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NEW RECORDS AND SPECIES OF TETRANYCHIDAE AND TENUIPALPIDAE (ACARINA) FROM UTAH AND IDAHO

Donald M. Tuttle¹ and Edward W. Baker²

ABSTRACT.—Twenty-three species of spider mites (Tetranychidae) are recognized for Utah and Idaho; three of these are described as new: Bryobia neoribis, Pseudobryobia knowltoni, and Schizotetranychus agropyron. Eleven species of Tenuipalpidae are recorded.

Spider mites and false spider mites are relatively well known in only a few regions of the United States such as Arizona and California where economic and native plants have been carefully surveyed. Therefore, it was believed opportune to publish the following records of tetranychid mites from Utah and Idaho. These records were compiled from numerous collections made by George F. Knowlton, Professor Emeritus of Entomology at Utah State University, 1972-1975. Information on species other than these was taken from Pritchard and Baker (1955 and 1958) and Knowlton and Ma (1950).

A total of 24 species of Tetranychidae were determined; Bryobia neoribis, Pseudobryobia knowltoni, and Schizotetranychus agropyron are described as new. Eleven species of Tenuipalpidae were recorded.

Tetranychidae Donnadieu, 1875
Bryobia praetiosa Koch

Bryobia praetiosa Koch, 1836:8; Pritchard and Baker, 1955:26; Wainstein, 1960:102; Tuttle and Baker, 1968:6.

The clover mite (B. praetiosa) is one of the most common species and occurred as follows: Aesculus hippocastanum L. (horse chestnut) ex duff, Logan, Utah, 15 Apr 1973 and 2 May 1974; Agropyron desertorum (Fisch.) Schult. (crested wheatgrass), Duck Creek Camp (Kane Co.), Utah, 5 May 1973 and Holbrook, Idaho, 19 Oct 1972; Agropyron smithii Rydb. (western wheatgrass). Reese Valley (Chicken Creek Canyon), Utah (7,500 ft.), 19 May 1972; Artemisia nova A. Nels., Logan Canyon, Utah, 2 Jul 1973; Artemisia tridentata Nutt. (big sagebrush) ex duff, Logan, Utah, 14 Nov 1972; Chrysanthemum sp., Logan, Utah, 24 Oct 1973; Chrysanthemum nauseosus (Pall.) Britton (rabbitbrush), Logan Canyon, Utah, 5 Jun 1973 and Paradise, Utah, 6 Jun 1973; Chrysanthemus sp. ex duff, Snowville, Utah, 15 Nov 1972 and North Logan, Utah, 14 Nov 1972; grasses (not determined), 10 collections (some include duff) from Idaho and Utah, Feb-May 1973; Juniperus sp. ex duff, Black Pine Mt. (Curlew Valley), Idaho, 3 May 1974 and Juniper, Idaho, 15 Nov 1972; moss, Blacksmith Fork Canyon, Utah, 30 Apr and 2 May 1973; Ribes inerme Rydb. (gooseberry), Tony Grove Canyon (Cache Co.), Utah, 30 Jul 1974; and Sarcobatus vermiculatus Torr. (greasewood) ex duff, Wildcat Hills (Box Elder Co.), Utah, 18 Apr 1974. It was reported by Knowlton and Ma (1950) in Utah on alfalfa, sweetclover, and rabbitbrush.

Bryobia rubiiculus (Scheuten)
Sannio rubiculus Scheuten, 1857:104.
Bryobia rubiiculus: Tuttle and Baker, 1968:7.

Collections were made from Juniperus sp. ex duff, Black Pine (Oneida Co.), Idaho, 3 May 1973; Lonicera sp. (honeysuckle), Hyde Park, Utah, 16 May 1972; Populus tremuloides Michx. ex duff, Monte Cristo, Utah, 21 Jun 1973; Salix sp. ex duff, Mantua, Utah, 17 May 1973; and Sarcobatus vermiculatus Torr. (greasewood) ex duff, Wildcat Hills (Box Elder Co.), Utah, 18 Apr 1974.

Bryobia neoribis, n. sp.
Figs. 1-7

This species is related to Bryobia ribis Thomas, a European species, but differs in having more slender body setae, in having the inner coxal I seta about twice as long as the outer serrate seta, in having

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Fig. 1. *Bryobia neoribis*, n. sp.: 1, dorsum of female.

24 setae rather than 16 (as illustrated by Mathys 1957), and in having a long, slender seta on trochanter 1.

**Female.**—Body oval, rounded; rostrum of moderate length and width. Stylophore longer than wide and slightly indented anteriorly; peritremes broadly anastomosing distally. Propodosoma with anterior projections, inner projections longer than outer and distinctly incised to almost a single unit (Fig. 1). Dorsal setae elongate, serrate; dorsum covered with broad tuberculate ridges. Leg I slightly longer than body; other legs shorter; inner seta of coxa I long, slender, outer seta short and serrate; seta of trochanter slender with few serrations; femur I with 24 setae (Fig. 2); duplex setae of tarsi III and IV of equal length (Figs. 3-4).

Figs. 2-4. *Bryobia neoribis*, n. sp.: 2, femur, trochanter, and coxa I; 3, tarsus III; 4, tarsus IV.

Figs. 5-7. *Bryobia neoribis*, n. sp.: 5, anterior propodosomal projections; 6, anterior dorsal body seta; 7, seta.
Holotype.—Female USNM No. 3720, ex Ribes cereum Dougl., Willard Basin, 9,300 ft, Box Elder County, Utah, 28 Aug 1975.

Paratypes.—Thirteen females with the above data in the U.S. National Museum. Eleven nymphs were also collected at the same locality.

Additional collections were made from the same host at Monte Cristo, 9,000 ft, Rich County, Utah, 27 Aug 1975; and Logan Canyon, Utah, 30 Aug 1975.

_Pseudobryobia bakeri_ McGregor

_Pseudobryobia bakeri_ McGregor, 1950:366.
_Bryobia bakeri_: Pritchard and Baker, 1955:19.
_Pseudobryobia bakeri_: Baker and Tuttle, 1972:2.

A female was collected from moss material beneath _Artemisia_ sp. (sagebrush), Holbrook, Idaho, 17 May 1972.

_Pseudobryobia filifoliae_ (Tuttle and Baker)

_Bryobia filifoliae_ Tuttle and Baker, 1968:10.
_Pseudobryobia filifoliae_, Baker and Tuttle, 1972:2.

A female of this species was collected from duff of _Artemisia tridentata_ Nutt. (big sagebrush), Wildcat Hills (Box Elder Co.), Utah, 2 Oct 1972.

_Pseudobryobia knowltoni_, n. sp.

_Figs. 8-9_.

This species is similar to _Pseudobryobia curiosa_ Summers (1953) but differs in having the peritremes anastomosing distally, in having the stylophore not deeply cleft anteriorly, and in having the dorsal body setae with many more spines than those of _curiosa_.

_FEMALE._ Body broadly rounded; rostrum elongate; palpal femoral seta short, lanceolate-serrate. Stylophore broadly rounded anteriorly or only slightly indent ed, about as long as wide; peritremes an-
astomosing distally. Propodosoma without anterior projections; anterior propodosomal setae not set on strong tubercles, inner pair smaller than outer pair; dorsum of propodosoma covered with small tubercles. Hysterosoma with few transverse striae; dorsal setae broadly clavate, longer than wide; striae in area of D₃ setae either completely transverse or longitudinal lateral of setae as in curiosa; no distinct dorsal aperture between setae D₁ as in curiosa; D₄ setae same distance apart as D₃ setae. Empodium simple pad, with single pair of tenent hairs; claws strong and curved, each with single pair of tenent hairs. Length of body 547 μ, including rostrum 667 μ; width about 670 μ.

**Holotype.**—Female, USNM No. 3721, from *Atriplex nuttallii* Wats. (salt sage) (duff), NW Cedar Hill, Curley Valley, Idaho, 6 Oct 1972 by G. F. Knowlton for whom the mite is named.

**Paratypes.** Three females with the above data and one female with the same data but collected 12 Oct 1972 in the U.S. National Museum. A single female was collected from the same host at Snowville, Utah, 12 Oct 1972.

**Petrobia (Petrobia) latens** (Müller)

*Acaeus latens* Müller, 1776:187.

**Petrobia latens** Pritchard and Baker, 1955:51; Wainstein 1960:134.

**Petrobia (Petrobia) latens**: Tuttle and Baker, 1968:71.

The brown wheat mite is a common species in Utah and Idaho occurring particularly on several grasses and other low-growing plants: *Artemisia tridentata* Nutt. (big sagebrush), Curlew Junction, Utah, 16 Dec 1969, Wildcat Hills (Curlew Valley), Utah, 17 May 1972, and Holbrook, Idaho (ex duff), 25 May and 2 Nov 1972; *Artemisia* sp., Samaria, Idaho, 2 Nov 1972; *Agropyron desertorum* (Fisch.) Schult. (crested wheatgrass), Chicken Creek Canyon (Juab Co.) and Ephraim, Utah, 19 May 1972, Duck Creek Camp (Kane Co.), Utah, 16 May 1973, Curlew National Grasslands (Curlew Valley), Idaho, 19 Oct 1972, Holbrook, Idaho, 25 Mar 1972, 12 and 17 May 1972, and Woodruff (Oneida Co.), Idaho, 2 Nov 1972 and 24 Apr 1973; *Agropyron smithii* Rydb. (western wheatgrass), Chicken Creek Canyon (Reese Valley), Utah (7,500 ft), 19 May 1972, Hardup, Utah, 14 Apr 1973, and Ephraim Canyon, Utah, 19 May 1972; *Chrysothamnus viscidiflorus* (Hook.) Nutt. (rabbitbrush), Holbrook, Idaho, 17 May 1972; *Elymus canadensis* L. (ryegrass), Malad, “Ida,” Idaho, 10 Apr 1973; *Juniperus sp.* ex duff, Black Pine Canyon (Oneida Co.), Idaho, 23 May 1974; and *Tetranychidium canescens* DC. (horsetailbrush), Holbrook, Idaho, 17 and 25 May 1972. Pritchard and Baker (1955) report it from Utah and Idaho. Knowlton and Ma (1950) recorded it from wheat and rye in Utah.

**Tenuipalpoides dorychaeta** Pritchard and Baker

**Tenuipalpoides dorychaeta** Pritchard and Baker, 1955:99; Tuttle and Baker, 1968:83.

This species was collected in Utah from an unknown host by G. F. Knowlton and Shi Chun Ma (Pritchard and Baker 1955).

**Eurytetranychus admes** Pritchard and Baker

**Eurytetranychus admes** Pritchard and Baker, 1955:110.

This species was collected in Utah on juniper by G. F. Knowlton (Pritchard and Baker 1955).

**Panonychus ulmi** (Koch)

*Tetranychus ulmi* Koch, 1936:11.

**Metaeurytetranychus ulmi:** Pritchard and Baker, 1955:128.

**Panonychus ulmi:** Wainstein. 1960:202.

Knowlton and Ma (1950) reported it from apple, pear, plum, and poplar in Utah.

**Schizotetranychus agropyron**, n. sp.

Figs. 11-14

This species is similar to *Schizotetranychus eremophilus* McGregor and *S. celtidis* Tuttle and Baker in having the first three pairs of dorsocentral hysterosomal setae shorter than the dorsolateral setae, but differs in having a U-like stria pattern in the dorsocentral area of the propodosoma.

**Female.**—Body elongate; rostrum long, reaching base of Tibia I; terminal sensillum about 2 times as long as broad; peritremes gently hooked distally. Dorsal striae of propodosoma U-shaped in central.
area and longitudinal laterally, transverse on central area of hysterosoma and irregularly longitudinal laterally. Second pair of propodosomal setae slightly longer than first and second pairs; first three pairs of dorsocentral hysterosomal setae about three-fourths as long as dorsolateral setae and one-half as long as distance between their bases; fourth and fifth pairs of dorsocentrals as long as dorsolaterals \( L_3 - L_4 \); \( L_5 \) one-half as long as \( L_3 - L_4 \); humeral setae longer than others. All empodial claws split and strong. Tarsus I with slender solenidion about as long as segment, with four tactile setae proximal to duplex setae; tibia I with eight tactile setae and one shorter solenidion. Tarsus II with one dorsal proximal seta; tibia II with five tactile setae; genu II with five tactile setae, femur II with seven tactile setae. Tarsus III with dorsal solenidion shorter than segment; tibia III with five tactile setae; leg IV similar to leg III with some setae longer. Striae transverse on genital flap and area anterior to flap. Length of body 422 \( \mu \); including rostrum 460 \( \mu \); width 250 \( \mu \).

**Holotype.**—Female, USNM No. 3722, \( cx \) *Agropyron desertorum* (Fisch.) Schutt., Logan Canyon, Utah, 26 Apr 1973.

**Paratypes.**—Two females with the above data in the U.S. National Museum.

*Schizotetranychus elymus* McGregor

*Schizotetranychus elymus* McGregor, 1950:310; Pritchard and Baker. 1955:254; Tuttle and Baker, 1968:104.

This species was collected in Utah on unknown host by G. F. Knowlton (Pritchard and Baker 1955).

*Platyctetranychus libocedri* (McGregor)

*Tetranychus libocedri* McGregor, 1936:771; *Eotetranychus libocedri*: Tuttle and Baker. 1964: 20.

*Platyctetranychus libocedri*: Tuttle and Baker, 1968:106.

Specimens were collected from *Thuja occidentalis* L. (*arborvitae*), Logan, Utah, 24 Aug 1973. It was also collected by G. F. Knowlton in Utah on juniper and cedars (Pritchard and Baker 1955).
Eotetranychus perplexus (McGregor)
Tetranychus perplexus McGregor, 1950:298. Eotetranychus perplexus: Pritchard and Baker, 1955:175.

McGregor (1950) records this species from Cercocarpus sp. from Idaho.

Eotetranychus unicus Garman
Eotetranychus unicus Garman, in Pritchard and Baker, 1952:183; Pritchard and Baker, 1955:183.

Pritchard and Baker (1955) record this species on white birch, Utah.

Eotetranychus sp.
Three nymphs were collected from Artemisia tridentata Nutt. (big sagebrush), Cedar Hill (Curlew Valley), Utah, 17 May 1972.

Oligonychus (Oligonychus) ununguis (Jacobi)
Tetranychus ununguis Jacobi, 1905:239. Oligonychus ununguis: Tuttle and Baker, 1968:118.

This species is a pest of conifers throughout the world. It was collected in Utah by G. F. Knowlton on juniper, Crystal Springs, and arborvitaes at Farmington, Colorado blue spruce, Smithfield, 1933 (Knowlton and Ma 1950); red cedar, Beaver, 4 Aug 1954, ornamental juniper, Provo, 9 May 1957, and on Pfitzer juniper, Provo, 9 May 1957 (Pritchard and Baker 1955).

Oligonychus (Reckiella) pratensis (Banks)
Tetranychus pratensis Banks, 1912:97. Oligonychus pratensis: Pritchard and Baker, 1955:349; Tuttle and Baker, 1968:122.

This is a common species on grasses. It was found in Utah on aspen by G. F. Knowlton (Pritchard and Baker 1955). Knowlton and Ma (1950) reported it on corn at Magna, Utah and on “grass” at Franklin, Idaho, during November.

Oligonychus (Wainsteiniella) milleri (McGregor)
Paratetranychus milleri McGregor, 1950:343. Oligonychus milleri: Pritchard and Baker, 1955:280; Tuttle and Baker, 1968:119.

Pritchard and Baker (1955) record this species from Scots Pine, Logan, Utah. Tetranychus (Polynychus) canadensis (McGregor)

Septanichus canadensis McGregor, 1950:319. Tetranychus canadensis: Pritchard and Baker, 1955:393; Tuttle and Baker, 1968:130.

Specimens were taken on Fraxinus sp. (ash), St. George, Utah, 9 Jul 1958.

Tetranychus (Polynychus) polys Pritchard and Baker
Tetranychus polys Pritchard and Baker, 1955:396.

Tetranychus (Polynychus) polys: Tuttle and Baker, 1968:131.

This species was collected on Artemisia tridentata Nutt. (big sagebrush), Logan Canyon, 4 Sep 1972 and Atriplex nuttallii Wats. (salt sage), Wildcat Hills (Curlew Valley), Utah, 17 May 1972.

Tetranychus (Armenychus) pacificus McGregor
Tetranychus pacificus McGregor, 1919:657. Pritchard and Baker, 1955:388; Tuttle and Baker, 1968:131.

This species is an important pest of agriculture in the far western areas of the United States. Pritchard and Baker (1955) report it from Idaho (no hosts listed) and Knowlton and Ma (1950) list plum and rose as hosts from Utah.

Tetranychus (Armenychus) mcdanieli McGregor
Tetranychus mcdanieli McGregor, 1931:13; Pritchard and Baker, 1955:386; Tuttle and Baker, 1968:131.

This species is a pest of deciduous fruit trees in the northwestern United States. Pritchard and Baker (1955) and Knowlton and Ma (1950) report it from Utah on apple.

Tetranychus (Tetranychus) turkestanii Ugarov and Nikolski
Eotetranychus turkestanii Ugarov and Nikolski, 1937:28.
Tetranychus atlanticus McGregor, 1941:26. Pritchard and Baker, 1955:424.

Tetranychus turkestanii: Baker and Pritchard, 1953:213; Wainstein, 1960:154; Tuttle and Baker, 1968:128; Baker, 1968:1080.

This species is widespread throughout the world and had been known in North
America as *T. atlanticus*. It is more common on low-growing plants but may occur on some fruit trees. It has been found in Utah and Idaho (Pritchard and Baker 1955). Knowlton and Ma (1950) reported it from strawberry, alfalfa, ragweed, and celery in Utah.

*Tetranychus (Tetranychus) urticae* Koch

*Tetranychus urticae* Koch, 1836:10; Boudreaux and Dosse, 1963:353.

*Tetranychus telarius* (Linn.) of various authors. *Tetranychus* (*Tetranychus*) *urticae*: Tuttle and Baker, 1968:129.

These mites are found throughout the temperate areas of the world feeding on many hosts. It was found on *Agropyron desertorum* (Fisch.) Schult. (crested wheatgrass), Holbrook, Idaho, 25 Mar 1972 and *Chrysosplenium viscidiflorum* Nutt. (rabbitbrush), Holbrook, Idaho, 17 May 1972. Pritchard and Baker (1955) also report it in Utah and Idaho. It occurs on numerous crops and plants in Utah (Knowlton and Ma 1950).

**Tenuipalpidae** Berlese, 1913

*Aegyroptia baptus* Pritchard and Baker

*Pentamerimus baptus* Pritchard and Baker, 1952: 21.

*Aegyroptia baptus*: Pritchard and Baker, 1958: 181; Baker and Tuttle, 1964:21.

Four females were collected from *Chrysosplenium viscidiflorum* Nutt. (rabbitbrush), Holbrook, Idaho, 17 May 1972.

*Aegyroptia pseudoleptoides* (Baker and Pritchard)

*Pentamerimus pseudoleptoides* Baker and Pritchard, 1953b:357.

*Aegyroptia pseudoleptoides*: Pritchard and Baker, 1958:180.

This species is known only from Utah on *Bouteloua gracilis* (H.B.K.) Lag. (grama).

*Aegyroptia aletes* (Pritchard and Baker)

*Pentamerimus aletes* Pritchard and Baker, 1952:9. *Aegyroptia aletes*: Pritchard and Baker, 1958:183.

This species was collected from red cedar in Utah (Pritchard and Baker 1952).

*Pentamerimus erythreus* (Ewing)

*Tenuipalpus erythreus* Ewing, 1917:152.

*Pentamerimus erythreus*: Pritchard and Baker, 1958:188; Baker and Tuttle, 1964:30.

A female was collected from *Thuja occidentalis* L. (arborvitae). Logan, Utah, 24 Aug 1973. The species was also collected on juniper in Idaho (Pritchard and Baker 1958). Knowlton and Ma (1950) reported it from several evergreens in Utah and Idaho.

*Brevipalpus acolus* Pritchard and Baker

*Brevipalpus acolus* Pritchard and Baker, 1952:32; Baker and Tuttle, 1964:60.

A long series of males, females, and nymphs were collected from *Artemisia ludoviciana* Nutt. (sagebrush), Green Canyon, Utah, 2 Aug 1973.

*Brevipalpus homalus* Pritchard and Baker

*Brevipalpus homalus* Pritchard and Baker, 1952:25; Baker and Tuttle, 1964:54.

Mites were collected from *Artemisia nova* A. Nels. (sagebrush), Logan, Utah, 2 Jul 1973 and Monte Cristo, Utah, 21 Jun 1973.

*Brevipalpus phoenicis* (Geijskes)

*Tenuipalpus phoenicis* Geijskes, 1939:23.

*Brevipalpus phoenicis*: Pritchard and Baker, 1958:233.

A female was found on *Salix* sp., Logan, Utah, 4 Jul 1973.

*Brevipalpus porca* Pritchard and Baker

*Brevipalpus porca* Pritchard and Baker, 1958:208.

This species has been taken on mistletoe on Douglas fir at Bryce Canyon, Utah.

*Brevipalpus punicans* Pritchard and Baker

*Brevipalpus punicans* Pritchard and Baker, 1952: 24; Baker and Tuttle, 1964:38.

Twenty-seven females were taken from *Chrysosplenium viscidiflorum* (Hook.) Nutt. (rabbitbrush), Holbrook, Idaho, 17 May 1972.

*Dolichotetranychus carnea* (Banks)

*Siteropies carnea* Banks, 1906:140.

*Dolichotetranychus carnea*: Baker and Pritchard, 1956:361; Pritchard and Baker, 1958:251.

*Dolichotetranychus carnea* has been taken on *Muhlenbergia* and grass in Utah and Idaho.

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March 1976

TUTTLE, BAKER: ACARINA
Dolichotetranychus cracens Pritchard and Baker
Dolichotetranychus cracens Pritchard and Baker. 1958:253.

This species was found in Utah on Bouteloua gracilis (H.B.K.) Lag.
Other Species of Tetranychoid Mites
The following species were reported by Knowlton and Ma (1950) but have not been verified or seen by us: Oligonychus (Oligonychus) viridis (Banks), Eotetranychus willamaeteci (McGregor), and Pentamerismus nr. oregonensis McGregor.

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