagus is strong, bent ventrally distally, and with a small distal head forming a dorsal ventral angulation. Length of body 255μ; including rostrum 319μ.

**Female.**—Terminal sensillum of palpus strong, about twice as long as broad; peritreme ending in simple knob. Tibia I with 9 tactile setae; tibia II with 8 tactile setae; tarsus I with 4 tactile setae proximal to duplex setae. Striae of genital area transverse. Length of body 287μ; including rostrum 385μ.

**Holotype.**—Male, ex *Brickellia veronicaefolia* (Humboldt, Bonpland, and Kunth) Gray, Fresnillo, 3 August.

**Paratypes.**—Two males and two females with the above data.

Two males and eight females were also in the above series.

*Eotetranychus* species

These mites were collected from *Polanisia* species, Mazatlan, 28 July and *Sida* species, Zapotlanejo, 30 July.

The females key out to *E. perplexus* (McGregor), based on the setal count of tibia II and tarsus I. Males were not present, and should be studied for specific determination.

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**Eotetranychus deflexus** (McGregor)

*Tetranychus deflexus* McGregor


The peritremes of the females are straight distally. There are 8 tactile setae on tibia II. These characters agree with those of *E. deflexus*, which have been found on *Symphoricarpos oreophilus* Gray and *S. palmeri* G. N. Jones in Arizona (Tuttle and Baker, 1968:90). No males were found.

Specimens were collected in Mexico from *Celtis iguanae* (Jacquin), Sargent, Alamos, 26 July; and *Crescentia alata* Humboldt, Bonpland, and Kunth, Mazatlan, 28 July.

**Eotetranychus ecclisis** Pritchard and Baker


Only females were found. These key out to *E. ecclisis*, which was described from *Artemisia ludoviciana* subspecies *mexicana* (Wildenow) Keck, Cuernavaca. We have taken it on *Quercus reticularata* Humboldt and Bonpland, Zapotlanejo, 30 July.

**Eotetranychus fallugia** Tuttle and Baker


This species was taken on *Cassia wislizeni* Gray, Chihuahua, 7 August.

**Eotetranychus fremonti** Tuttle and Baker


Specimens of this species were collected from *Acacia constricta* Bentham, Torreon, 6 August; *Mentzelia involucrata* Watson, 10 miles southwest of Chihuahua, 7 August; *Populus fremontii* Watson, Los Mochis, 24 July; *Populus tremuloides* Michaux, Ciudad Obregon, 22 July; *Prosopis juliflora* (Swartz) De Candolle, 10 miles southwest of Chihuahua, 7 August; and *Ruellia nudiflora* (Engelmann and Gray) Urban, Torreon, 6 August.

**Eotetranychus lewisi** (McGregor)

*Tetranychus lewisi* McGregor, 1943:147.


Identifications based on males and females rep-
resent material from Ceiba acuminata (Watson) Rose, Mazatlan, 26 July; Ipomoea species, Guadalajara, 31 July; and Mimosa laxiflora Bentham, Hermosillo, 19 July. The following are believed to be E. lewisi because of the hosts, distribution, and female morphology (no males were found): Bebbia juncea (Bentham) Greene, Hermosillo, 19 July; Cardiospermum corindum Linnaeus, Hermosillo, 19 July; Brickellia californica (Torrey and Gray) Gray, Los Mochis, 23 July; Croton sonorae Torrey, Hermosillo, 19 July; and Mimosa biuncifera Bentham, Fresnillo, 3 August.

A series of females was collected in which the peritreme is not strongly hooked or bent as in the typical E. lewisi. These are tentatively placed here. Host plant records include: Abutilon malacum Watson, Chihuahua, 8 August; Ambrosia confertifolia (De Candolle) Rydberg, Tepic, 26 July; Croton ciliato-glandulosus Ortega, Guadalajara, 31 July; Croton species, Jimenez, 4 August; and Heterotheca species, Guadalajara, 31 July.

**Eotetranychus malacatis** (McGregor)


Males and females were in a series on *Abutilon* species, Hermosillo, 18 July; Topolobampo, 24 July, and Mazatlan, 26 July; Pluchea odorata (Linnaeus) Case, Mazatlan, 26 July; and *Sida* species, Mazatlan, 26 July.

**Eotetranychus prosopis** Tuttle and Baker


Collections in Mexico included two additional host records: *Acacia vernicosa* Standley, Fresnillo, 3 August; and *Hibiscus palustris* Linnaeus, Ciudad Obregon, 21 July.

**Eotetranychus vaughni** Baker and Pritchard


Specimens were taken from Guazuma ulmifolia Lamarck, Ciudad Obregon, 21 July.

The figure given by Baker and Pritchard for this species shows the aedeagal head with sharp angulations anteriorly and posteriorly. If seen from a slightly different angle, the anterior portion of the knob is rounded.

**Eotetranychus yumensis** (McGregor)


Specimens were collected from the following host plants: Cassia covesii Gray, Ciudad Obregon, 22 July; Jatropha cinese (Ortega) Mueller, Jean (of Aargau) Ciudad Obregon, 22 July; *Jatropha cardiophylla* (Torrey) Mueller, Jean (of Aargau), 22 July and Hermosillo, 27 July; Olneya tesota Gray, Hermosillo, 19 July; Pluchea odorata (Linnaeus) Cassini, Topolobampo, 24 July; Sarcostemma pannosum (Decaisne) Schlechter, Topolobampo, 24 July; and Trichloris crinita (Lagasca) Peroti, Torreon, 5 August.

**Eotetranychus mastichi** DeLeon


A series was taken on Berlandiera lyrata Bentham, Fresnillo, 3 August.

**Eotetranychus species**

Several females were collected from Bouteloua curtipendula (Michaux) Torrey, Rancho Grande, 4 August. These are similar to *E. potentillae* Tuttle and Baker, but differ in having long solenidia on the tarsi. Males should be studied.

**Genus Neotetranychus** Tragardh


**Neotetranychus gloriosus** Estebanes and Baker


This mite was collected by the authors from Agave tequilana Weber, Mazatlan, 28 July.

The dorsal spiculate pattern of the striae is not typical, but the ventral body striae do form a basket-weave pattern.
Genus *Schizotetranychus* Trägårdh


Collections from Mexico include the following host plants: *Commelina dianthifolia* Delile, 8 miles north of Chihuahua, 8 August; and *Stipa eminens* Cavara, Rancho Grande, 4 August.


Specimens were found on *Sporobulus flexuosus* (Thurber) Rydberg, Torreon, 5 August; and *Tri
dens pulchellus* (Humboldt, Bonpland, and Kunth) Hitchcock, Chihuahua, 7 August.

*Schizotetranychus eymus* McGregor


A series was taken from *Panicum obtusum* Humboldt, Bonpland, and Kunth, Rancho Grande, 4 August and Fresnillo, 15 August.

*Schizotetranychus eremophilus* McGregor

*Schizotetranychus eremophilus* McGregor, 1950:311.—Pritch
dard and Baker, 1955:251.—Tuttle and Baker, 1964:32.—
Tuttle and Baker, 1968:95.

This species was collected from *Cynodon dactylon* (Linnaeus) Persoon, Mazatlan, 26 July and 20 miles south of Torreon, 4 August.

*Schizotetranychus montanae* Tuttle and Baker


This species was found on *Pappophorum micro
nulatum* Nees, Torreon, 5 August.

*Schizotetranychus nugax* Pritchard and Baker

*Schizotetranychus nugax* Pritchard and Baker, 1955:264.—
Tuttle and Baker, 1968:95.

One collection of *S. nugax* was made from *Hilaria mutica* (Buckley) Bentham, Torreon, 5 August.

*Schizotetranychus species*

A series of these mites was found on two grasses in Mexico: *Scleropogon brevilolius* Philippi, Chihuahua, 8 August; and *Setaria macrostachya* Humboldt, Bonpland, and Kunth, Chihuahua, 8 August. This mite is similar to *S. eremophilus* McGregor in having the same general dorsal setal pattern. However, the Mexican mites have much shorter dorsal body setae, which do not or barely reach the bases of the setae of the next row.

Genus *Anatetranychus* Womersley


Specimens were collected from *Dalea emoryi* Gray, Hermosillo, 8 July.

*Anatetranychus albiflora* Tuttle and Baker


Collections of this species were taken from *Brickellia* species, Fresnillo, 3 August; *Dalea tuber
culata* Lagasca, Fresnillo, 3 August, and Rancho Grande, 3 August; *Dalea* species, Fresnillo, 3 Au
gust; and *Ipomoea* species, Fresnillo, 3 August.

Genus *Atetranychus*, new genus

This genus is similar to *Anatetranychus* but differs in having a single set of duplex setae on tarsus 1, and in that the dorsal hysterosomal striae and the lateral striae of the propodosoma are very widely separated and irregular. The empodia are clawlike and without ventral hairs. The propodosomal shield is pebbled. The dorsal body setae are long and set on prominent tubercles.

Type-Species.—*Atetranychus estebanesae*, new species.
Atetranychus estebanesae, new species

**FIGURES 23-26**

This species is named for Sra. Maria Luisa Estebanes of the Instituto de Biologia of the Universidad Nacional Autónoma de Mexico.

**FEMALE.**—Rostrum elongate; stylophore broadly rounded anteriorly; peritreme ending in large anastomosing ball. Dorsal body setae long, slender, serrate, and expanding distally, set on prominent tubercles. Propodosomal shield covered with lobes, in general these lobes form a longitudinal pat-
tern; laterad of the shield striae widely separated and angularly broken. Striae of hystersoma, in general, transverse and similar to those of propodosoma, widely separated and angularly broken. All dorsal setal tubercles surrounded by area of small lobes, those between DC₄ setae contiguous. Ventral striae more or less similar to dorsal striae. Leg setal pattern as follows:

1. 2-1-9-4-15+1-19+duplex  
2. 2-1-5-4-9-15+duplex  
3. 1-1-5-4-9-14  
4. 1-1-5-4-11-14

Length of body 666μ; including rostrum 826μ.

**Male.**—In general similar to female in setal patterns. Entire dorsum with pattern of tubercles, those on propodosoma forming longitudinal patterns, those on hystersoma transverse pattern. Legs I broken off; leg II with single set of duplex setae. Aedeagus long, strong, simply curved, and attenuate distally. Length of body 351μ; including rostrum 382μ.

**Holotype.**—Female, USNM 3547, ex Verbena canescens Humboldt, Bonpland, and Kunth, Fresnillo, 3 August.

**Paratypes.**—A female and a male with the above data.

**Genus Oligonychus Berlese**


**Subgenus Oligonychus (Oligonychus) Berlese**


**Oligonychus (Oligonychus) ununguis (Jacobi)**

Tetranychus ununguis Jacobi, 1905:239.

Oligonychus (Oligonychus) ununguis.—Tuttle and Baker, 1968:118.

The spruce spider mite was collected from Thuja occidentalis Linnaeus, Ciudad Obregon, 22 July.

**Oligonychus (Oligonychus) species**

Only females were collected from Setaria macrostachya Humboldt, Bonpland, and Kunth, Chihuahua, 8 August. Males are needed for specific identification.

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**Subgenus Oligonychus (Homonychus) Wainstein**


**Oligonychus (Homonychus) conostegia, new species**

**Figure 27**

This species is similar to *O. (H.) gambeli* Tuttle and Baker (1968:120), differing in that there are four tactile setae and one solenidion proximal to the duplex setae on tarsus I. *O. gambelii* has only two tactuals and one solenidion proximal to the duplex setae.

**FEMALE.**—Rostrum short and broad; stylophore broadly rounded; peritreme ending in a simple bulb. Dorsal body striae with strong, rounded lobes; striae longitudinal between DC₃ setae. Dorsal body setae long, strong, serrate, and on small tubercles. All setae of about equal length except for short DC₅ setae. Tarsus I with four tactiles and one solenidion proximal to duplex setae. Setal pattern of legs as follows:

1. 2-1-8-5-7+1-4+1 (proximals)  
2. 2-1-6-5-5+1  
3. 1-1-2-2-5-5+1  
4. 1-1-1-2-5-5+1

Length of body 255μ; including rostrum 383μ.

**Male.**—Not known.

**Holotype.**—Female, USNM 3548, ex Conostegia xalapensis (Bonpland) David Don, Tepic, 28 July.

**Oligonychus (Homonychus) platani? (McGregor)**

Oligonychus (Homonychus) platani (McGregor), 1950:349.—Tuttle and Baker, 1968:120.

This mite is similar in many respects to *O. (H.) platani* McGregor, but the tactile setae of the duplex setae are longer. Males were not found. This species was collected on Boerhaavia species, Torreon, 2 August.

**Subgenus Oligonychus (Pritchardinychus) Wainstein**

**Oligonychus (Pritchardinychus) species**

A series of females was collected from the following plants in Mexico: *Euphorbia albomarginata* Torrey and Gray, 120 miles north of Chihuahua, 8 August; *Hyptis* species, Guadalajara, 31 July; *Pithecolobium duke* (Roxburgh) Bentham, Topolobampo, 24 July; *Setaria macrostachya* Humboldt, Bonpland, and Kunth, Chihuahua, 8 August; and *Sida* species, Chihuahua, 8 August.

**Subgenus Oligonychus (Reckiella) Tuttle and Baker**

*Oligonychus (Reckiella) Tuttle and Baker, 1968:122.*

**Oligonychus (Reckiella) mexicanus** (McGregor and Ortega)

*Paratetranychus mexicanus* McGregor and Ortega, 1953:3.  
*Paratetranychus indicus* Hirst.—Pritchard and Baker, 1955:354 [misidentification].  
*Oligonychus mexicanus*.—Esteban and Baker, 1968:95.

Two collections were made by D. M. Tuttle on *Zea mays* var. *saccharata* (Sturtevant) Bailey, Torreon, 26 July and Chapingo, 2 July 1969.  
This species was placed in synonymy with *O. indicus* by Pritchard and Baker in 1955. Examination of Indian material in the British museum proved that the two species were different.

**Oligonychus (Reckiella) species**

Without males no specific determinations can be made. A series of females was found on the following plants: *Artemisia bigelovii* Gray, Torreon, 5 August; *Chenopodium album* Linnaeus, Zapotlanejo, 50 July; *Cynodon dactylon* (Linnaeus) Persoon, Mazatlan, 26 July; *Gossypium hirsutum* Linnaeus, 8 miles south of Torreon, 5 August; *Helianthus annuus* Linnaeus, 107 miles south of Torreon, 6 August; *Parthenium incanum* Humboldt, Bonpland, and Kunth, Torreon, 6 August; *Setaria lutescens* (Weigel) Hubbard, Zapotlanejo, 30 July; *Solanum rostratum* Dunal, Guadalajara, 31 July; *Sporobolus flexuosus* (Thurber) Rydberg, Torreon, 5 August; *Verbena carolina* Linnaeus, Guadalajara, 31 July; and *Zea mays* var. *saccharata* (Sturtevant) Bailey, Guadalajara, 31 July.

**Genus Tetranychus Dufour**

*Tetranychus Dufour, 1832:276.*

**Subgenus Tetranychus (Tetranychus) Dufour**


**Tetranychus (Tetranychus) cinnabarinus** (Boisduval)

*Tetranychus (Tetranychus) cinnabarinus*.—Tuttle and Baker, 1968:129.

Specimens of this mite were taken on *Gossypium hirsutum* Linnaeus, Santa Rosa, Valle del Fuerte, 4 August; *Mangifera indica* Linnaeus, Acoponeta, 28 July; *Morus rubra* Linnaeus, San Miguel, east of Torreon, 5 August; and *Rosa delecta* Rehder, Guadalajara, 31 July.

**Tetranychus (Tetranychus) desertorum** Banks

*Tetranychus desertorum* Banks, 1900:76.—Tuttle and Baker, 1968:126.

Records of this species from material collected in 1970 included the following host plants: *Ambrosia confertiflora* De Candolle, Ciudad Obregon, 22 July; *Buddleja scordioides* Humboldt, Bonpland, and Kunth, Rancho Grande, 4 August; *Cassia crotolariodes* Kunth, Fresnillo, 3 August; *Encelia farinosa* Gray, Hermosillo, 19 July; *Marrubium vulgare* Linnaeus, Zacatecas, 2 August; *Mentzelia pumila* (Nuttall) Torrey and Gray, Hermosillo, 18 July; *Parthenium hysterophorus* Linnaeus, Los Mochis, 24 July; *Ruellia nudiflora* (Engelmann and Gray) Urban, Torreon, 5 August; and *Sphaeralcea angustifolia* (Cavara) David Don, Rancho Grande, 4 August.

Females of what may be this species, but differing in that the proximal duplex setal are not quite on a line with the proximal duplex setae and that tarsus I is not as slender, were collected on *Sida* species, Mazatlan, 26 July.
Tetranychus (Tetranychus) fiechtmanni, new species

**FIGURE 28**

This species is related to *T. (T.) armipenis* Flechtmann and Baker (1970) in having a posteriorly protruding spur on the aedeagus. In *T. armipenis* this spur is pointed distally; in the species here described it is either blunt or slightly indented.

**MALE.**—Striae of both sexes not lobed, that of *T. (T.) armipenis* ♀ lobed. Empodium I with ventral hairs forming claw; other empodia with ventral hairs free. Sensillum of palpus longer than broad. Knob of aedeagus directed dorsal and with the terminal angulation ending well beyond the level of the bend, as in *T. pacificus* McGregor. Posteriorly, below the knob, is a short projecting blunt or indented spur as figured. Length of body 363μ; including rostrum 446μ.

**FEMALE.**—Typical for the subgenus *Tetranychus*. Length of body 446μ; including rostrum 574μ.

**HOLOTYPE.**—Male, USNM 3549, ex *Haplopappus spinulosus* (Pursh) De Candolle, Zacatecas, 5 August.

**PARATYPE.**—Male with the above data.

This species has been named in honor of Dr. Carlos Flechtmann of the University of Sao Paulo at Piracicaba, Sao Paulo, Brazil.

Tetranychus (Tetranychus) gigas Pritchard and Baker


This species was found on *Parthenium incanum* Humboldt, Bonpland, and Kunth, Torreon, 5 August.

Tetranychus (Tetranychus) hydrangeae Pritchard and Baker


Specimens were collected on *Ambrosia ambrosioides* Cavara, Ciudad Obregon, 22 July; *Clethra alnifolia* Linnaeus, Hermosillo, 17 July; and *Cucumis melo* Linnaeus, Antunez, 5 May 1968, by Servando Lopez B.

Tetranychus (Tetranychus) merganser Boudreaux


This species was taken from *Solanum rostratum* Dunal, Tepic, 25 July.

Tetranychus (Tetranychus) polys Pritchard and Baker


*A series was taken from* *Solanum elaeagnifolium* Cavara, Topolobampo, 24 July.

Tetranychus (Tetranychus) urticae Koch

*Tetranychus urticae* Koch, 1836:10.

*Tetranychus (Tetranychus) urticae.*—Tuttle and Baker, 1968: 129.

This species appears to be out of its northern range, but the females collected appear to be typical.

Specimens in Mexico were collected on *Acacia greggii* Gray, 10 miles east of Torreon, 5 August; and *Rosa dilecta* Rehder, Guadalajara, 31 July.
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