The False Spider Mites Of Arizona

(Acarina: Tenuipalpidae)

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The Tenuipalpidae, or false spider mites, are plant feeders, a few species being of economic importance in Arizona and other parts of the world. Among those of importance in Arizona is the citrus flat mite, Brevipalpus lewisi McGregor, which damages citrus by scarring the fruit, especially that of tangerines and oranges; it also occurs on ornamentals. B. californicus (Banks), which infests citrus and ornamentals throughout the world, is found on grapes and some ornamentals in Arizona. Another species, which causes damage to its host, is B. obovatus Donnadieu, which attacks peach, grape, and lantana. B. cardinalis (Banks) bronzes the leaves of the ash. Dolichotetranychus summersi Pritchard and Baker is common on bermudagrass, and members of the genus Aegyptobia frequently occur in abundance on certain conifers.

In 1959 Bibby and Tuttle reported only five species of Tenuipalpidae from Arizona; the number has now been increased to forty.

The false spider mites possess a stylophore as in the Tetranychidae, and from this arise the long, U-shaped, whiplike chelicerae. These are small mites, usually ranging from 200 to 300 µ in length. The legs are short and wrinkled; tarsi I and II bear rodlike setae. The body setae are typically arranged, and in general, small. The body is frequently sculptured, either with striae or reticulations, and the color is generally reddish. The genitalia for both sexes are typical for the family.

We are indebted to F. F. Bibby and his associates for material collected by him from 1953 through 1959 in Arizona while he was Entomologist with the Arizona Fertilizers, Inc., at Phoenix. Material has also been supplied by L. A. Carruth, G. D. Butler, Jr., Leon Moore, and P. D. Gerhardt of the University of Arizona. All collections listed in this paper, unless otherwise stated, were made by D. M. Tuttle. The determinations of many of the plants were made by Charles T. Mason, Jr., Department of Botany, University of Arizona.

References of importance to the study of the Tenuipalpidae of Arizona and the Southwest are listed in the Bibliography.
KEY TO GENERA OF TENUIPALPIDAE
FOUND IN ARIZONA*

1. With dorsosublateral setae ......................................................... 2
   Without dorsosublateral setae .................................................. 5

2. With one-two pairs of dorsosublateral setae .................................. 3
   Fifth four pairs of dorsosublateral setae; with ventral plate ... Aegyptobia

3. With two pairs of dorsosublateral setae ........................................ 4
   With one pair of dorsosublateral setae; without ventral plate .......... Dolichotetranychus

4. With ventral plate ................................................................. Pentamerismus
   Without ventral plate ............................................................. Pseudoleptus

5. With ventral plate; body ovoid ................................................ Brevipalpus
   Without ventral plate; podosoma much broader than opisthosoma .... Tenuipalpus

* For a Key to the genera of the world see Pritchard and Baker, 1958.
Aegyptobia Sayed


The presence of the four pairs of dorsosublateral hysterosomal setae, the five-segmented palpus, and the typical shape of the genital and ventral plates are distinctive for this genus.

**KEY TO SPECIES OF Aegyptobia IN ARIZONA**

1. Claw without hook ................................................................. 2
   Claw with hook ........................................................................ 3

2. Striae of hysterosoma longitudinal on entire dorsocentral region ........................................................................ macswaini
   Striae of hysterosoma tranverse posterior to second pair of dorsocentral setae .......................................................... ephedrae

3. Hysterosoma without pore posterior to second pair of dorsosublateral setae ................................................................. 4
   Hysterosoma with pore posterior to second pair of dorsosublateral setae ................................................................. 8

4. Dorsal body setae strongly spatulate or lanceolate ....................... 5
   Dorsal body seta short, slender and smooth ................................ aplopappi

5. With more or less even reticulations dorsally ................................ 6
   With elongate reticulations or with striae .................................... 7

6. Reticulations small but longer than wide .................................. cassiae
   Reticulations large, not longer than wide .................................. thujae

7. Striae on hysterosoma longitudinal except for small area anterior to second pair of dorsocentral setae .............................. campsis
   Striae on hysterosoma transverse between second and third pair of dorsocentral setae; dorsal setae large, palmate and serrate... vannus

8. Dorsal body setae smooth .......................................................... 9
   Dorsal body setae serrate .......................................................... 10

9. Reticulations exceptionally small, palpus reaching to tarsus I .......................................................... franseriae
   Reticulations large; palpus reaching to tibia I .............................. baptus

10. Striae longitudinal on anterior dorsocentral area of hysterosoma .... 11
    Striae transverse on anterior dorsocentral area of hysterosoma ... 12

11. Dorsocentral setae of hysterosoma as long as distance between bases .......................................................... desertorum
    Dorsocentral setae of hysterosoma not half as long as distance between bases ................................................ hymenocleae

12. Dorsum with striae; striae transverse on hysterosoma between first and second dorsocentral setae ................................ bibbyi
    Dorsum with elongate reticulations; pattern an inverted V between first and second dorsocentral hysterosomal setae .......... arizonensis
Aegyptobia macswaini (Pritchard and Baker)


This mite was known from California only on Gutierrezia californica (DC.) Torr. and Gray, and Hemizonia sp. It has been collected in Arizona on several species of plants: *ex Coldenia palmeri* Gray, Yuma, October 17, 1960; *ex Cucurbita palmata* Wats., Dome Valley, Yuma County, May 23, 1961; *ex Polygonum argyrocoleon* Steud., Dome Valley, Yuma County, May 23, 1961; *ex Dicoria canescens* Gray, Gila Valley, Yuma County, September 19, 1960; *ex Eriogonum inflatum* Torr. and Frém., Mohawk Mountains, Yuma County, January 8, 1960; *ex Euphorbia polycarpa* Benth., Gila Bend, April 13, 1961; *ex Oenothera clavaeformis* Torr. and Frém., Yuma Mesa, Yuma, April 12, 1960; and *ex Abronia villosa* Wats., Yuma, May 14, 1962.
Aegyptobia ephedrae, new species.

Fig. 1, Dorsum of female.
Aegyptobia ephedrae, new species
(Figs. 1-3)

This species lacks the hysterosoma pores; the dorsal and marginal setae are slender; the striae between the second and third pair of dorsocentral setae are transverse; and the tarsal claws are padlike.

Female

Rostrum slender, reaching to tibia I. Dorsal setae of femora, genua, and tibiae I and II slender, slightly serrate, those on tibiae longest; sensory rod of tarsi long and slender; tarsal claws padlike, without hooks. Rostral shield absent, anterior margin of propodosoma rounded. Striae of propodosoma longitudinal, long and straight; setae long, slender, serrate. Striae of hysterosoma longitudinal in area between first and second pair of dorsocentral setae, and transverse posterior to this; striae between first and second dorsal sublateral setae irregular, forming a circular pattern; hysterosomal setae similar to propodosomal setae. Venter of hysterosoma as figured; genital setae not on margin of plate. Length of body including rostrum 325μ.

Male

Similar to female. Length of body including rostrum 248μ.

Holotype


Paratypes

Three females and three males with the above data; also four females collected on the same host January 16, 1960.
*Aegyptobia ephedrae*, new species.

Fig. 3, Dorsum of male.
Aegyptobia alopappi, new species.
Fig. 4, Dorsum of female.
This species lacks the hysterosomal pores; the dorsal and marginal body setae are narrowly lanceolate and nude; and the hysterosomal striae are longitudinal except for a marginal area.

**Female**

Rostrum slender, reaching past end of genu I. Dorsal setae of femora I and II slightly lanceolate; setae of genua and tibiae I and II setiform; tarsi I and II each with a single rodlike sensory seta; claws well developed. Rostral shield absent; anterior margin of propodosoma slightly indented; propodosoma striae longitudinal, with small reticulate area just behind first pair of propodosomals; setae of medium length, nude, slightly lanceolate. Hysterosomal striae longitudinal except for marginal area as figured; setae similar to those on propodosoma but shorter. Venter as figured. Length of body including rostrum 287 \( \mu \).

**Male**

Similar to female. Length of body including rostrum 233\( \mu \).

**Holotype**


A male was collected on *Aplopappus acradenius* (Greene) Blake, Gila Bend, April 13, 1961.

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*Aegyptobia aplopappi*, new species.

Fig. 5, Genital-ventral region of female.
*Aegyptobia aplopappi*, new species.

Fig. 6, Dorsum of male.
*Aegyptobia cassiae*, new species.

Fig. 7, Dorsum of female.
Aegyptobia cassiae, new species
(Figs. 7-8)

This species lacks the hysterosomal pores; the reticulate pattern is longitudinal on the propodosoma and dorsomedian portion of the hysterosoma; the reticulations are short. A bilobed rostral shield is present.

**Female**

Rostrum slender, reaching to distal end of genu I. Femora, genua, and tibiae I and II each with a large, spatulate serrate seta; tarsi I and II each with a slender, rodlike sensory seta; claws well developed. Rostral shield small and only moderately cleft. Propodosoma reticulate over entire surface, reticulations short; setae spatulate, serrate, subequal in size. Hysterosoma with longitudinal reticulate pattern dorsomedially; transverse on anterior lateral margin; setae similar to those of propodosoma, except smaller posteriorly. Genital region as figured. Length of body including rostrum 351 µ.

**Male**

Similar to female. Length of body including rostrum 274 µ.

**Nymph**

Setal pattern similar to that of adults, except setae smaller.

**Holotype**


Other specimens studied were from *Solanum elaeagnifolium* Cav., Yuma, August 24, 1959, September 30, 1959, and November 10, 1960, and Gila Bend, April 13, 1961. Specimens were also found on *Physalis* sp., Sells, October 15, 1960.
Aegyptobia thujae, new species
(Figs. 9-10)

This species lacks the hysterosomal pores; the dorsal body setae are broadly spatulate and serrate; the reticulations are large and even, not longer than wide; and the rostral shield is slightly cleft.

Female
Rostrum slender, reaching past end of genu I; distal setae of terminal segment of palpus much longer than segment. Femora I and II and tibiae I and II each with broadly spatulate serrate setae; tarsi I and II each with single rodlike sensory seta; claws well developed. Rostal shield small and mildly cleft. Propodosoma with large, even reticulations over entire surface; setae broadly spatulate and serrate, subequal in size. Hysterosoma with reticulate and setal pattern similar to those of propodosoma. Genital and ventral plates as figured. Length of body including rostrum 351µ.

Male
Not known.

Nymph
Setal pattern similar to that of female.

Holotype

Other specimens studied were collected on *Franseria deltoidea* Torr., Dateland, March 9, 1961, Casa Grande, May 10, 1962, Tucson, February 21, 1963, Gila Bend, April 9, 1963, and Marana, August 2, 1963. Specimens were also taken from *Datura stramonium* L., Gila Bend, November 10, 1959.
Aegyptobia thujae, new species.
Fig. 9, Dorsum of female.
Aegyptobia thujae, new species.

Fig. 10, Genital-ventral region of female.
Aegyptobia campsis, new species.

Fig. 11, Dorsum of female.
Aegyptobia campsis, new species
(Figs. 11-12)

This species lacks the hysterosomal pores, the dorsal setae are serrate, spatulate, the striae are widely separated and relatively short, and the striaion pattern is an inverted V on the propodosoma and anterior portion of the hysterosoma.

Female

Rostrum short, reaching distal end of femur I. Femora and genua I and II each with a large, spatulate, serrate seta; tibiae I and II each with a strong, straight, lightly serrate seta; tarsal claws well developed. Propodosoma with weak rostral shield, lightly indented; striae widely separated, relatively short, and with inverted V-pattern on posterior dorsocentral portion of propodosoma; setae spatulate, serrate. Hysterosoma setae similar to those on propodosoma; striae with inverted V-pattern on anterior dorsocentral portion. Genital and ventral plates as figured. Length of body including rostrum 319µ.

Male

Body ovate. Striae longitudinal, not with inverted V-pattern. Setae similar to those of female. Length of body including rostrum 255µ.

Holotype


Paratypes

One female and four males with the above data.
Aegyptobia vannus Pritchard and Baker

This species infests Prosopis juliflora (Swartz) DC. and P. pubescens Benth. It has been collected in Nogales, Yuma, Camp Verde, Sells, and Dome Valley and Palm Canyon in Yuma County.

Aegyptobia franseriae, new species

(Figs. 13-14)

This species possesses hysterosomal pores posterior to the second pair of sublateral setae; the body setae are broadly spatulate and smooth, as are those on femora and genua I and II; the rostral shield is strongly bilobed; and the reticulations are small and arranged in a longitudinal pattern.

Female

Rostrum very long, reaching to center or distal end of tarsus I. Femora I and I and genua I and II each with a broadly spatulate nude seta; tarsi I and II each with a long, rodlike sensory seta; claws well developed. Rostral shield bilobed and broadly rounded. Reticulations of propodosoma and hysterosoma small, elongate, and arranged in a longitudinal pattern; propodosomal setae broadly spatulate and smooth. Hysterosomal striation pattern consisting of small, longitudinally arranged reticulations; setae similar to those on propodosoma; a strong pore between hysterosomal sublateral setae two and three. Ventral plates as figured. Length of body including rostrum 414 ..

Male

Not known.

Nymph

Not known.

Holotype


Paratypes

Twenty females with the above data.

Also studied were specimens collected from Aplopappus spinulosus (Pursh) DC., Sells, October 5, 1960, and from Stephanomeria pauciflora (Torr.) A. Nels., Casa Grande, December 14, 1960.
Aegyptobia franseriae, new species.

Fig. 13, Dorsum of female.
Aegyptobia franseriae, new species.

Fig. 14, Genital-ventral region of female.
Aegyptobia baptus (Pritchard and Baker)


Previously this species was known only from California on _Baccharis, Gutierrezia, Hemizonia, _and_ Pluchea_. It has been collected in Arizona on the following plants: _ex_ _Menodora scabra_ Gray, McNary, August 16, 1963; _ex_ _Aplopappus spinulosus_ (Pursh) DC., Camp Verde, February 28, 1963, and Gila Bend, October 15, 1963; _ex_ _Aplopappus acradenius_ (Greene) Blake, McNary, June 29, 1962; _ex_ _Viguiera multiflora_ (Nutt.) Blake, McNary, August 15, 1963; _ex_ _Tridens pulchellus_ (H.B.K.) Hitchc., Camp Verde, February 28, 1963; _ex_ _Sitanion hystrix_ (Nutt.) J. G. Smith, McNary, July 12, 1963; _ex_ _Pluchea sericea_ (Nutt.) Coville, Yuma, March 22, 1963; _ex_ _Bahia dissecta_ (Gray) Britton, Sells, February 28, 1963; and _ex_ _Atriplex canescens_ (Pursh) Nutt., Show Low, August 18, 1963.

_Aegyptobia baptus_ was originally described and figured as lacking the hysterosomal pores. Examination of the type proved this to be erroneous. _A. baptus_ and _A. franseria_, new species, are closely related, but _A. baptus_ has longer reticulations on the dorsal surface of the body, and a much shorter and stronger palpus. The specimens of _A. baptus_ collected from _Bahia dissecta_ at Sells have very weak hysterosomal pores.
*Aegyptobia desertorum*, new species.

Fig. 15, Dorsum of female.
Aegyptobia desertorum, new species
(Figs. 15-16)

This species possesses hysterosomal pores behind the second pair of
dorsosublateral setae; femora and genua I and II, and tibiae I and II each
possesses a strongly clavate serrate seta; there is no rostral shield; the striae
pattern of the propodosoma is longitudinal, and the propodosomal setae are
long, clavate, and serrate; striation pattern and setae of the hysterosoma are
similar to those of the propodosoma.

Female
Rostrum long, reaching nearly to tip of genu I. Dorsal setae of femora
and genua I and II broadly clavate, serrate; that on tibiae I and II long, whip-
like tarsi I and I each with a long single sensory rod; claws strong. Rostral
shield lacking; anterior margin of propodosoma broadly rounded. Striae of
propodosoma longitudinal, forming long reticulations; setae long, subequal,
clavate, serrate. Hysterosoma with strong pore; striae as on propodosoma
except for transverse area anterior to second pair of dorsosublateral setae;
setae similar to propodosomal setae. Genital and ventral plates without striae.
Length of body including rostrum 300µ.

Male
Not known.

Nymph
Not known.

Holotype
Female, U. S. National Museum No. 3023, ex Atriplex canescens
(Pursh) Nutt., Dome Valley, Yuma County, January 8, 1963.

Paratypes
Twenty three females with the above data.

Aegyptobia desertorum, new species.
Fig. 16, Genital-ventral region of female.
*Aegyptobia hymenocleae*, new species.

Fig. 17, Dorsum of female.
Aegyptobia hymenocleae, new species
(Figs. 17-18)

This species possesses hysterosomal pores; the striae are longitudinal and long, and a small reticulate pattern is located near the second pair of hysterosomal sublateral setae; the dorsal setae are broadly spatulate and serrate; and the rostral shield is present and bilobed.

Female
Rostrum slender, reaching to base of tibia I. Femora I and II and tibiae I and II each with a broad, spatulate serrate seta; tarsi I and II each with a single rodlike seta; claws well developed. Rostral shield well developed and slightly bilobed. Propodosoma with longitudinal striae and a few elongate reticulations posterior to eyes; dorsal body setae broadly spatulate and serrate. Hysterosoma with longitudinal striae; with reticulate pattern near sublateral setae two; with pores; setae as on propodosoma. Venter as figured. Length of body including rostrum 306µ.

Male
Similar to female. Rostral shield not indented. Length of body including rostrum 255µ.

Nymph
Setal pattern similar to that of adults, except propodosomal and setae of first transverse row on hysterosoma much narrower than others.

Holotype

Paratypes
Three females and seven males with the above data; also, one female at Gila Bend, April 13, 1961, and two males and two females at Telegraph Pass, Yuma County, May 6, 1960, from the same host.
Aegyptobia bibbyi, new species
Fig. 19, Dorsum of female.
Aegyptobia bibbyi, new species
(Figs. 19-20)

This species possesses hysterosomal pores; there is no rostral shield; the body setae are slender, lanceolate and serrate, becoming very broad on the posterior marginal section of the hysterosoma; striae are longitudinal on the propodosoma, transverse on the hysterosoma anterior to the second pair of dorsocentral setae, and longitudinal posterior to this area.

**Female**

Rostrum slender, reaching to middle of tibia I. Dorsal setae of femur and genu I lanceolate, serrate; dorsal setae of femur and genu II much more slender; tibiae and genua I and II with long, whiplike setae; tarsi I and II each with 2 single, rodlike sensory seta; claws well developed. Rostral shield lacking, anterior margin of propodosoma broadly rounded. Striae of propodosoma long, longitudinal; setae slender, serrate and lanceolate. Hysterosoma with transverse striae in region anterior to second pair of dorsocentral setae and third pair of dorsosublateral setae 3; striae longitudinal posterior to this area. Genital plate without striae; ventral plate covered by transverse striae. Anterior and posterior medioventral setae short and subequal in length. Length of body including rostrum 287μ.

**Nymph**

Not known.

**Holotype**


**Paratypes**

Twenty two females with the above data. Also, two females from the same host, Camp Verde, February 28, 1963.

This species is named in honor of Mr. F. F. Bibby, Entomologist, now residing in Smithville, Mississippi.
Aegyptobia arizonensis, new species.
Fig. 21, Dorsum of female.
Aegyptobia arizonensis, new species
(Figs 21-22)

This species is closely related to Aegyptobia bibbyi, new species. It may be differentiated in that the rostrum is shorter; the striae of the propodosoma are broken; the striae of the anterior dorsomedial portion of the hysterosoma are shorter and form an inverted V-pattern; and both the genital and ventral plates lack striae.

Female
Rostrum long, reaching to end of genu I. Genua and femora I each with a strong, lanceolate serrate seta; those on genua and femora II more slender. Rostral shield lacking. Striae of propodosoma longitudinal, of moderate lengths; setae serrate and broadly lanceolate. Hysterosoma with setae similar to those on propodosoma; striae broken, forming an inverted V-pattern in area between first and second pairs of dorsocentral setae; striae transverse lateral to this area; posterior portion of body with longitudinal striae. Genital and ventral plates without striae. Length of body including rostrum 306µ.

Male
Not known.

Nymph
Not known.

Holotype

Paratypes
Two females with the above data.

Aegyptobia arizonensis, new species.
Fig. 22, Genital-ventral region of female.
Pseudoleptus Bruyant


This genus has two pairs of dorsosublateral setae, four or five palpal segments, a narrowly bifurcate rostral shield, and a typical striation pattern. There is no ventral plate.

Pseudoleptus palustria Pritchard and Baker


This species was previously known from California and Kansas, the hosts being Distichlis, crabgrass, and grass. Arizona records are: ex Hilaria mutica (Buckl.) Benth., Palm Canyon, Yuma County, May 5, 1961, and November 13 and 18, 1961, ex Hilaria rigida (Thurb.) Benth., Gila Bend. October 15, 1963, and Yuma, October 16, 1963; ex Tridens pulchellus (HBK.) Hitchc., Camp Verde, February 28, 1963. Specimens were also collected from Gutierrezia sarothrae (Pursh.) Britt. and Rushby, Fort Collins, Colorado, September 6, 1963.

Pentamerismus McGregor


This genus is characterized in having a five-segmented palpus, two pairs of dorsosublateral and six to seven pairs of dorsolateral hysterosomal setae, characteristic genital and ventral plates, and a broadly ovate body.

Pentamerismus erythreus (Ewing)


This species has been recorded in North America from Washington, Oregon, California, Kansas, Idaho, Pennsylvana, Ohio, Virginia, Washington, D. C., and Ontario, Canada. Known host plants are: Cupressus, Libocedrus, Thuja, Chamaecyparis, and Juniperus. Other records, which may be accidental, include Sequoia, Picea, Olea, and Rubus. It has been collected in Arizona on Juniperus deppeana Steud., at Flagstaff. September 7, 1961, Camp Verde, February 28, 1963, Show Low, August 17, 1963, and McNary, August 18, 1963. It was also taken on Cupressus sempervirens L., Tucson, June 27, 1961.

Brevipalpus Donnadieu


The genus Brevipalpus has a four-segmented palpus, lacks dorsosublateral hysterosomal setae, possesses genital and ventral plates, and is usually characteristically sculptured.
**Key to Species of Brevipalpus in Arizona**

1. Hysterosoma with five pairs of dorsolateral setae ........................................... 2  
   Hysterosoma with six pairs of dorsolateral setae ........................................... 3
2. Dorsum with irregular longitudinal striae mediolaterally; with narrow longitudinal groove mediolaterally on hysterosoma ................................................................. *melichrus*
   Dorsum with rather even reticulations mediolaterally; with broad depression mediolaterally on hysterosoma ................................................................. *obovatus*
3. Palpus with two setae and a sensory peg on terminal segment  4  
   Palpus with one seta and a sensory peg on terminal segment  6
4. Tarsus II with two sensory rods ................................................................. 5  
   Tarsus II with one sensory rod ................................................................. 14
5. With even reticulations on dorsolateral area of propodosoma  ............................................ *californicus*
   With irregular longitudinal reticulations on dorsolateral area of propodosoma  ............................................ *lewisi*
6. Metapodosoma with anterior medioventral setae much shorter than posterior pair  7
   Metapodosoma with anterior and posterior medioventral setae subequal in length and as long as distance between them ............................................ *cardinalis*
7. Propodosoma with dorsocentral area evenly reticulate ....................................... 8  
   Propodosoma with dorsocentral area bare or lightly striate ............................................ 10
8. Hysterosoma with mediolateral depression broad ........................................... 9  
   Hysterosoma with mediolateral depression narrow ........................................... *ogmellus*
9. Marginal setae of body lanceolate and strongly serrate .................................... *porca*
   Marginal setae of body slender and smooth ............................................ *pritchardi*
10. Dorsocentral area of propodosoma lightly reticulate ...................................... 11  
    Dorsocentral area of propodosoma bare ............................................ 12
11. Dorsal setae of femora I and II narrowly lanceolate and slightly serrate; setae of terminal segment of palpus subequal in length ............................................ *punicans*
    Dorsal setae of femora I and II broadly lanceolate and serrate; rod-like seta of terminal segment of palpus much shorter than others ............................................ *potentillae*
12. Dorsal and marginal body setae small and narrowly lanceolate ............................................ 13  
    Dorsal and marginal body setae large and broadly spatulate ............................................ *salicis*
13. Marginal body setae short, lanceolate and smooth ........................................... *pini*
    Marginal body setae short, narrow and smooth ........................................... *mumai*
14. Propodosoma with reticulations ................................................................. 15  
    Propodosoma with striae only and bare on posterior dorsocentral area; body setae slender, lanceolate and slightly serrate ............................................ *atropini*
15. Reticulations not covering dorsocentral area of propodosoma ............................................ 16  
    Reticulations covering dorsocentral area of propodosoma ............................................ 17
16. Dorsal setae slightly serrate; coxal II region with small areolae  ............................................ *homalus*
    Dorsal setae strongly serrate; coxal II region with few striae  ............................................ *ipomoeae*

* The number of rods on Tarsus II varies in this species; see discussion.
17. Dorsal body setae narrowly lanceolate ........................................ 18
     Dorsal body setae broadly lanceolate ........................................ aeoloides

18. Anterior propodosomal setae not as long as distance between them;
     third hysterosomal dorsocentral setae not half as long as distance
     between them .................................................................................. 19
     Anterior propodosomal setae as long as distance between them;
     third hysterosomal dorsocentral setae nearly as long as distance
     between them ................................................................................... aeolus

19. With reticulations anterior to ventral plate ................................... 20
     With transverse striae anterior to ventral plate ......................... psilostrophae

20. Area anterior to posterior medioventral setae smooth ......... artemisiae
     Area anterior to posterior medioventral setae with reticulations ....... asterae

Brevipalpus melichrus Pritchard and Baker

This species has been collected in California on Acer. A single female
was collected on Ficus carica L., Somerton, June 20, 1962.

Brevipalpus obovatus Donnadieu

Brevipalpus obovatus Donnadieu, 1875, Rech. Serv. Hist. Tetranych.,
This mite is known in the United States from: Maine, New Jersey, Maryland, North and South Carolina, Florida, Alabama, Mississippi, Louisiana, Missouri, Kansas, Ohio, California, Oregon, and Arizona. It also occurs in Ontario (Canada), France, Spain, Cyprus, Israel, Egypt, Kenya, Ceylon, New Zealand, Australia, Japan, Hawaii, Venezuela, and Argentina. The host plants recorded for the privet mite are: Aesculus, Althaea, Anthurium, Aralia, Aspidistra, Begonia, Buddleia, Campanula, Chrysanthemum, Citharexylum, Citrus, Coleus, Cosmia, Cotoneaster, Dendrobium, Euphorbia, Fragaria, Fuchsia, Gazania, Geranium, Gerbera, Hedera, Hibiscus, Ligularia, Ligu-
The records of Brevipalus obovatus in Arizona are all from Yuma: ex
Lantana (intercepted at Inspection Station) May 4, 1960; ex Prunus persica
(L.) Batsch., July 8, 1960; and ex Vitis vinifera L., December 14, 1959.

Brevipalpus californicus (Banks)

Brevipalpus californicus (Banks), McGregor, 1949, Mem. S. Calif. Acad.
Ent., 14(3):216.
Brevipalpus californicus (Banks) is a widespread mite, and at times can cause serious injury to its host. It has been recorded from California, Florida, Kansas, Texas, Maryland, Mexico, Hawaii, France, Tripolitania, Algeria, Egypt, Israel, Natal, Transvaal, Southern Rhodesia, Australia, Ceylon, and Malaya. Known host plants for this species are: Acer, Acineta, Anguloa, Anthurium, Antidesma, Aphelandra, Bletia, Brassica, Callicarpa, Catasetum, Citrus, Clausena, Clerodendron, Cocos, Crescentia, Croton, Dendrobiun, Dodonaea, Dolichos, Epidendrum, Ficus, Flaucourtia Flaveria, Gardenia, Gongor, Hibiscus, Houlletia, Lycaste, Malus, Melia, Odontoglossum, Persisteria, Persea, Pilea, Poinsettia, Sida, Solanum, Stanhopea. Thea, Thunbergia, Trevesia, Trichophila, and Vitis.

Specimens have been collected in Arizona as follows: ex Phordendron californicum Nutt., Yuma and Palm Canyon, Yuma County, January 15, 1960 and May 5, 1961 respectively; ex Hibiscus palustris L., Yuma, August 30, 1959; ex Vitis vinifera L., Yuma, August 26, 1959; and ex Pittosporum sp., Mesa, August 6, 1954 by F. F. Bibby.

Brevipalpus lewisi McGregor


Brevipalpus lewisi is found in California, Arizona, District of Columbia, Maryland, North Carolina, Australia, Japan, and Egypt. Its hosts are: Citrus, Eugenia, Parthenocissus, Phoradendron, Actinider, Alnus, Vitis, and Juglans.

Many collections of Brevipalpus lewisi were made in Arizona throughout the year on several plants. The mite is most prevalent during August and September, particularly on Citrus. Tangerines appear to be preferred to other Citrus. Primarily, the fruits are attacked, but when abundant this mite also feeds extensively on the leaves. It is common in the areas of Yuma, Phoenix, and Tucson. Hosts in Arizona are: Arachis hypogaea L., Bouteloua barbata Lag., Catalpa bignonioiides Walt., Citrus auratifolia (Christm.) Swingle, Citrus limon Burm. f., Citrus paradisi Macf., Citrus reticulata Blanco, Citrus sinensis (L.) Osbeck, Myrtus communis L., Ficus carica L., Parthenocissus tricuspidata (Sieb. and Zucc.), Planch., Lycium halimifolium Mill., Pittosporum sp., Punica granatum L., Rosa multiflora (Christm.) Swingle, Citrus limon Burm. f., Citrus paradisi Macf., Citrus reticulata Blanco, Citrus sinensis (L.) Osbeck, Myrtus communis L., Ficus carica L., Parthenocissus tricuspidata (Sieb. and Zucc.), Planch., Lycium halimifolium Mill., Pittosporum sp., Punica granatum L., Rosa multiflora (Christm.) Swingle, Ephedra fasciculata A. Nels., Oenothera speciosa Nutt., Melia azedarach L., Medicago sativa L., Geranium sanguineum L., Aster spinosus Benth., Aster coerulescens DC., Atriplex semibaccata R. Br., Heterotheca subaxillaris (Lam.) Britt. and Rusby, and Phoradendron californicum Nutt.

The number of rodlike sensory setae on the second tarsus of the female has been used to separate groups. DeLeon (1961a) found that this appeared to be a variable character in Brevipalpus californicus (Banks) and consequently placed B. lilium Baker into synonymy with that species. In the series of B. lewisi from Arizona we find that the females may have one or two rodlike setae on tarsus II, and in some cases, one on one leg and two on the other. It appears that B. lewisi originally had two rodlike setae and is in the process of losing one.
Brevipalpus cardinalis (Banks)


This species has been collected from _Fraxinus velutina_ Torr. in Arizona and California.

_Brevipalus ogmellus_ Pritchard and Baker


Previously this mite had been collected on oak in Florida, Louisiana, and Oklahoma. It has been taken on _Quercus turbinella_ Greene, Camp Verde, Arizona, February 28, 1963.

_Brevinalpus porca_ Pritchard and Baker


This species was collected on mistletoe in Utah and Arizona. The Arizona records are: _ex_ pinyon mistletoe, Jacob Lake, and ponderosa pine dwarf mistletoe, Flagstaff. The host name as published in Pritchard and Baker is wrong and should be _Arceuthobium_ sp. Males, females and nymphs were also collected on _Picea engelmanni_ Parry, McNary, June 29, 1962.

_Brevipalpus pritchardi_, new species

(Figs. 23-25)

_Brevipalpus pritchardi_ keys out to _B. oleae_ Baker, but can be differentiated in that the areolae of the dorsal body surface are much larger, and in that the dorsal leg and body setae are whiplike and nude, rather than lanceolate and nude.

**Female**

Rostrum reaching to or past distal end of genu I: palpus long, slender, distal segment with two sensory and one rodlike setae. Femora I and II with smooth, narrowly lanceolate setae; tarsi I and II each with a single rodlike sensory seta; tarsal claws well developed. Propodosoma with dorsomedian area completely covered with reticulations; mediolateral area with similar pattern which continues almost to margin of body; setae long, smooth, slightly lanceolate. Anterior dorsomedian area of hysterosoma with reticulate pattern; area posterior to this with transverse striae; elongate reticulations in dorsolateral depression; transverse striae on lateral area of hysterosoma; hysterosomal setae similar to those of propodosoma but shorter. Genital and anal plates with transverse striated pattern; with few transverse striae in area directly anterior to ventral plate; area anterior to posterior medioventral setae bare. Venter of propodosoma with few striae; coxal II area with few areolae, and area laterad to this with few faint striae. Length of body including rostrum 274μ.
Brevipalpus pritchardi, new species.

Fig. 23, Dorsum of female.
Brevipalpus pritchardi, new species.

Fig. 24, Genital-ventral region of female.

Male
Similar to female. Length of body including rostrum 236μ.

Nymph
All dorsal body setae very short, subequal in length.

Holotype
Female, U. S. National Museum No. 3031, ex Ditaxis lanceolata (Benth.) Pax and Hoffman, Palm Canyon, Yuma County, May 6, 1960.

Paratypes
Nine females and seven males with the above data.
Nymphs with the above data were also studied.

This species is named in honor of Dr. A. E. Pritchard.
Brevipalpus pritchardi, new species.
Fig. 25, Dorsum of male.
Brevipalpus punicans Pritchard and Baker


Brevipalpus potentillae, new species
(Figs. 26-28)

This new species is related to Brevipalpus punicans Pritchard and Baker, but differs in that the dorsal setae of femora I and II are broad, lanceolate and serrate, and in that the rodlike seta of the terminal segment of the palpus is much shorter than the other setae.

Female

Body ovate. Rostrum slender, reaching to distal end of femur I; terminal segment of palpus with two sensory and one rodlike setae which is much shorter than the other two. Femora I and II each with a broadly lanceolate serrate seta; other dorsal leg setae slender and short; tarsus II with a single rodlike sensory seta; claws well developed. Rostral shield lightly sculptured. Propodosoma with large, even reticulations, very faint and broken dorsomedially; propodosomal setae short, slender and smooth. Hysterosoma with six pairs of marginal setae; without pores; with broken reticulations on anterior dorsomedian area, and transverse striae posterior to second pair of dorsocentral setae; marginal setae similar to propodosomal setae. Genital plate with transverse striae; ventral plate with striae either transverse or in V-pattern; large areolae laterad to ventral plate; transverse striae anterior to plate; area anterior to posterior medioventral setae smooth. Length of body including rostrum 251μ.

Male

Similar to female. Length of body including rostrum 306μ.

Nymph

All dorsal and marginal setae of body very short, slender, slightly lanceolate.

Holotype


Nymphs with the above data were also studied. A single female was collected on Tragopogon porrifolius L., Flagstaff, September 4, 1961.
Brevipalpus potentillae, new species.

Fig. 26, Dorsum of female.
Brevipalpus potentillae, new species.
Fig. 27. Genital-ventral region of female.
Brevipalpus potentillae, new species.

Fig. 28, Dorsum of male.
Brevipalpus salicis, new species.
Fig. 29, Dorsum of female.
Brevipalpus salicis, new species
(Figs. 29-31)

The unique striation pattern on the dorsum of both sexes, and the broadly clavate dorsal and marginal setae are distinctive.

**Female**

Rostrum reaching slightly past end of femur I; palpus elongate, terminal segment with two sensory and one rodlike setae. Femora I and II each with a broadly lanceolate serrate seta; dorsal seta of genua and tibiae I and II only slightly lanceolate, serrate; tarsus II with a single sensory rod; claws strongly developed. Rostral shield distinctly sculptured. Propodosoma with dorsocentral area smooth; with characteristic dorsolateral grooves and small areolate; setae broadly clavate, serrate, subequal. Hysterosoma with six pairs of marginal setae, without pores; with few dorsocentral transverse striae, with characteristic dorsolateral grooves and areolae; dorsocentral and marginal setae similar to those on propodosoma, but becoming smaller on posterior margin of body. Genital plate with few transverse striae; fewer on ventral plate; few striae anterior to ventral plate; many areolae of medium size laterad of plate. Length of body including rostrum 274μ.

**Male**

Similar to female, but with fewer dorsal areolae. Length of body including rostrum 223μ.

**Nymph**

Setal pattern similar to that of adults.

**Holotype**


**Paratypes**

Fourteen females and eight males with the above data. Nymphs with the above data were also studied.
Brevipalpus salicis, new species.

Fig. 31, Dorsum of male.
Brevipalpus pini Baker
(Figs. 32-35)


This species was known only from California on pines. It has been collected in Arizona as follows: *ex Pinus ponderosa* Lawson, Flagstaff, August 27, 1961, and McNary, July 12 and August 15, 1963; *ex Pinus edulis* Englm., Flagstaff, September 8, 1961, and McNary, July 12, 1963.

Brevipalpus pini Baker is closely related to *B. homalus* Pritchard and Baker. It differs in having lanceolate, serrate dorsal body setae, in having only a few areolae of medium size in the coxal II region, and in having only a few striae in the area laterad of the coxal II areolae.
Fig. 32, Coxal II and III region of female.

Fig. 33, First propodosomal setae, female.

Fig. 34, Posterior marginal seta, female.

Fig. 35, First propodosomal setae, male.

*Brevipalpus pini* Baker.
Brevipalpus mumai, new species 
(Figs. 36-37)

Brevipalpus mumai belongs to the homalus group, differing in having short, slender, nude dorsal body setae, a few large areolae in the coxal I region, a few striae laterad to this area, and large areolae anterior to coxae III, and in having two setae and a rod on the terminal segment of the palpus.

Female
Rostrum broadly triangular, not reaching to end of femur I; terminal segment of palpus with two setae and a rod. Femora I and II each with an apparently nude, slender dorsal seta; tarsi I and II each with a single rodlike seta; claws well developed. Rostral shield with few striae, and with few areolae on posterior margin. Propodosoma with dorsomedian area nearly smooth, with large reticulations mediolaterally; propodosomal setae subequal in length, short, nude, narrowly lanceolate. Genital plate with transverse striae; ventral plate with weak transverse striae; area posterior to posterior medioventral setae faintly striate, the area anterior to these setae smooth, coxae III and IV lightly striated longitudinally; area anterior to coxae III with few well developed areolae. Few striae on ventral of propodosoma; coxal I area with few well developed areolae, and area laterad of this with weak longitudinal stria. Length of body including rostrum 268μ.

Male
Not known.

Nymph
Not known.

Holotype

Paratypes
Eleven females with the above data.

This species is named in honor of Dr. Martin H. Muma of the Citrus Experiment Station, Lake Alfred, Florida.
Fig. 36, Coxal II and III region of female.

Fig. 37, Dorsal body seta.

*Brevipalpus mumai*, new species.
Brevipalpus allenrolfeae, new species
(Figs. 38-40)

This species has the single sensory and the rodlike setae on the terminal segment of the palpus; the dorsal and marginal body setae are long, slender, and lightly serrate; the body striae are also distinctive.

Female
Body ovate. Rostrum broadly triangular, reaching only past middle of femur I; terminal segment of palpus with two short, rodlike setae, one being very short. Femora I and II each with a strong, lanceolate serrate seta; other dorsal leg setae short and slender; tarsus II with single, rodlike seta; claws well developed. Rostral shield faintly sculptured, with few striae. Propodosoma with striae only, reticulations lacking, as figured; setae long, slender, lanceolate and slightly serrate. Hysterosomal setae similar to propodosomal seta, but becoming shorter posteriorly; with six pairs of marginal setae; pores lacking; striae similar to those of propodosoma. Genital plate with transverse striae; ventral plate similar; few striae between ventral plate and posterior medio-ventral setae; area anterior to medioventral setae without striae; few large reticulations laterad of ventral plate. Length of body including rostrum 293 µ.

Male
Similar to female. Length of body including rostrum 261µ.

Nymph
All dorsal and marginal body setae short, slightly lanceolate and serrate, those on propodosoma one third to one half longer than others.

Holotype

Paratypes
Six females and two males with the above data. Nymphs with the above data were studied. One male and sixteen females were also collected on Suaeda torreyana Wats., Yuma, March 27, 1963.
*Brevipalpus allenrolfeae*, new species.

Fig. 38, Dorsum of female, with details of seta and palpus.
*Brevipalpus allenrolfae*, new species.

Fig. 39, Genital-ventral region.
Brevipalpus allenrofileae, new species.

Fig. 40, Dorsum of male.
Brevipalpus homalus Pritchard and Baker

Fig. 41, Dorsum of female.
*Brevipalpus homalus* Pritchard and Baker
(Figs. 41-45)


*Brevipalpus homalus* Pritchard and Baker was originally described as having two setae and a sensory peg on the terminal segment of the palpus; examination of the type proved this to be erroneous; the segment possesses only two setae, not three. This species is redescribed and refigured.

**Female**

Rostrum broadly triangular, reaching to end of femur I; palpus with a single seta and a rod on terminal segment. Femora I and II each with a small, slightly lanceolate serrate seta; tarsi I and II each with a single sensory rod; claws well developed. Rostral shield with few striae, and with few areolae on posterior margin. Propodosoma with dorsocentral region nearly smooth, with few faint striae, with large reticulations mediolaterally; propodosomal setae subequal in length, slightly lanceolate, smooth. Hysterosoma with six pairs of marginal setae; without pores; with anterior mediiodorsal area smooth, with transverse striae across rest of mediiodorsal surface; broad reticulations on mediolateral areas; mediiodorsal and marginal setae short, slightly lanceolate, smooth. Genital plate with transverse striae; ventral plate with faint transverse striae; area anterior to posterior medioventral setae bare; coxae III and IV striate longitudinally; area anterior to coxae III with areolae. Coxae I and II striate; coxal I area with many minute areolae; area laterad of coxa II with large areolae arranged longitudinally. Length of body including rostrum 300µ.

**Male**

Similar to female. Length of body including rostrum 274µ.

This species was originally described from specimens collected on a composite plant in California. Arizona records are: *ex Ephedra fasciculata* A. Nels., Yuma, March 23 and September 22, 1961, and February 18 and June 20, 1963; *ex Aplopappus spinulosus* (Pursh) DC., Sells, October 5, 1960.
*Brevipalpus homalus* Pritchard and Baker

Fig. 42, Genital-ventral region of female.
Fig. 43, Coxal II and III Region.

Fig. 44, Dorsal body setae of female.

*Brevipalpus homalus* Pritchard and Baker

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Brevipalpus homalus Pritchard and Baker
Fig. 45, Dorsum of male.
Brevipalpus ipomoeae, new species
(Figs. 46-49)

Brevipalpus ipomoeae is related to *B. homalus* Pritchard and Baker, and is differentiated by the lanceolate, strongly serrate body setae, and in lacking areolae in the coxal II area of the female.

**Female**

Rostrum broadly triangular, reaching to end of femur I; palpus with a single seta and rod on terminal segment. Femora I and II only slightly broader than other segments, each with a broadly lanceolate, serrate seta; tarsi I and II each with a single sensory rod distally, claws well developed. Rostral shield with a few striae, and with few areolae on posterior margin. Propodosoma with dorsomedian area nearly smooth, with few weak striae; with large reticulations mediolaterally; setae subequal in size slightly lanceolate, and serrate. Hysterosoma with anterior dorsomedian area smooth, with transverse striae on dorsomedian area posterior to this, with broad reticulations on mediolateral areas, mediodorsal and anterior lateral setae only slightly lanceolate, serrate; all setae short. Venter as in *Brevipalpus homalus*; genital plate with transverse striae; ventral plate only lightly striated; area anterior to posterior medioventral setae without striae; few striae anterior to coxae III. Few striae on venter of propodosoma; no areolae present. Length of body including rostrum 319μ.

**Male**

Similar in pattern to female. Length of body including rostrum 261μ.

**Nymph**

Body setae short, lightly lanceolate and serrate, the propodosomal setae strongest.

**Holotype**


**Paratypes**

Two females and three males with the above data. Nymphs with the above data were also studied.
Fig. 46, Coxal I and II regions of female.

Fig. 47, Dorsal body setae of female.

Fig. 48, Femora I ca.

Fig. 49, Posterior marginal seta of male.

*Brevipalpus ipomoeae*, new species.
Brevipalpus aeoloides Pritchard and Baker


This species is known only from Arizona. Type material was collected on Franseria deltoidea Torr. at Phoenix. It was also collected on Encelia farinosa Gray at Glendale by F. F. Bibby. Other collections are: ex Franseria deltoidea Torr., Gila Bend, April 13, 1961, Sells, October 5, 1960, and Picacho, April 2, 1962; ex Pluchea sericea (Nutt.) Coville, Yuma, September 2, 1952, December 23, 1959, and January 27, 1960; and ex Psilostrophe cooperi (Gray) Greene, Sells, October 5, 1960.

Brevipalpus aeolus Pritchard and Baker


Brevipalpus psilostropheae, new species  
(Figs. 50-52)

This species is closely related to Brevipalpus asterae, new species, and can be differentiated by having transverse striae ventrally, rather than having reticulations as in B. aster. Also, the reticulate pattern of B. aster in the area anterior to the posterior medioventral setae is longitudinal, while that of this new species is transverse, and this area is so lightly sculptured as to appear almost bare. The rostrum is also much longer.

Female

Rostrum long, reaching to center of genu I; terminal segment of palpus with only two setae. Femora I and II each with a small, slightly lanceolate seta; other dorsal leg setae similar but shorter; tarsus II with a single rodlike seta; claws well developed. Rostral shield with longitudinal striae on median lobes and few areolae on posterior margin. Reticulate pattern covering all but lateral margins even dorsomedially, and with longitudinal reticulations in dorsolateral grooves; setae short, slightly lanceolate, nude. Hysterosoma with reticulate pattern on anterior dorsomedial area; region behind second pair of dorsomedial setae with transverse striae; with elongate reticulations in dorsolateral grooves; with transverse striae on lateral margins; hysterosomal setae as on propodosoma. Genital plate with transverse striae; striae of ventral plate less broken. Area between ventral plate and posterior medioventral setae with transverse striae; area anterior to this with very faint striae, appearing bare. Striae on venter of propodosoma with few areolae. Length of body including rostrum 312µ.

Male

In general, similar to female. Striae lacking anterior to posterior medioventral setae; few transverse striae on venter of propodosoma. Length of body including rostrum 255µ.

Nymph

All dorsal and marginal setae tiny.

Holotype


Paratypes

Twenty seven females and one male with the above data. One nymph, with the above data, was also studied.
Brevipalpus psilostropheae, new species.

Fig. 50, Dorsum of female.
*Brevipalpus psilostropheae*, new species.

Fig. 51, Genital-ventral region of female.
Brevipalpus psilostropheae, new species.

Fig. 52, Dorsum of male.
Brevipalpus artemesiae, new species
(Figs. 53-55)

This species is closely related to Brevipalpus aeolus Pritchard and Baker, but has shorter, narrower and much less serrated setae. The first pair of propodosomal setae are about two-thirds as long as the distance between them, whereas in B. aeolus these setae are longer than the distance between them. Nymphs of the two species are similar; the posterior marginal setae of B. artemesia, however, are much more slender.

**Female**

Body ovate. Rostrum reaching to distal end of femur I; terminal segment of palpus with one sensory and one rodlike setae. Femora I and II each with a narrowly lanceolate and lightly serrate seta; other dorsal leg setae whiplike, smooth; tarsus II with single rodlike sensory seta; claws well developed. Rostral shield with few median longitudinal striae and few areolae on posterior margin. Propodosoma with dorsocentral area reticulate; reticulations elongated dorsolaterally; setae long, slightly lanceolate and serrate, anterior pair about two thirds as long as distance between them. Hysterosoma with six pairs of marginal setae; pores lacking; anterior dorsocentral area reticulate; irregular transverse striae posterior to this; elongate reticulations in dorsolateral groove; transverse striae on margin of body; setae similar to those of propodosoma but much shorter. Genital and ventral plates with strong transverse striae; striae anterior to ventral plate; area anterior to posterior medioventral setae smooth. Length of body including rostrum 320µ.

**Male**

Similar to female. Length of body including rostrum 294µ.

**Nymph**

Dorsal and marginal body setae long, slender, serrate, those on posterior margin shorter.

**Holotype**


**Paratypes**

Four females and two males with the above data.

Nymphs with the above data were also studied.

This species was also collected on Artemisia tridentata Nutt. at Grand Canyon, September 8, 1961, and on Grindelia aphanactis Rydb., Flagstaff, September 6, 1961.
Brevipalpus artemesiae, new species.

Fig. 53, Dorsum of female.
Brevipalpus artemesiae, new species.

Fig. 54, Genital-ventral region of female.
Brevipalpus artemesiae, new species.

Fig. 55, Dorsum of male.
**Brevipalpus asterae**, new species
(Figs. 56-58)

This species is related to *Brevipalpus punicans* Pritchard and Baker, but differs in that the reticulate pattern covers the dorsocentral and dorsolateral surfaces of the propodosoma, as well as the anterior dorsocentral area of the hysterosoma. The terminal segment of the palpus has two setae.

**Female**

Body ovate. Rostrum short, triangular, not reaching to end of femur I; terminal segment of palpus with a sensory seta and a short rodlike seta. Femora I and II each with a short, slender, slightly lanceolate seta; other dorsal leg setae similar, but smaller; tarsus II with a single sensory rod; claws well developed. Rostral shield lightly sculptured, with few striae on median lobes and few areolae along posterior margin. Propodosoma evenly reticulate except for transverse striae on lateral margins; reticulations elongate in dorsolateral groove; setae slightly lanceolate, short and smooth. Hysterosoma with six pairs of marginal setae; without pores; with reticulations on anterior dorsocentral area and transverse striae posterior to this area; reticulations elongate in dorsolateral groove; transverse striae on lateral margins of body; setae similar to propodosomal setae. Genital and ventral plates with strong transverse striae; striae covering entire venter of hysterosoma and propodosoma. Length of body including rostrum 287μ.

**Male**

Similar to female. Length of body including rostrum 255μ.

**Nymph**

All dorsal and marginal setae short and subequal in length.

**Holotype**


**Paratypes**

Twenty seven females and two males with the above data.

Nymphs with the above data were studied.

Brevipalpus asterae, new species.

Fig. 56, Dorsum of female.

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Brevipalpus asterae, new species.

Fig. 57, Genital-ventral region of female.
Brevipalpus asterae, new species.

Fig. 58, Dorsum of male.
**Tenuipalpus Donnadieu**


This genus is recognized by the following characters: The podosoma is very broad, and the opisthosoma narrow; there is usually a pair of long, flagellate setae on the posterior margin of the body; the palpus has one, two, or three segments; the ventral plate is lacking; and the leg segments are characteristically wrinkled.

**Tenuipalpus trisetosus**, new species

(Figs. 59-60)

This species is separated from all others in the genus in having three pairs of anterior medioventral setae and three pairs of posterior medioventral setae on the podosoma.

**Female**

Palpus three-segmented, with a single seta on terminal segment; rostrum with ventral setae. Femora I and II with slightly lanceolate setae; genua I and II each with two small setae; rodlike sensory setae of tarsus I and II short. Rostral shield strongly bifurcate, without sculpture, with lateral angulations. Propodosoma with light, longitudinal striae; first two pairs of setae short, lanceolate; third pair about three times as long. Hysterosoma with few striae on dorsum; without special development anterior to coxa III; marginal setae, except flagellate seta, short, lanceolate, about as long as distance between their bases. Podosoma ventrally with three pairs of posterior and three pairs of anterior medioventral setae. Length of body 390µ.

**Male**

Not known.

**Nymph**

Setal pattern similar to that of female, but setae much smaller.

**Holotype**


A single nymph, with the above data, was studied.

**Dolichotetranychus Sayed**


This genus is characterized by the following characters: The body is slender and bright red; the palpus is three-segmented; there is no rostral shield; the hysterosoma has two pairs of dorsocentral setae, one pair of dorsosub-lateral setae, and five pairs of dorsolateral setae.
*Tenuipalpus trisetosus*, new species.

Fig. 59, Dorsum of female.
'Tenuipalpus trisetosus,' new species.

Fig. 60, Venter of female.
Dolichotetranychus salinas Pritchard and Baker


This species was known only from California, New Mexico, and Maryland from saltgrass, *Distichlis*. It has been collected on *Distichlis stricta* (Torr.) Rydb. at Yuma, November 3, 1960, and May 23, 1961, and at Palm Canyon, Yuma County, March 16, and April 19, 1962.

Dolichotetranychus summersi Pritchard and Baker


This species was described from *Cynodon dactylon* (L.) Pers. in California. It has been found on the same host at Yuma, October 30, 1962.
BIBLIOGRAPHY


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