

PLANT MITES (ACARI) OF THE FRENCH ANTILLES.

1. TETRANYCHOIDEA (PROSTIGMATA)

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TETRANYCHIDAE
TENUIPALPIDAE
TUCKERELLIDAE
SPIDER MITES
FALSE SPIDER MITES
CARIBBEAN
SCHIZOTETRANYCHUS KREITERI

SUMMARY: Twenty-three species of Tetranychoidea are reported from the French Antilles viz. 3 Tenuipalpidae, 18 Tetranychidae and 2 Tuckerellidae. One species of Tetranychidae, *Schizotetranychus kreiteri* Flechtmann, which is new to science, is described here.

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RÉSUMÉ : Nous signalons dans cette publication 23 espèces de Tetranychoidea des Antilles françaises : 3 Tenuipalpidae, 18 Tetranychidae et 2 Tuckerellidae. Une espèce de Tetranychidae, *Schizotetranychus kreiteri* Flechtmann, nouvelle pour la science, est également décrite.

Only a few species of Tetranychoidea were previously known from the French Antilles. GUTIERREZ & ETIENNE (1988) reported 10 species from Guadeloupe and Martinique viz. *Dolichotetranychus floridanus* (Banks) and *Brevipalpus phoenicis* (Geijskes) (Tenuipalpidae); *Oligonychus biharensis* (Hirst), *O. zae* (McGregor), *Mononychellus caribbeanae* (McGregor), *Tetranychus gloveri* Banks, *T. tumidus* Banks, *T. marianae* McGregor, *T. neocaledonicus* André and *T. urticae* Koch (Tetranychidae). SCHMUTTERER (1990) reported a few species from the Caribbean area without presenting their real geographic distribution. In this paper, 23 species are reported: 3

Tenuipalpidae, 18 Tetranychidae and 2 Tuckerellidae.

The following abbreviations are used in this paper: CIRAD-FLHOR (Centre International de Recherche Agronomique pour le Développement-Département de recherche sur les Fruits, Légumes et l'Horticulture, Martinique); CNPq (Conselho Nacional de Desenvolvimento Científico e Tecnológico, Brazil); ENSAM (Ecole Nationale Supérieure Agronomique de Montpellier, France); ESALQ (Escola Superior de Agricultura "Luiz de Queiroz", Piracicaba, Brazil); INRA (Institut National de la Recherche Agronomique; Centres de Recherche

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Antilles-Guyane et Montpellier). CF, GJM, JE and SK refer to the authors.

TENUIPALPIDAE

Brevipalpus obovatus Donnadieu

Brevipalpus obovatus DONNADIEU, 1875: 116

Specimens examined: **Guadeloupe**, Matouba, SK, April 1997, from *Thunbergia alata* (Acanthaceae).

Brevipalpus phoenicis (Geijskes)

Brevipalpus phoenicis (GEIJSKES, 1939): 230.

Specimens examined: **Marie-Galante**, Saint-Louis, GJM, March 1998, from *Ipomoea batatas* (Convolvulaceae); **Saint-Martin**: Oyster Pond, SK, March 1998, from *Abutilon indicum* (Malvaceae).

Brevipalpus trinidadensis Baker

Brevipalpus trinidadensis BAKER, 1949: 381.

Specimens examined: **Guadeloupe**: Le Moule, CF, Dec. 1997, from *Parthenium hysterophorus* (Asteraceae); **Martinique**: Anse Céron, CF, Dec. 1997, from *Hibiscus* sp. (Malvaceae); Le Marin, CF, Dec. 1997, from *Lantana* sp. (Verbenaceae); Tombeau des Caraïbes, CF, Dec. 1997, from *Tecoma stans* (Bignoniaceae).

For the synonymy of the above-mentioned species, see PRITCHARD & BAKER (1958).

TETRANYCHIDAE

Petrobia harti (Ewing)

Neophyllobius harti EWING, 1909: 405.

Specimens examined: **Martinique**, Macouba, CF, Dec. 1997, from *Oxalis* sp. (Oxalidaceae).

Eutetranychus banksi (McGregor)

Tetranychus banksi MCGREGOR, 1914: 358.

Specimens examined: **Guadeloupe**: Baillif, JE, April and June 1998, from *Citrus* sp. (Rutaceae); Gourbeyre, CF, Dec. 1997, from *Erythrina corallo-dendron* (Fabaceae); Marigot, SK, April 1997, from *Piscidia carthagenensis* (Fabaceae); Morne-à-Louis, SK, April 1997, from *Piper dilatatum* (Piperaceae); Pointe-Noire, GJM, April 1997, from *Erythrina* sp. (Fabaceae); **Martinique**: Case-Pilote, CF, Dec. 1997, from *Thespesia populnea* (Malvaceae); Le Marin, CF, Dec. 1997, from *Ricinus communis* (Euphorbiaceae); Fond-Boucher, SK, Dec. 1997, from *Ricinus communis* (Euphorbiaceae); Le François, Morne Gamelle, GJM, April 1997, from *Erythrina* sp. (Fabaceae); **Les Saintes, Terre-de-Haut**: centre-ville, GJM, March 1998, from *Manihot esculenta* (Euphorbiaceae); centre-ville, SK, March 1998, from *Ricinus communis* (Euphorbiaceae); Plage de Figuier, GJM, March 1998, from *Zizyphus mauritiana* (Rhamnaceae); Plage de Pompierre, SK, Jan. 1998, from *Codiaeum variegatum* (Euphorbiaceae).

Panonychus citri (McGregor)

Tetranychus citri MCGREGOR, 1916: 284.

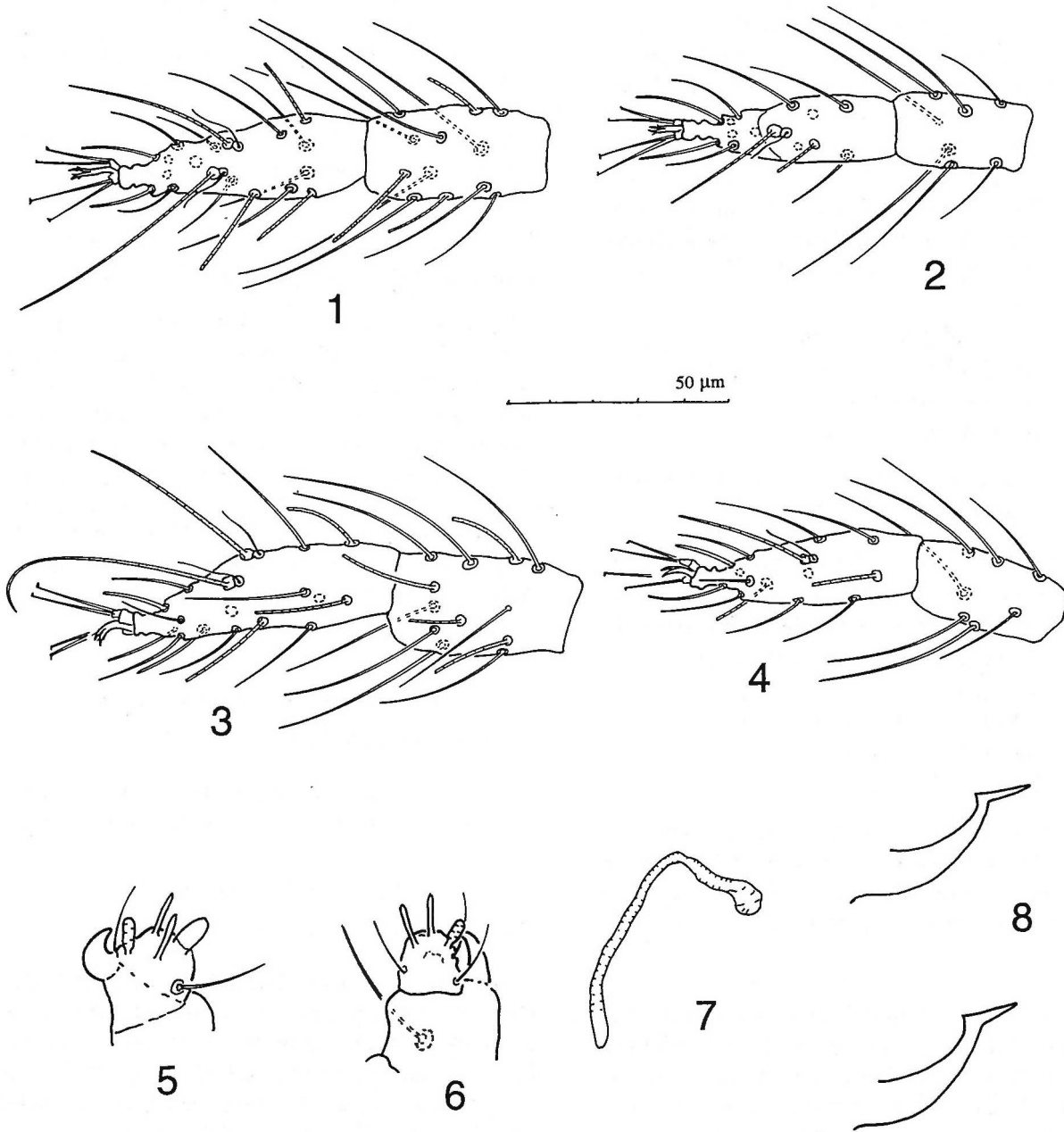
Specimens examined: **Guadeloupe**, Baillif, JE, April 1998, from *Citrus* sp. (Rutaceae).

Schizotetranychus kreiteri Flechtmann, sp. nov.

(Figs. 1–8)

DIAGNOSIS: *S. kreiteri* belongs to the group of *Schizotetranychus* having 9 tactile and 3 sensory setae on the female tibia I; with dorsal setae longer than longitudinal distances between their bases; aedeagus resembling that of *S. dahlbergiae* Meyer, 1974, broadly curving dorsad, with an elongate knob parallel to the main axis of the shaft.

FEMALE. – measurements in micrometers (n = 10): 244–354 long, 302–435 long including rostrum; 163–225 wide. Gnathosoma: stylophore broadly



Schizotetranychus kreiteri Flechtmann, sp. nov.

1. — Tibia and tarsus I of female. 2. — Tibia and tarsus II of female. 3. — Tibia and tarsus I of male. 4. — Tibia and tarsus II of male.
5. — Palpal tibia and tarsus of female. 6. — Palpal tibia and tarsus of male. 7. — Peritreme. 8. — Aedeagi. Figs 5-8 enlarged.

oval, rounded anteriorly. Palptarsus with spinneret twice as long as broad. Peritreme ending in a single bulb. Dorsum: all body setae longer than distances between bases of consecutive pairs. Striae longitudinal on the propodosoma and transverse on the hysterosoma; in a few specimens they are somewhat irregular between bases of setae e1. All dorsal striae lobed. Venter: striae on the genital flap transverse and arched; area anterior to flap and entire area between ventral setae with smooth and transverse striae. Legs: empodia with proximolateral chaetae. The leg chaetotaxy is unique:

- I - 2-1-9[8]-5-9+(3)-16+(3)+2 duplexes;
- II - 2-1-8[7]-5-7-12+(1)+1 duplex;
- III - 1-1-4-4-6-9+(1);
- IV - 1-1-3-4-7[6]-9+(1)

numbers refer to tactile setae; in brackets, alternative count; in parentheses, sensory setae.

MALE. – (n = 4) smaller than female, 244–291 long, including rostrum. Gnathosoma: palptarsal spinneret represented by a single line or slit. Leg chaetotaxy:

- I - 2-1[0] - 9-4[5] - 8 + (4)[3] - 12 + (3) + 2 duplexes;
- II - 2-1-6-5-7-11+(2)+1 duplex;
- III - 1-1-4-4-7-9+(1);
- IV - 1-1-3-4-7-9+(1)

Aedeagus: the shaft of the aedeagus curves broadly dorsad; the distal end forms a knob with and acute angulation anteriorly and a long, slender projection caudally, which runs parallel to the main axis of the shaft.

TYPE MATERIAL. – Male holotype, from *Centrosema pubescens* (Fabaceae), collected by SK, 24 April 1997, in Guadeloupe, Basse Terre, Vernou, entrée du Parc National; 1 male, 3 female paratypes, same data as for holotype; 2 male, 9 female paratypes collected from *Vigna* sp. (Fabaceae), by SK, 27 April 1997, in Guadeloupe, Basse Terre, Petit Bourg, Prise d'Eau; 1 male, 1 female, from *Cajanus cajan* (Fabaceae), collected by CF, Guadeloupe, Vieux Habitants, 16 Dec. 1997. All material on 7 microscopic preparations; 1 male and 2 female paratypes deposited in Muséum national d'Histoire naturelle, Paris (France); holotype and remaining paratypes in the collection of

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REMARKS. – Mites of this species are green when alive.

ETYMOLOGY. – This species is named in honor of the French acarologist Serge KREITER.

Mononychellus caribbeanae (McGregor)

Tetranychus caribbeanae MCGREGOR, 1950: 283.

Specimens examined: **Guadeloupe:** Lamentin, Roussel, SK, April 1997, from *Manihot* sp. (Euphorbiaceae); Petit-Bourg, Prise d'Eau, SK, April 1997, from *Manihot esculenta* (Euphorbiaceae); **Marie-Galante:** Saint-Louis and Sibley, GJM, March 1998, from *Manihot esculenta* (Euphorbiaceae); **Martinique:** Ducos, GJM, May 1997, from *Manihot esculenta* (Euphorbiaceae); Le François, GJM, April 1997, from *Manihot esculenta* (Euphorbiaceae); Marigot, GJM, May 1997, from *Manihot esculenta* (Euphorbiaceae).

Eotetranychus lewisi (McGregor)

Tetranychus lewisi MCGREGOR, 1943: 127.

Specimens examined: **Saint-Barthélemy,** Lorient, GJM, April 1998, from *Carica papaya* (Caricaceae).

Oligonychus biharensis (Hirst)

Paratetranychus biharensis HIRST, 1925: 69.

Specimens examined: **Guadeloupe:** Beausoleil, CF, Dec. 1997, from *Zizyphus mauritiana* (Rhamnaceae); Pointe-Noire, GJM, April 1997, from *Artocarpus alttilis* (Moraceae); Saint-François, CF, Dec. 1997, from *Zizyphus mauritiana* (Rhamnaceae); **Marie-Galante:** Grand-Bourg, SK, March 1998, from *Artocarpus alttilis* (Moraceae).

Oligonychus mcgregori (Baker & Pritchard)

Paratetranychus mcgregori BAKER & PRITCHARD, 1953: 209.

Specimens examined: **Guadeloupe,** Col des Mamelles, SK, April 1997, from *Inga ingoides* (Mimosaceae).

Oligonychus smithi Cromroy

Oligonychus smithi CROMROY, 1958: 61.

Specimens examined: **Marie-Galante**, Grand-Bourg, SK, March 1998, from *Psidium guajava* (Myrtaceae).

Tetranychus desertorum Banks

Tetranychus desertorum BANKS, 1900: 76.

Specimens examined: **Guadeloupe**: Caféière Birlo-ton, SK, April 1997, from *Amphilopium paniculatum* (Bignoniaceae); Col des Mamelles, SK, April 1997, from *Amphilopium paniculatum* (Bignoniaceae) and *Bidens alba* (Asteraceae); La Coque, SK, Jan. 1997, from *Bidens alba* (Asteraceae); Matouba, SK, April 1997, from *Impatiens* sp. (Balsaminaceae); Parc National, CF, Dec. 1997, from *Ipomoea* sp. (Convolvulaceae); Petit-Bourg, Domaine Duclos INRA, CF, Dec. 1997, from *Mussaenda erythrophylla* (Rubiaceae); Saint-Claude, SK, April 1997, from *Dunalia arborescens* (Solanaceae); Vernou, SK, April 1997, from *Centrosema pubescens* (Fabaceae); **Martinique**: Grande Anse, CF, Dec. 1997, from *Citharexylum fruticosum* (Verbenaceae).

Tetranychus gloveri Banks

Tetranychus gloveri BANKS, 1900: 76
Synonymy: *T. antillarum* Banks, 1917.

Specimens examined: **Guadeloupe**: Barbotteau, CF, Dec. 1997, from *Ricinus communis* (Euphorbiaceae); Col des Mamelles, SK, April 1997, from *Daphnopsis americana* (Thymelaeaceae); Lamentin, JE, Oct. 1992, from *Ricinus communis* (Euphorbiaceae); Le Moule, CF, Dec. 1997, from *Parthenium hysterophorus* (Asteraceae); Montée Mahault, SK, April 1997, from *Rivina humilis* (Phytolaccaceae); Pointe-Noire, CF, Dec. 1997, from *Codiaeum* sp. (Euphorbiaceae); Sainte-Anne, CF, Dec. 1997, from *Vigna* sp. (Fabaceae); Vieux-Bourg, CF, Dec. 1997, from *Ricinus communis* (Euphorbiaceae); **Marie-Galante**: Grand-Bourg, SK, March 1998, from *Amaranthus dubius* (Amaranthaceae); Guignès, SK, March 1998, from *Moghania strobilifera* (Fabaceae); Saint-Louis, Plage, GJM, March 1998, from *Ricinus communis*

(Euphorbiaceae) and *Coccus nucifera* (Arecaceae); **Martinique**: Balata, CF, Dec. 1997, from *Cosmos* sp. (Asteraceae); Basse-Pointe, SK, May 1997, from *Ricinus communis* (Euphorbiaceae); Ducos, GJM, May 1997, from *Manihot esculenta* (Euphorbiaceae); Fond-Boucher, CF, Dec. 1997, from *Ipomoea* sp. (Convolvulaceae), from *Merremia aegyptia* (Convolvulaceae) and *Ricinus communis* (Euphorbiaceae); Fort-de-France, GJM, April 1997, from *Amaranthus* sp. (Amaranthaceae); Grande Anse, CF, Dec. 1997, from *Ricinus communis* (Euphorbiaceae); La Trinité, GJM, April 1997, from an unknown plant, and CF, Dec. 1997, from *Vigna* sp. (Fabaceae); Le Diamant, SK, May 1997, from *Cecropia peltata* (Moraceae); Le François, GJM, April 1997, from *Hibiscus abelmoschus* (Malvaceae); Le François, Morne Gamelle, SK, April 1997, from *Ipomoea* sp. (Convolvulaceae); Le Lamentin, GJM, April 1997, from *Leonotis nepetifolia* (Lamiaceae); Le Lamentin, Petit-Morne CIRAD, SK, April 1997, from *Maranta* sp. (Marantaceae) and *Gossypium hirsutum* (Malvaceae), and, CF, Dec. 1997, from *Ipomoea* sp. (Convolvulaceae); Le Marin, CF, Dec. 1997, from *Priva lappulacea* (Verbenaceae) and, GJM, May 1997, from *Erythrina* sp. (Fabaceae); Le Précheur, CF, Dec. 1997, from *Commelina diffusa* (Commelinaceae) and *Laportea aestuans* (Urticaceae); Macouba, CF, Dec. 1997, from *Calopogonium mucunoides* (Fabaceae); Trois-Ilets, CF, Dec. 1997, from *Synedrella nodiflora* (Asteraceae); Vauclin, GJM, May 1997, from *Brassica oleracea* (Brassicaceae); **Saint-Barthélemy**: Anse Maréchal, GJM, April 1998, from *Livistona* sp. (Arecaceae); Marie-Barthe, SK, April 1998, from *Anthurium* sp. (Araceae); **Saint-Martin**: Marigot, GJM, March 1998, from *Bougainvillea* sp. (Nyctaginaceae); Pic de Paradis, SK, March 1998, from *Pedilanthus tithymaloides* (Euphorbiaceae); **Les Saintes, Terre-de-Haut**: centre-ville, GJM, March 1998, from *Amaranthus dubius* (Amaranthaceae); Stade, GJM, March 1998, from *Terminalia catappa* (Combretaceae).

Tetranychus lombardini Baker & Pritchard

Tetranychus lombardini BAKER & PRITCHARD, 1960: 551.

Specimens examined: **Saint-Martin**, Oyster Pond, GJM, March 1998, from *Jatropha* sp. (Euphorbiaceae).

Tetranychus marianae McGregor

Tetranychus marianae MCGREGOR, 1950: 291.

Specimens examined: **Guadeloupe**, Beausoleil, CF, Dec. 1997, from *Ricinus communis* (Euphorbiaceae); Goyave, JE, April 1998, from *Passiflora edulis* (Passifloraceae); Morne-à-Louis, SK, April 1997, from *Centrosema pubescens* (Fabaceae); Parc National, CF, Dec. 1997, from *Centrosema pubescens* (Fabaceae) and *Sida* sp. (Malvaceae); Pigeon, SK, April 1997, from *Cajanus cajan* (Fabaceae); Pointe-Noire, CF, Dec. 1997, from *Annona muricata* (Annonaceae); Vieux-Habitants, CF, Dec. 1997, from *Cajanus cajan* (Fabaceae); **Marie-Galante**: Le Coq, SK, March 1998, from *Acalypha wilkesiana* (Euphorbiaceae); Rabi, SK, March 1998, from *Ipomoea* sp. (Convolvulaceae); Siblet, SK, March 1998, from an unidentified Bignoniaceae; **Martinique**: Anse Coulevre, CF, Dec. 1997, from *Sida* sp. (Malvaceae); Le Précheur, CF, Dec. 1997, from *Petiveria alliacea* (Phytolaccaceae); Trois-Ilets, CF, Dec. 1997, from 2 unknown plants; **Saint-Barthélemy**: Lorient, GJM, April 1998, from *Petiveria alliacea* (Phytolaccaceae) and SK, April 1998, from *Rivina humilis* (Phytolaccaceae).

Tetranychus mexicanus (McGregor)

Septanychus mexicanus MCGREGOR, 1950: 323.

Specimens examined: **Guadeloupe**: Baie-Mahault, Belcourt, JE, Oct. 1998, from *Codiaeum variegatum* (Euphorbiaceae); Gosier, CF, Dec. 1997, from *Citrus* sp. (Rutaceae); Lamentin, JE, Jul. 1998, from *Citrus* sp. (Rutaceae); Petit-Bourg, JE, Nov. 1994, from *Ptychosperma macarthurii* (Arecaceae); Pointe-Noire, SK, Jan. 1998, from *Codiaeum variegatum* (Euphorbiaceae); **Marie-Galante**: Grand-Bourg, GJM, March 1998, from *Alocasia* sp. (Araceae); Saint-Louis, SK, March 1998, from *Crotalaria retusa* (Fabaceae); **Martinique**: La Trinité, CF, Dec. 1997, from *Bauhinia* sp. (Fabaceae); Le Lamentin, Petit Morne CIRAD, GJM, April 1997, from *Codiaeum* sp. (Euphorbiaceae); Pointes des Sables, GJM, April 1997, from *Passiflora edulis* (Passifloraceae); **Saint-Barthélemy**: Lorient, GJM, April 1998, from *Melicoccus bijugatus* (Sapindaceae); Marie-Barthe, SK, April 1998, from *Roystonea regia* (Arecaceae); **Saint-**

Martin: Marigot, JE, Jan. 1994, from *Passiflora edulis* (Passifloraceae).

Tetranychus neocaledonicus André

Tetranychus neocaledonicus ANDRÉ, 1933: 302.

Specimens examined: **Guadeloupe**: Col des Mamelles, SK, April 1997, from *Ipomoea* sp. (Convolvulaceae); Ferry, GJM, April 1997, from *Ricinus communis* (Euphorbiaceae); Gosier, CF, Dec. 1997, from *Erythrina corallodendron* (Fabaceae); La Jaille, CF, Dec. 1997, from *Ricinus communis* (Euphorbiaceae); Lamentin, JE, April 1992, from *Sechium edule* (Cucurbitaceae); Pointe-Noire, GJM, March 1997, from *Erythrina* sp. (Fabaceae); Pointe-à-Pitre, SK, April 1997, from *Centrosema pubescens* (Fabaceae); Sainte-Anne, SK, April 1997, from *Cajanus cajan* (Fabaceae); Vieux-Habitants, SK, April 1997, from *Zizyphus mauritiana* (Rhamnaceae); **Marie-Galante**: Grand-Bourg, GJM, March 1998, from *Ricinus communis* (Euphorbiaceae); Rabi, SK, March 1998, from *Solanum torvum* (Solanaceae); **Martinique**: La Trinité, CF, Dec. 1997, from *Clerodendron* sp. (Verbenaceae); Saint-Pierre, CF, Dec. 1997, from *Ricinus communis* (Euphorbiaceae); Trois-Ilets, SK, May 1997, from *Gliricidia sepium* (Fabaceae); **Saint-Barthélemy**: Anse Maréchal, SK, April 1998, from *Citharexylum fruticosum* (Verbenaceae); Morne Saint-Jean, GJM, April 1998, from *Zizyphus mauritiana* (Rhamnaceae); Saint-Jean, SK, April 1998, from *Asystasia gangetica* (Acanthaceae).

Tetranychus turkestanii (Ugarov and Nikolski)

Eotetranychus turkestanii UGAROV & NIKOLSKI, 1937: 28.
Synonymy: *Tetranychus atlanticus* McGregor, 1941: 26.

Specimens examined: **Marie-Galante**, Sainte-Croix, SK, March 1998, from *Citharexylum fruticosum* (Verbenaceae).

Tetranychus urticae Koch

Tetranychus urticae KOCH, 1836: 10.

Specimens examined: **Saint-Barthélemy**, Saint-Jean, GJM, April 1998, from *Tecoma stans* (Bignoniaceae).

Tetranychus yusti McGregor

Tetranychus yusti MCGREGOR, 1955: 368.

Specimens examined: **La Désirade**: Baie-Mahault, SK, March 1998, from *Zizyphus mauritiana* (Rhamnaceae); **Guadeloupe**: Pointe des Châteaux, CF, Dec. 1997, from *Canavalia maritima* (Fabaceae); **Martinique**: La Trinité, Pointe Jean-Claude, SK, April 1997, from *Ricinus communis* (Euphorbiaceae); Le Lamentin, Petit Morne CIRAD, CF, Dec. 1997, from *Holmskioldia sanguinea* (Verbenaceae); Trois-Ilets, CF, Dec. 1997, from *Musa* sp. (Musaceae); **Saint-Barthélémy**: Anse des Flamands, GJM, April 1998, from *Citharexylum fruticosum* (Verbenaceae) and *Leonotis nepetaefolia* (Lamiaceae).

For the synonymy of the species of Tetranychidae, see BOLLAND *et al.* (1998).

TUCKERELLIDAE

Tuckerella ornata (Tucker)

Tuckerella ornata (TUCKER, 1926): 1.

Specimens examined: **Guadeloupe**: Bouillante, Malendure, SK, Dec. 1997, from *Mangifera indica* (Anacardiaceae); **Saint-Martin**: Pic de Paradis, SK, March 1998, from *Annona muricata* (Annonaceae).

Tuckerella pavoniformis (Ewing)

Tuckerella pavoniformis (EWING, 1922): 106.

Specimens examined: **Marie-Galante**: Plage de Saint-Louis, SK, March 1998, from *Lantana camara* (Verbenaceae) and *Turnera ulmifolia* (Turneraceae); **Saint-Martin**: Pic de Paradis, SK, March 1998, from *Annona muricata* (Annonaceae).

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