PROC. ENTOMOL. SOC. WASH.
105(3), 2003, pp. 698–707

# REVISION OF NORTH AMERICAN *ALEIODES* WESMAEL (PART 7): THE *COMPRESSOR* HERRICH-SCHAEFFER, *UFEI* (WALLEY), *GRESSITTI* (MUESEBECK) AND *PROCERUS* WESMAEL SPECIES-GROUPS (HYMENOPTERA: BRACONIDAE: ROGADINAE)

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*Abstract.*—Six North American species in four species-groups of the genus *Aleiodes* are treated. The *compressor* (Herrich-Schaeffer) species-group includes *A. palmatus* (Walley), **new combination** and ***A. palmatoides*, new species**; the *ufei* (Walley) species-group includes only *A. ufei* (Walley), **new combination**; the *gressitti* (Muesebeck) species-group includes ***A. lissos*, new species**; and the *procerus* species-group includes *A. granulatus* (DeGant), **new combination**, and ***A. angustipennis*, new species**. Other new combinations proposed are: *A. alighurensis* (Quadri), **new combination**; *A. compressor* (Herrich-Schaeffer), **new combination**; *A. gressitti* (Muesebeck), **new combination**; and *A. narangae* (Rohwer), **new combination**.

*Key Words:* Hymenoptera, Braconidae, parasitoids

The rogadine braconid genus *Aleiodes* Wesmael is worldwide in distribution but is particularly species-rich in the Holarctic Region. *Aleiodes* is well diversified in North America, with at least 90 species in the United States and Canada (S. Shaw et al. 1997). This study is the seventh paper in a series on *Aleiodes* species-groups, intended to provide a complete revision of the genus for North America (see S. Shaw et al. 1997, 1998a, 1998b; Marsh and S. Shaw 1998, 1999, 2001). The four groups covered here are small, with only 13 included Holarctic species, six of which occur in North America. This paper treats several minor and unrelated groups that are not frequently encountered, but nevertheless must be treated to complete our revision of North American species. For convenience, these are being consolidated into one paper. Because our intent is to provide a revision of the North American species, species treatments are limited to the Nearctic fauna.

*Aleiodes* species are koinobiont endoparasitoids of lepidopterous larvae, especially macrolepidoptera of the superfamilies Noctuoidea and Geometroidea, and to a lesser extent, Arctioidea, Sphingoidea, and Papilionoidea (S. Shaw et al. 1997). The method of parasitism, unique to the tribe Rogadini, is noteworthy: the *Aleiodes* larva completes its feeding and pupates within the shrunken and mummified remains of the host caterpillar. In all known cases, the form of the mummy caused by a particular *Aleiodes* species is characteristic for that host and

parasitoid, so mummified remains are of considerable diagnostic value and should be retained with the parasitoid when reared. For a more complete discussion of *Aleiodes* biology, readers may refer to M. Shaw (1983, 1994), M. Shaw and Huddleston (1991), S. Shaw (1995) and S. Shaw et al. (1997). Very little is know about the biology of the species of the groups included in this paper, but the few records indicate parasitism of noctuid and arctiid larvae.

## Methods

Species covered in this paper can be identified as members of the subfamily Rogadinae using the keys of S. Shaw (1995), M. Shaw and Huddleston (1991), or Sharkey (1997). Our definition of *Aleiodes* follows that of S. Shaw (1993), S. Shaw et al. (1997) and van Achterberg (1991). Specimens can be determined as *Aleiodes* using the key of Shaw (1997). The species-groups of North American *Aleiodes* can be identified using the key provided in S. Shaw et al. (1997). Fortier (1997) and Fortier and Shaw (1999) provided a cladistic analysis of the *Aleiodes* species-groups.

Terminology follows that used for *Aleiodes* by S. Shaw et al. (1997), S. Shaw (1993), and Marsh (1989). Microsculpture terminology follows that of Harris (1979). Wing vein terminology agrees with the system adopted by Wharton et al. (1997). A labeled diagram of wing veins was provided by S. Shaw et al. (1997).

Acronyms for collections where type material is deposited are as follows: CNC (Canadian National Collection, Ottawa, Ontario, Canada), CUI (Cornell University, Ithaca, New York), FSCA (Florida State Collection of Arthropods, Gainesville, FL), MSU (Michigan State University, East Lansing, MI), NCDA (North Carolina Department of Agriculture, Raleigh, NC); RMSEL (Rocky Mountain Systematic Entomology Laboratory, University of Wyoming, Laramie, WY), UCD (University of California, Davis, CA), UCR (University of California, Riverside, CA), UK (University of Kansas, Lawrence, KS), USNM (National Museum of Natural History, Smithsonian Institution, Washington, DC).

### *Aleiodes compressor* Species-Group

Included species.—*A. compressor* (Herrich-Schaeffer 1838), **new combination** (Europe); *A. aligharensi* (Quadri 1933), **new combination** (India, Spain); *A. palmatus* (Walley 1941), **new combination** (North America); *A. palmatoides*, new species.

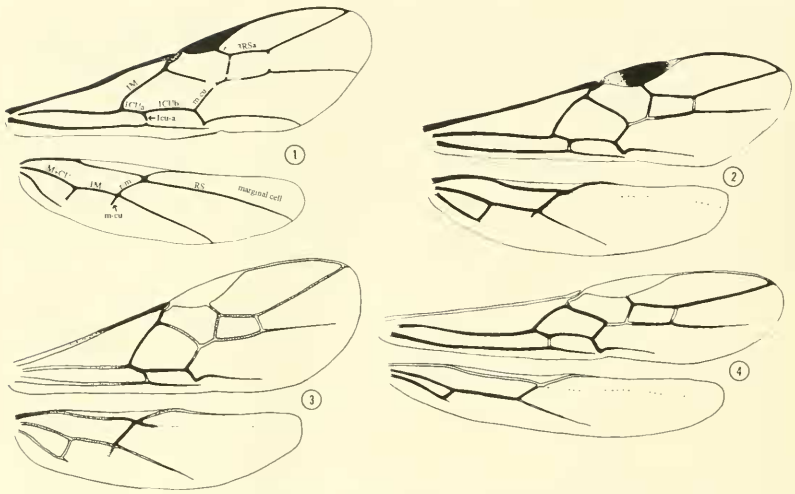
Diagnostic characters.—First metasomal tergum (petiole) parallel-sided (Fig. 8) or nearly so, apex of metasoma laterally compressed in some females (Fig. 6); hind wing vein RS sinuate, marginal cell narrowest in middle (Fig. 2).

Comments.—Species of this group are easily distinguished by the parallel-sided petiole, compressed metasoma, and form a monophyletic group within *Aleiodes* (Fortier and S. Shaw 1999). These species have been previously placed in the genus *Petalodes* Wesmael; however, van Achterberg (1991) synonymized this genus with *Aleiodes*. *Aleiodes ufei* (Wallley) was also included in *Petalodes* based upon the nearly parallel-sided petiole, but it has distinctly different venation in the hind wing and is placed in its own species-group (see Fortier and S. Shaw 1999).

M. Shaw (1994) stated that the European species, *A. compressor*, "has a blade-like gaster and parasitizes a common geometrid that lives concealed in spun leaves in its spring generation, and later in the summer a notodontid living in similar spun leaf packets." If the compressed metasoma (gaster) is a useful adaptation for getting at concealed hosts, then this may explain the convergent evolution of this feature in the *ufei* group.

## Key to the North American Species of the *Compressor* Species-Group

1. Apex of metasomal terga 3–6 brown; lateral mesonotal lobes usually brown . . . . . *palmatoides*, new species




Figs. 1–4. Wings of *Aleiodes* species. 1, *A. ufei*. 2, *A. palmatoides*. 3, *A. lissos*. 4, *A. angustipennis*.

— Metasomal terga 3–6 entirely orange; lateral mesonotal lobes orange . . . . . *palmatus* (Walley)

### *Aleiodes palmatoides* Marsh and Shaw, new species
(Fig. 2)

Female.—*Body color:* head including antenna and mouth parts honey yellow, ocellar triangle black; mesosoma honey yellow, with lateral mesonotal lobes and pronotum, mesopleuron and propodeum dorsally brown; metasoma honey yellow, first and second terga brown laterally, terga 3–5 brown apically, venter yellow; legs yellow, hind femur light brown apically; wings hyaline, veins brown, stigma bicolored brown with yellow at apex and base, tegula yellow. *Body length:* 4.0–5.5 mm; fore wing length, 3.0–3.5 mm. *Head:* eyes and ocelli large, 33–35 antennomeres, flagellomeres slightly longer than wide; malar space short, less than basal width of mandible and about ¼ eye height; temple narrow, about ⅓ eye width; occipital carina weak or absent on vertex, meeting hypostomal carina; oral space small and circular, diameter less than basal width of mandible and about ½ face height; clypeus weakly swollen; ocelli large, ocellocular distance about ¾ diameter of lateral ocellus; head entirely coriaceous; palpi not swollen; mandibles small, tips not crossing when closed. *Mesosoma:* pronotum rugulose laterally; mesonotum and scutellum coriaceous, notauli weakly scrobiculate, meeting in small triangular rugose area before scutellum; mesopleuron coriaceous, often weakly rugulose medially, subalar sulcus rugose, sternaulus absent; propodeum rugose coriaceous dorsally, coriaceous laterally, median carina complete. *Legs:* tarsal claws not pectinate; hind coxa finely coriaceous dorsally. *Wings* (Fig. 2): fore wing with vein r ⅓ length of 3RSa and ½ length of m-cu, vein 1cu-a beyond 1M by distance slightly greater than length of 1cu-a, vein 1CUa ⅓ length of 1CUb; hind wing with vein RS slightly sinuate, marginal cell narrowest in middle, vein r-m slightly shorter than 1M, vein 1M about ¾ length of M+CU, vein m-cu weakly indicated. *Metasoma:* first tergum costate, apical

width only slightly greater than basal width, median carina complete; second tergum costate, apical width equal to or less than basal width, median carina complete; third tergum costate on basal ¾, smooth on apical ¼, median carina absent or weakly present on basal half; remainder of terga smooth, fourth tergum occasionally with few costae at base; ovipositor about ½ length of hind basitarsus.

Male.—Essentially as in female; 38–39 antennomeres, flagellomeres 3 times longer than wide; fourth metasomal tergum strongly costate.

Holotype.—Female; VIRGINIA, Louisa Co., 4 mi. S. Cuckoo, July 4–18, 1989, J. Kloke and D. R. Smith, Malaise trap. Deposited in USNM.

Paratypes.—VIRGINIA: 5 ♀, 3 ♂, same data as holotype, dates of July 4–October 6, 1989; 2 ♀, Essex Co., 1 mi. S.E. Dunnsville, September 17–October 10, 1991 and May 25–June 5, 1991, Malaise trap, D. R. Smith. NORTH CAROLINA: 3 ♀, Orange Co., Chapel Hill, September 9, 1975 and August 1, 1976, Malaise trap. Deposited in USNM, RMSEL, NCDA.

Distribution.—Known only from the type localities in Virginia and North Carolina.

Biology.—Unknown.

Comments.—This species differs from other North American species by the nearly parallel-sided first metasomal tergum, which is similar to *A. palmatus* from which is is distinguished by the brown markings on the mesonotum and metasomal terga.

Etymology.—The specific name refers to the similarity of this species to *A. palmatus*.

*Aleiodes palmatus* (Walley), **new combination**
(Figs. 6, 8)

*Petalodes palmatus* Walley 1941: 214.

Diagnosis.—Body unicolored honey yellow, stigma bicolored; body length, 6.0–7.0 mm; 33–35 antennomeres; malar space shorter than basal width of mandible; face rugo-coriaceous, frons, vertex and temple coriaceous; oral opening small and circular, diameter about equal to basal width of mandible; pronotum rugose; mesonotum and scutellum coriaceous, notauli weakly scrobiculate anteriorly, meeting in weak obscure rugulose area before scutellum; mesonotum coriaceous, subalar sulcus weakly rugulose, sternaulus absent; propodeum rugose coriaceous dorsally, coriaceous laterally, median carina complete; first metasomal tergum (Fig. 8) costate, basal width about equal to apical width, sides parallel, length nearly twice apical width, median carina complete although weak apically; second tergum costate, longer than wide, apical width slightly less than that of first tergum, median carina not complete; third tergum costate on basal half, coriaceous on apical half, median carina absent; remainder of terga coriaceous, laterally compressed from apical half of second tergum to tip of metasoma (Fig. 6); forewing with vein 1cu-a beyond vein 1M by distance greater than length of 1cu-a; hind wing with vein RS sinuate, marginal cell narrowest in middle, vein 1r-m about equal to 1M, vein m-cu weak, only short stub present; tarsal claws with 3–4 thin spines at base.

Type material examined.—*Petalodes palmatus* Walley, holotype female, BRITISH COLUMBIA, Canim Lake [CNC].

Distribution.—Ontario west to British Columbia, south to Wisconsin, Minnesota, Utah and California.

Biology.—Recorded as a solitary parasitoid of *Nycteola cinereana* Neumoegen and Dyar (Noctuidae). Also reared from an undetermined microlepidopteran on *Populus tremuloides* Michx.

Comments.—*Aleiodes palmatus* is distinguished from *A. palmatoides* by the honey yellow mesonotum and metasoma (in *A. palmatoides* the mesonotal lobes and apical borders of metasomal terga 3–6 are brown).

### *Aleiodes ufei* Species-Group

Included species.—*A. ufei* (Walley) 1941, **new combination** (North America).

Diagnostic characters.—First metasomal tergum (petiole) parallel-sided, apex of metasoma laterally compressed in females; hind wing vein RS straight, marginal cell narrowest at base, widening gradually to apex (Fig. 1).

Comments.—Only one species is included in this species-group. It also has the nearly parallel-sided petiole as in the *compressor* species-group but is distinguished by the straight hind wing vein RS and the gradually widening marginal cell and by its bicolored black and orange body. Cladistic analysis by Fortier and S. Shaw (1999) indicated that this species is not closely related to members of the *compressor* group, despite superficial resemblance in the form of the metasoma.

### *Aleiodes ufei* (Walley), new combination
(Fig. 1)

*Petalodes ufei* Walley 1941: 215.

Diagnosis.—Body bicolored black and orange, head, antenna and mesosoma black, first and second metasomal terga orange, remainder of terga black, third tergum occasionally orange on basal ⅓, legs orange, apex of hind tibia and tarsus black, wings hyaline, veins brown, tegula black; body length, 8.0–9.0 mm; 49–55 antennomeres; malar space longer than basal width of mandible; head entirely punctate and shining; ocellocular distance slightly longer than diameter of lateral ocellus; pronotum rugose, mesonotum and scutellum minutely punctate and shining, mesopleuron punctate and shining, subalar sulcus and sternaulus rugose; propodeum rugose dorsally, smooth laterally, median carina complete; first metasomal tergum parallel sided, apical width equal to basal width, first and second terga costate rugose, median carina complete, third tergum costate on basal ⅓, remainder of terga smooth, apical metasomal segments laterally compressed; vein 1cu-a of fore wing beyond 1M by distance slightly greater than length of 1cu-a; marginal cell of hind wing gradually widening to apex, vein RS straight, vein m-cu present (Fig. 1); tarsal claws not pectinate.

Type material examined.—*Petalodes ufei* Walley, holotype female, Lake Almanor, California [USNM].

Distribution.—Specimens have been examined from California, Nevada, and British Columbia.

Biology.—The type series was reared from *Ufeus plicatus* Grote (Noctuidae).

Comments.—This species is superficially similar in coloration to other bicolored black and orange species, such as *A. terminalis* Cresson and *A. abdominalis* Cresson, but is distinguished by the parallel-sided first metasomal segment and the laterally compressed apical metasomal segments.

### *Aleiodes gressitti* Species-Group

Included species.—*A. gressitti* (Muesebeck 1964), **new combination** (Campbell Islands); *A. lissos* new species.

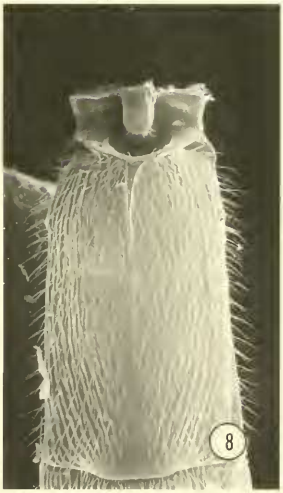
Diagnostic characters.—Metasomal terga very finely coriaceous and shining, appearing smooth (Fig. 7); fore wing vein 1cu-a beyond 1M by 1.5 times length of 1cu-a; hind wing vein RS slightly sinuate, marginal cell narrowest in middle (Fig. 3).

Comments.—This is a monophyletic group (Fortier and Shaw 1999) of only two species at present which is defined by the nearly smooth and shining metasomal terga, which does not occur in any other species we have studied.

### *Aleiodes lissos* Marsh and Shaw, new species
(Figs. 3, 7)

Female.—*Body color:* entire body including legs honey yellow, flagellum gradually turning brown apically, wing veins light brown, stigma and vein C+Sc+R yellow. *Body length:* 5–6 mm; fore wing length, 5–6 mm. *Head:* 38 antennomeres, first flagellomere slightly longer than second, all flagellomeres longer than wide; malar space slightly longer than basal width of mandible and ⅓ eye height; temple ½ eye width; occipital carina meeting hypostomal




Figs. 5–8. Morphology of *Aleiodes* species. 5, Pronotum, lateral view, *A. angustipennis*. 6, Metasoma, lateral view, *A. palmatus*. 7, Metasoma, dorsal view, *A. lissos*. 8, First metasomal tergum, dorsal view, *A. palmatus*.

carina; oral space small and circular, width slightly less than malar space and about ½ face height; clypeus swollen; ocelli moderate size, ocellocular distance equal to diameter of lateral ocellus; face coriaceous with few rugae below antennae, median ridge between antennal sockets; frons coriaceous, rugose behind antennae; vertex and

temples coriaceous; maxillary palpus not swollen; mandibles small. *Mesosoma:* pronotum coriaceous, weakly rugose medially; mesonotum and scutellum coriaceous; notauli scrobiculate, meeting in wide rugose area; prescutellar furrow wide, with one cross carina; mesopleuron finely coriaceous, subalar sulcus weakly rugose; sternaulus absent; propodeum coriaceous, with only short median carina at base. *Legs:* tarsal claws not pectinate but with 3–4 large spines at base; inner spur of hind tibia ⅓ length of hind basitarsus; hind coxa coriaceous dorsally. *Wings* (Fig. 3): fore wing with vein r ½ length of 3RSa and ⅔ length of m-cu, vein 1cu-a beyond 1M by 1.5 times length of 1cu-a, vein 1CUa slightly less than ½ 1CUb; hind wing with vein RS very slightly arched in middle, marginal cell narrowest in middle, vein M+CU slightly longer than 1M, vein m-cu weak. *Metasoma* (Fig. 7): all terga very finely coriaceous and shining; first tergum slightly wider at apex than length; median carina absent on all terga; ovipositor about ⅔ length of hind basitarsus.

Male.—Essentially as in female.

Holotype.—Female: CALIFORNIA, Monterey Co., Monterey Peninsula, August 9, 1978, C. P. Ohmart coll., reared from *Halisidota consobrina*? Deposited in USNM.

Paratypes.—CALIFORNIA: 1 ♀, 1 ♂, same data as holotype; 1 ♀, Berkeley, April 20, 1935; 1 ♂, Marin Co., parasitic on larva of *Halisidota harrisii* (label not clear on species name); 1 ♀, 4 mi. W. Stanton Ran. HQ, Sta. Cruz Is., September 14, 1964, M. Irwin; 1 ♂, Monterey, August 10, 1938, R. I. Sailer. COLORADO: 1 ♀, Davenport Camp, 36 mi. S. Florence, Custer Co., July 8, 1967, 8500 ft., E. P. & M. Rindge. NEW MEXICO: 1 ♀, 14 mi. N Silver City, Grant Co., July 8, 1961, G. C. Eickwort. ARIZONA: 1 ♀, Mt. Lemmon, 36 mi. N Tucson, 4300 ft., July 30, 1965, P. H. Freytag, L. P. Gibson collectors, blacklight trap. Deposited in USNM, RMISEL, MSU, CUI, UCR, UK.

Distribution.—Known only from California, Arizona, New Mexico, and Colorado.

Biology.—Three specimens of the type series are labeled as questionably reared from "*Halisidota consobrina*" and one from *Halysidota harrisii* Walsh (Arctiidae).

Comments.—This species is distinguished from all other North American species by the nearly smooth body, particularly the metasoma.

Etymology.—The specific name is from the Greek *lissos* meaning smooth in reference to the smooth metasomal terga.

### *Aleiodes procerus* Species-Group

Included species.—*A. procerus* Wesmael, 1838 (Europe, Japan); *A. narangae* (Rohwer 1934), **new combination** (China); *A. granulatus* (De Gant 1936), **new combination** (North America); *A. crassipes* Telenga, 1969 (Mongolia); *A. angustipennis* new species.

Diagnostic characters.—Pronotum (Fig. 5) with median length greater than ocellocular distance; fore wings narrow, width about ⅓ length (Fig. 4); fourth metasomal tergum sculptured.

Comments.—The *procerus* species-group will run to the *dispar* species-group in the key to species-groups in S. Shaw et al. (1997). Subsequent to the publishing of that key, Fortier (1997) and Fortier and S. Shaw (1999) split the *procerus* group from the *dispar* group, and we have followed that system. The *procerus* species-group is distinguished by the long pronotum, the sculptured fourth metasomal tergum, and the narrow wings.

### Key to the North American Species of the *Procerus* Species-Group

1. Fore wing vein 1cu-a beyond 1M by distance less than length of 1cu-a, vein 1CUa shorter than 1cu-a; head, propleuron and apical metasomal terga black, rest of body usually orange . . . . . *granulatus* (DeGant)
– Fore wing vein 1cu-a beyond 1M by distance equal to or greater than length of 1cu-a, vein 1CUa longer than 1cu-a; body entirely honey yellow . . . . . *angustipennis*, new species

### *Aleiodes angustipennis* Marsh and Shaw, new species
(Figs. 4, 5)

Female.—*Body color:* entirely honey yellow, coxae, trochanters and base of femora lighter yellow, apical ⅓ of flagellum brown; wings slightly fuscous, veins brown, stigma and vein C+Sc+R yellow. *Body length:* 7.0 mm; fore wing length, 4.5 mm. *Head:* eyes and ocelli small, not covering most of head; 49–50 antennomeres, all flagellomeres longer than wide; malar space long, longer than basal width of mandible and ⅔ eye height; temple broad, about ¾ eye width; occipital carina complete, meeting hypostomal carina; oral opening small and circular, diameter about equal to basal width of mandible and ⅖ face height; ocelli small, diameter of lateral ocellus 2/3 ocellocular distance; head entirely coriaceous; maxillary palpus not swollen; mandibles small, tips not crossing when closed. *Mesosoma:* pronotum (Fig. 5) distinctly lengthened, median length about twice ocellocular distance and length of first flagellomere, nearly on same plane as slightly declivous mesonotum, costate coriaceous; mesonotum and scutellum coriaceous, notauli weakly scrobiculate, meeting in shallow rugose area; mesopleuron coriaceous, subalar sulcus shallow and weakly costate, sternaulus weakly indicated by costate area; propodeum flat and not declivous apically, entirely costate coriaceous, median carina weak but complete. *Legs:* tarsal claws not pectinate; hind coxa coriaceous dorsally. *Wings* (Fig. 4): narrow, width of fore wing about ⅕ length; fore wing with vein r ⅓ length of 3RSa and ⅔ length of m-cu, vein 1cu-a beyond 1M by distance slight greater than length of 1cu-a, vein 1CUa ¼ length of 1CUb; hind wing with vein RS slightly sinuate, marginal cell narrowest in middle, vein 1r-m about ½ length of 1M, vein 1M ⅗ length of M+CU, vein m-cu absent. *Metasoma:* first tergum costate coriaceous, longer than apical width, median carina complete; terga 2–4 costate coriaceous, median carina complete on terga 2 and 3; remainder of terga finely coriaceous; ovipositor about ⅔ length of hind basitarsus.

Male.—Essentially as in female.

Holotype.—Female: FLORIDA, Marion Co., 9 mi SSW Ocala, Kings Land Country Estates, September 10–19, 1975, J. Wiley. Deposited in FSCA.

Paratypes.—FLORIDA: 1 ♀, Putnam Co., 2 mi NW Orange Springs, August 27–September 10, 1975, J. Wiley, Malaise trap; 1 ♀, Gainesville, Alachua Co., July 2, 1976, W. H. Pierce; 1 ♀, Highlands Co., Archbold Biol. Sta., April 4, 1979, H. V. Weems, Jr. and Sylvia Halkin, insect flight trap; 1 ♂, Suwannee Co., Houston, April 28, 1924, T. H. Hubbell. Deposited in RMSEL, UCD, FSCA, USNM.

Distribution.—Known only from the type localities in Florida.

Biology.—Unknown.

Comments.—This species looks somewhat similar to *A. aciculatus* Cresson (in the *coxalis* species-group) because of the costate metasoma and the lengthened pronotum, but it is distinct from *aciculatus* by its narrow wings, longer pronotum and entirely yellow stigma. It is distinguished from *granulatus* by fore wing vein 1cu-a being farther from vein 1M and by the entirely honey yellow body.

Etymology.—The specific name is from the Latin *angustus* meaning narrow and *penna* meaning wing in reference to the narrow wings.

### *Aleiodes granulatus* (DeGant), new combination

*Rogas granulata* DeGant 1930: 163–164.

Diagnosis.—Body bicolored, head black, antenna and mouth parts yellow, mesosoma sometimes entirely black, pronotum and mesonotum always black, mesopleuron and propodeum sometimes orange, metasoma with first tergum orange or black, second and third terga orange, remainder of terga black, legs orange, apical half of hind femur and tibia black, wings hyaline, veins brown,

stigma bicolored brown with yellow at apex and base; body length 4.5 mm; 45–50 antennomeres; malar space longer than basal width of mandible; head entirely coriaceous, face somewhat rugose; oral opening small and circular, diameter slightly less than basal width of mandible; ocelli small, diameter of lateral ocellus less than ocellocular distance; pronotum rugose coriaceous; mesonotum coriaceous; mesopleuron coriaceous, sternaulus absent; propodeum rugose coriaceous, median carina complete; metasomal terga 1–4 costate, median carina complete on terga 1–3; tarsal claws not pectinate; fore wing with vein 1cu-a beyond vein 1M by distance less than length of 1cu-a; hind wing with vein RS arcuate, marginal cell narrowest medially.

Type material examined.—*Rogas granulata* DeGant, holotype female, Cleveland, Ohio [USNM].

Distribution.—Michigan, Wisconsin, Ohio, Connecticut, New York, North Carolina, Ontario, New Brunswick.

Biology.—Associated with cabbage infested with "*Autographa brassicae*," (probably *Trichoplusia ni* (Hübner) (Noctuidae)).

Comments.—*Aleiodes granulatus* is not a particularly common species, considering that its presumed host is a pest of cabbages. This species is apparently closely related to *angustipennis* but differs by fore wing vein 1cu-a being closer to vein 1M and by the bicolored black and orange body.

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