INSECTA MUNDI A Journal of World Insect Systematics

0559

The Mantispidae of the West Indies with special reference to the Dominican Republic (Neuroptera: Mantispidae)

Kevin M. Hoffman
California Department of Food and Agriculture
Pest Detection/Emergency Projects
1220 N Street, Room 315
Sacramento, CA 95814

Oliver S. Flint, Jr.
Department of Entomology
National Museum of Natural History
Smithsonian Institution
Washington, DC 20013-7012

Daniel E. Perez-Gelabert
Integrated Taxonomic Information System and
Department of Entomology
National Museum of Natural History
Smithsonian Institution
Washington, DC 20013-7012

Date of Issue: June 30, 2017

Center for Systematic Entomology, Inc., Gainesville, FL

Kevin M. Hoffman, Oliver S. Flint, Jr., and Daniel E. Perez-Gelabert
The Mantispidae of the West Indies with special reference to the Dominican Republic (Neuroptera: Mantispidae)
Insecta Mundi 0559: 1–15

ZooBank Registered: urn:lsid:zoobank.org:pub:243D760B-6CEA-49EF-A20D-FD135DF7C620

Published in 2017 by
Center for Systematic Entomology, Inc.
P. O. Box 141874
Gainesville, FL 32614-1874 USA
http://centerforsystematicentomology.org/

Insecta Mundi is a journal primarily devoted to insect systematics, but articles can be published on any non-marine arthropod. Topics considered for publication include systematics, taxonomy, nomenclature, checklists, faunal works, and natural history. **Insecta Mundi** will not consider works in the applied sciences (i.e. medical entomology, pest control research, etc.), and no longer publishes book reviews or editorials. Insecta Mundi publishes original research or discoveries in an inexpensive and timely manner, distributing them free via open access on the internet on the date of publication.

Insecta Mundi is referenced or abstracted by several sources including the Zoological Record, CAB Abstracts, etc. **Insecta Mundi** is published irregularly throughout the year, with completed manuscripts assigned an individual number. Manuscripts must be peer reviewed prior to submission, after which they are reviewed by the editorial board to ensure quality. One author of each submitted manuscript must be a current member of the Center for Systematic Entomology.

Manuscript Preparation Guidelines and **Submission Requirements** available on the Insecta Mundi webpage at: http://centerforsystematicentomology.org/insectamundi/

Printed copies (ISSN 0749-6737) annually deposited in libraries:
CSIRO, Canberra, ACT, Australia
Museu de Zoologia, São Paulo, Brazil
Agriculture and Agrifood Canada, Ottawa, ON, Canada
The Natural History Museum, London, UK
Muzeum i Instytut Zoologii PAN, Warsaw, Poland
National Taiwan University, Taipei, Taiwan
California Academy of Sciences, San Francisco, CA, USA
Florida Department of Agriculture and Consumer Services, Gainesville, FL, USA
Field Museum of Natural History, Chicago, IL, USA
National Museum of Natural History, Smithsonian Institution, Washington, DC, USA
Zoological Institute of Russian Academy of Sciences, Saint-Petersburg, Russia

Electronic copies (Online ISSN 1942-1354, CDROM ISSN 1942-1362) in PDF format:
Printed CD or DVD mailed to all members at end of year. Archived digitally by Portico.
Florida Virtual Campus: http://purl.fcla.edu/fcla/insectamundi
University of Nebraska-Lincoln, Digital Commons: http://digitalcommons.unl.edu/insectamundi/
Goethe-Universität, Frankfurt am Main: http://nbn-resolving.de/urn/resolver.pl?urn:nbn:de:hebis:30:3-135240

Layout Editor for this article: Eugenio H. Nearns

INSECTA MUNDI 0559: 1–15 2017

The Mantispidae of the West Indies with special reference to the Dominican Republic (Neuroptera: Mantispidae)

Kevin M. Hoffman
California Department of Food and Agriculture
Pest Detection/Emergency Projects
1220 N Street, Room 315
Sacramento, CA 95814
kevin.hoffman@cdfa.ca.gov

Oliver S. Flint, Jr.
Department of Entomology
National Museum of Natural History
Smithsonian Institution
Washington, DC 20013-7012
flinto@si.edu

Daniel E. Perez-Gelabert
Integrated Taxonomic Information System and
Department of Entomology
National Museum of Natural History
Smithsonian Institution
Washington, DC 20013-7012
perezd@si.edu

Abstract. The Antillean fauna of Mantispidae (Neuroptera) consists of six species in four genera, all in the subfamily Mantispinae. Two **new species** are here described: *Leptomantispa antillesensis* Hoffman, n. sp., is described from Puerto Rico, Anguilla, British Virgin Islands (Grand Camanoe, Guana, Tortola), United States Virgin Islands (St. Croix, St. John, St. Thomas), Dominica, and Guadeloupe, and *Leptomantispa hispaniolaensis* Hoffman, n. sp. is described from Hispaniola (Dominican Republic). *Mantispilla zayasi* Alayo is synonymized under *Leptomantispa pulchella* (Banks), **new synonomy**, and *Mantispilla taina* Alayo is synonymized under *Zeugomantispa minuta* (Fabricius), **new synonomy**. *Climaciella cubana* Enderlein is recorded for the first time from Hispaniola (Dominican Republic). *Dicromantispa sayi* (Banks) is newly reported from the Cayman Islands (Cayman Brac and Little Cayman), and Hispaniola (Dominican Republic). *Zeugomantispa minuta* (Fabricius) is now recorded from the Bahamas (Andros) and Hispaniola (Dominican Republic).

Key Words. Mantisflies, systematics, distribution, Greater and Lesser Antilles.

Introduction

Mantispids are a nearly cosmopolitan family in the order Neuroptera, with an attractive appearance, interesting behavior and a relatively small number of species. The recent world catalog of the family (Ohl 2004) lists 561 extant species-group names and 61 genus-group names, of which 410 species and 44 genera were considered valid. With their raptorial frontlegs attached to the anterior margin of an elongate prothorax, they resemble small praying mantids of the order Mantodea, leading to their common name, mantis flies. They are, however, truly neuropteran with a holometabolous life cycle. Although the life cycles of most species are unknown, those that are known have larvae that feed on other insects and spiders. All of the West Indian genera and species belong to the subfamily Mantispinae, and they are all known to feed exclusively on spiders, primarily their eggs. The few rearings of species in the subfamily Symphrasinae (which are unknown from the West Indies) are all associated with nests of aculeate Hymenoptera, although most details of their life cycles are unclear.

The Antillean fauna here enumerated consists of 6 species in 4 genera. They have a rather uniform biology, excerpted from Hoffman (1992, 2002). "Adults have been reared exclusively from egg sacs of spiders. Larvae feed on eggs by piercing the chorion and draining the contents, and have been noted to feed on neonate spiderlings as well. Larvae have three instars and are hypermetamorphic with the

first instar campodeiform and the last two scarabaeiform. Female mantispines lay clutches of 200 to 2000 individually stalked eggs on objects such as leaves, twigs, branches, wooden structures, and iron poles. Following eclosion, first instar mantispines must locate spider egg sacs and gain access to the eggs within. Two general methods used by larvae to gain access to the eggs are either to locate and enter preexisting egg sacs or to locate and board female spiders and enter eggs sacs as they are deposited. Different mantispine species may use one of these two strategies exclusively or either strategy facultatively. Larvae aboard spiders generally are found either wrapped around the pedicel, inside the book lung openings, or attached to the membranous area between the edge of the carapace and the base of the legs; such larvae have survived for months apparently by feeding on spider haemolymph and can be considered true ectoparasites at this stage of their life cycle."

Materials and Methods

A large part of the material from the Dominican Republic was collected by DPG between 2002 and 2004 as part of the Hispaniolan Orthopteroids Project (NSF DEB 0103042). This was a collaborative effort between the Academy of Natural Sciences of Philadelphia, the National Museum of Natural History, Washington, DC and the Museo Nacional de Historia Natural de Santo Domingo. This included 8 one-month international expeditions in which, besides othopteroids, a number of other insect groups were targeted. One of these groups was the Neuroptera, including the Mantispidae herein studied. As part of the agreement stipulated in the above grant, some specimens will be returned to the Museo Nacional de Historia Natural de Santo Domingo, Dominican Republic (MNHNSD), and the remainder deposited in the National Museum of Natural History (NMNH).

Identifications were made mostly on the basis of appearance of the various specimens, utilizing the keys in Hoffman (1992, 2002). Examples were also compared to determined material in the collection of the NMNH that had been identified by KMH, OSF and others. A few identifications were confirmed by clearing the genitalia of a male and comparing structures to those figured in Hoffman (1992). The standard technique of clearing in warm 10% KOH and storing the cleared genitalia in a microvial pinned under the specimen was followed.

In addition, material was borrowed from a number of other museums, as follows:

AMNH	American Museum of Natural History, New York, NY
BPBM	Bernice P. Bishop Museum, Honolulu, HI
CMNH	Carnegie Museum of Natural History, Pittsburg, PA
CNC	Canadian National Collection, Ottawa, ON, Canada
FSCA	Florida State Collection of Arthropods, Gainesville, FL
LSAC	Louisiana State University, Baton Rouge, LA
MCZ	Museum of Comparative Zoology, Cambridge, MA
MNHNSD	Museo Nacional de Historia Natural, Santo Domingo, Dominican Republic
MSU	Montana State University, Bozeman, MT
NMNH	National Museum of Natural History, Washington, DC
PMNH	Peabody Museum of Natural History, New Haven, CT

Key to genera of Antillean Mantispidae

1. Antennal flagellomeres at mid-length of flagellum each three or more times as wide as long in anterior view; mesoscutal furrow obsolete; forewing with anterior half pale amber to dark brown ..... ***Climaciella***

— Antennal flagellomeres at mid-length of flagellum each less than three times as wide as long in anterior view; mesoscutal furrow conspicuous; forewing with anterior half hyaline **2**

2(1). Pronotum with prominent setae over entire length in lateral view **3**

— Pronotum with scattered fine setae in lateral view, most setae at anterior and posterior ends ..... ***Dicromantispa***

3(2). Pronotum with most setae arising from distinct bumps ..... ***Zeugomantispa***
— Pronotum with most setae arising flush with pronotal surface ..... ***Leptomantispa***

Genus *Climaciella* Enderlein

This is an exclusively New World genus found from southern Canada south to northern Argentina and in the Greater Antilles. Hoffman (1992) recognized 9 species, only one of which is known from the Greater Antilles including Hispaniola. All the species are wasp like in appearance and are apparently involved in a mimicry complex with various polistine wasp species. The immature stages of *Climaciella brunnea* (Say) have been associated with four species of wolf spiders (Lycosidae), and the first instar larvae are obligate spider boarders (Redborg and MacLeod 1983).

***Climaciella cubana* Enderlein**
(Fig. 1)
Climaciella cubana Enderlein 1910:362. Alayo 1968:11.

This species is easily distinguished from its congeners by its coloration, especially that of the wings and body. Its distribution in the Dominican Republic is montane, from 800m to over 1000m, being recorded from the Sierra de Bahoruco and the Cordillera Central, but not yet taken from the Cordillera Septentrional.

Coloration. Head yellow, vertex reddish-brown except along ocular margin, frons with transverse dark blackish stripe beneath antennae, reddish brown to blackish at fronto-clypeal junction, clypeus brown, labrum pale brown. Antenna with scape and pedicel yellow brown to pale brown, flagellum with basal three-fourths reddish-brown, remainder yellow. Pronotum blackish-brown, posterior fifth yellow with blackish-brown trianguloid spot posteromesally, anterodorsal margin yellow, paired oval yellow spots angling upward and meeting at midline anterodorsally, yellow stripe along midline connecting anterodorsal yellow spots and posterior yellow region. Mesonotum blackish-brown with yellow V-shaped band along scutal furrow and often along midline to scutellum, scutellum yellow. Metanotum blackish-brown with scutellum yellow. Abdomen with tergites reddish to blackish-brown with posterior margins yellow.

Size. Length of forewing: male 13.5 – 15.0mm (n=5); female 12 – 16mm (n=4).

Distribution. Its known range is on the Greater Antillean islands of Cuba and Puerto Rico, and now from the Dominican Republic on Hispaniola. It was recorded from Puerto Rico as *C. brunnea* by Wolcott (1948).

Material examined. DOMINICAN REPUBLIC: Barahona Prov., Eastern Sierra de Bahoruco, La Travesia, near Larimar mine, 850 m, 18°07.163'N, 71°08.505'W, 29.vii.2003, D. Perez, R. Bastardo, B. Hierro. (night), 1♀ (NMNH); Barahona Prov., Las Auyamas, Polo, 854m, 18°06.821'N, 71°16.447'W, 27-28.viii.2014, wet forest, D. Perez, C. de Soto M., 1♂ (NMNH); Barahona Prov., Masaco, S. of Polo, 812m, 18°02.495'N, 71°18.408'W, 28.viii.2014, D. Perez, C. de Soto M., 1♂ (MNHNSD); La Vega Prov., Reserva Cientifica Ebano Verde, La Sal, 1010 m, 19º04.42'N, 70º34.18', 28-30.i.2002, R. Bastardo, B. Hierro, D. Perez, RD-220, 1♀ (NMNH); La Vega Prov., P. N. Armando Bermúdez, La Ciénaga – Los Tablones, 1,100 – 1,270 m, 19º04.044'N, 70º51.789'W, 29.vi.2004, D. Perez (d), RD250, 1♂ (NMNH); La Vega Prov., P. N. Armando Bermúdez, trail La Cienaga de Manabao – Los Tablones, 20.viii.2006, D. Perez, R. Bastardo, B. Hierro, 2♀ (MNHNSD, NMNH); La Vega Prov., P. N. Armando Bermudez, km 1-3 along trail W of La Cienaga, 900 – 1000 m, 19º01.753'N, 70º54.654'W, 2.vii.2010, S. W. Lingafelter, 2♂ (MNHNSD, NMNH); La Vega Prov., La Cienaga, Finca Omar Rodriguez, 1232 m, 19º03'13.1"N 70º51'34.8"W, 20.vi.2010, S. W. Lingafelter, MV/UV light, 1♂ (NMNH); La Vega Prov., Parque Nacional A. Bermudez, Los Tablones-Agüita Fria, 18.vii.2002, D. Perez, B. Hierro, R. Bastardo, 1♂ (MNHNSD). PUERTO RICO: Adjuntas, Bosque Estatal de Guilarte, 0.5 km ESE Monte Guilarte, 18-08-29N, 66-

45-55W, 990 m, 18.vi.1996, C. Young, J. Rawlins, R. Davidson, W. Zanol, M. Klingler, S. Thompson, 1♂ (CMNH); Carite Forest, Cayey, Aug.25, 1969, R. Bonilla, black-light trap, 1♀ (NMNH); El Yunque, Carib. Nat. For., 600 m, 18º20'N, 65º30'W, 22-25.v.1987, M.S. Adams, 4♂, 10♀ (CMNH); El Yunque, 17-18 ii.1961, A.B. Gurney, 1♂ (NMNH); Yauco, 7.viii.1933, R.G. Oakley, on leaf *Inga vera*, 1♂ (NMNH).

Genus *Dicromantispa* Hoffman

This is an exclusively New World genus of 8 species, 2 of which are still undescribed (Hoffman 1992), found from southern Canada south to Argentina and Chile including the Bahamas Islands and the Greater Antilles. They are mostly brown, the pronotum has only scattered setae mostly at the anterior and posterior ends, the meso- and metanota have longitudinal yellow stripes laterally, and the wings are mostly transparent. The immatures of two species are associated with many species of primarily hunting spiders and their first instars are facultative boarders/penetrators (Redborg and MacLeod 1985, Hoffman and Brushwein 1992).

***Dicromantispa sayi* (Banks)**
(Fig. 2)
Mantispa sayi Banks, 1897:23. Alayo, 1968:12. Perez-Gelabert and Flint, 2001:19.
Dicromantispa sayi (Banks), Hoffman 2002: 260.

This species, on Hispaniola, is usually almost uniformly brown in body color, with transparent wings. It is widespread in the Dominican Republic from sea level to well over 1000m in the mountains. In addition to the Dominican Republic, we have seen examples from the Bahamas (Andros Island) and from the Cayman Islands (Cayman Brac and Little Cayman).

Coloration. Head brown, vertex paler along ocular margins, paired small comma-shaped yellow marks above antennae, yellow stripe along midline posterior to comma-shaped marks, but variable, sometimes vertex mostly pale, face brown, often darker transversely below antennae labrum and frontoclypeus usually paler laterally. Antennae with scape pale, pedicel light brown, flagellum with basal two-thirds brown, next sixth yellower, apical sixth dark brown. Pronotum light brown, with anterior and posterior sixths with a dark midline, variably with a thin dark line totally or partially connecting end marks. Meso- and metanota brown with longitudinal yellow band sublaterally, ends of mesoscutellum yellow, bands on metanotum less defined, often obscure posteriorly. Abdomen varying from almost uniformly brown to being paler dorsolaterally with slightly darker posterior margins of tergites.

Size. Length of forewing: male 9 – 14.0mm (n=6); female 9.5 – 12.5mm (n=3).

Distribution. United States from coast to coast, Bahamas (Andros Island, Eleuthera Island), Caymans (Cayman Brac, Little Cayman), Cuba, Dominican Republic, Puerto Rico, Mexico, Belize, Guatemala, El Salvador, Honduras, Costa Rica, Panama.

Material examined. BAHAMAS: Andros Island, Forfer Field Station, nr. Stafford Cr., 25.vii.2006, M. Thomas & T. Smith, 2♂, 1♀ (FSCA, NMNH); Andros, Andros Town, 7-13.iii.1966, O. L. Cartwright, 1♀ (NMNH). CAYMAN ISLANDS: Cayman Brac, Brac Paradise Subdivision, 6.vi.2008, B. Dozier, 1 ♂, 1♀ (FSCA); Cayman Brac, N19º43.158', W79º47.579', 6.vi.2008, B. Dozier, 3 ♂, 4♀ (FSCA, NMNH); Cayman Brac, Major Donald Dr., 4km E jct. Aston Red Dr., 25.v.2009, M. Thomas, B. Turnbow, 1♀ (FSCA); Cayman Brac, Bight Rd. at Maj. Donald Rd., 25.v.2009, M. Thomas, B. Turnbow, 1♀ (FSCA); Cayman Brac, Hemmington Rd. at Songbird Dr., 24.v.2009, M. Thomas, B. Turnbow, 2 ♂, 2♀ (FSCA, NMNH). Little Cayman, North Coast Rd., 1km W jct. Olivine Kirk Rd., 27.v.2009, M. Thomas, B. Turnbow, 1 ♂, 1♀ (FSCA); Little Cayman, N. Coast Rd., 1km W Olivine Kane Dr., 25.v.2009, M. Thomas, B. Turnbow, 2♀ (FSCA, NMNH). DOMINICAN REPUBLIC: Azua Prov., La Furnia, Barreras, 18º19.289'N, 70º54.755'W, 18.vii.2003, D. Perez, R. Bastardo, B. Hierro, (night), RD-156, 1 ♂, 1♀ (NMNH); Azua Prov., 8 km NE Padre las Casas, Rio Las Cuevas, 580m, 18º46'N, 70º53'W, viii.1990, J.

Rawlins, S. Thompson, 1♀ (CMNH); Barahona Prov., 5 km SE Polo, slopes of Loma La Torre, 980m, 18°03'N, 71°16'W, 18.vii.1992, C. Young, R. Davidson, J. Rawlins, S. Thompson, disturbed forest with coffee, 1♂, 1♀ (CMNH); Barahona Prov., south slope of Sierra Martin Garcia, 530 meters, 18°21.012'N, 71°01.765'W, 9.xii.2014, N.E. Woodley, MV/UV light, 1♂ (NMNH); Barahona Prov., nr. Filipinas, Larimer Mine, 20-26.vi.1992, R.E. Woodruff, P.E. Skelley, at light, 1♀, 1 without abdomen (FSCA); same, but 26-27.vi.1992, 2♀ (FSCA); Independencia Prov., Parque Nacional Sierra de Bahoruco, around Caseta No. 1, 1,239 m, 18°16.038'N, 71° 32.691'W, 11-12.xii.2003, D. Perez, R. Bastardo, B. Hierro, (day/night), RD-191, 1♂ (NMNH); La Altagracia Prov., Parque de Este, 2.9 km SW Boca de Yuma, 18-21-51N, 68-37-05W, 11 m, 28.v.2004, J. Rawlins, C. Young, C. Nunez, J. Fetzner, semihumid dry forest, limestone, UV light, 4♂, 1♀ (CMNH); [La Altagracia Prov.], Isla Saona, 6.vii.2002, C. Nuñez, 1♀ (MNHNSD); La Vega Prov., Reserva Ebano Verde, Loma La Golondrina, 19°03.498'N, 70°32.670'W, 11.vii.2003, D. Perez, R. Bastardo, B. Hierro, (day/night), RD-149, 2♀ (MNHNSD, NMNH); Ocoa Prov., 10 km S of Ocoa, nr. main road, 468 m, 18°28.350'N, 70°29.670'W, 7.xii.2002, D. Perez, R. Bastardo, (night), RD-084, 3 ♂ (MNHNSD, NMNH); Peravia Prov., 5 km W of Bani on Highway 2, 18°17.742'N, 70 °22.108'W, 52 m, 16.vii.2004, N. E. Woodley, 1 ♂ (NMNH); Peravia Prov., Angostura, 215m, 18°20.561'N,,70°25.389'W, 27.x.2012, D. Perez, B. Hierro, R. Bastardo, 1♀ (NMNH); Samana Prov., Samana Peninsula, 8 km S Las Galeras, Punta Balandra, 35 m, 19-11N, 69-14W, 10.x.1991, C. Young, S. Thompson, R. Davidson, J. Rawlins, semiarid scrub-forest on limestone bluffs, 1♀ (CMNH).

Genus *Leptomantispa* Hoffman

This genus, as the other Antillean genera, is limited to the New World. With the description of 2 species herein, it will contain 12 described species (Hoffman 2002, Machado and Rafael 2010, Ardila-Camacho and García 2015). The immatures of *Leptomantispa pulchella* (Banks) have been associated with 21 spider species in 6 families that are generally non web building wanderers on foliage (Hoffman and Brushwein 1989, 1992). The first instars are obligate spider boarders (Hoffman and Brushwein 1989).

Key to Adults of Antillean species

1. Antennal flagellomeres all fuscous ..... ***L. pulchella* Banks**
— Antennal flagellomeres either yellowish to light brown, or with alternating brown and yellowish sections **2**

2. Male with dorsolateral lobe of ectoproct barely rounded laterally and extending posteriad only as far a base of ventromedial lobe. Face with a vertical dark line mesally..... ..... ***L. hispaniolaensis* Hoffman, n.sp.**
— Male with dorsolateral lobe of ectoproct bulging laterally and extending well posteriad of the ventromedial lobe. Face with a transverse dark band below antennae, often with a dark mesal line below this to fronto-clypeal suture ..... ***L .antillesensis* Hoffman, n.sp.**

Leptomantispa antillesensis Hoffman, new species

(Fig. 4, 7–11)

Diagnosis. The male of this species is distinguished from *L. hispaniolaensis* by the dorsolateral lobe of the ectoproct bulging laterally and extending well posteriad of the spiculate ventromesal lobe. In coloration it can be recognized by: having the face with a dark, transverse band below the antennae, from which usually extends a ventrally directed mesal line; the antennal flagellomeres being uniformly brown; by the almost uniformly brown pronotum often showing a pair of paler, submesal, oval maculae near the anterior margin; by the mesonotum being broadly brown mesally, paler laterally and a brown mesal mark on the mesoscutellum; the metanotum may show a V-shaped mesal macula open anteriorly,

continuing posteriad as a mesal dark mark – all these thoracic markings are often wholly or partially obscured and the thorax may appear almost uniformly brown.

Male coloration. Head yellow, vertex with anterior half brown to between antenna except along ocular margins, yellow T-shaped mark medially, transverse stripe beneath antennae, nearly reaching ocular margins, distal margin convex on either side of midline, brown stripe along midline from beneath antennae and onto labrum; mandibles yellow proximally, reddish-brown distally, other mouthparts yellow, palps with distal segment yellow-brown; antenna with scape yellow with posterodistal margin brown, pedicel yellow anteriorly, light brown posteriorly, flagellum entirely light brown or with distal two-thirds yellow; eyes metallic silver to purple. Prothorax with pronotum reddish-brown dorsally and laterally, yellow ventrally, paired short longitudinal yellow stripes from anterodorsal margin and ending anteriad of maculae, ventral midline often brown; posterodorsal membrane brown, posteroventral membrane pale yellow; pleural sclerites brown, sternum light brown, membrane pale yellow; leg with coxa and trochanter yellow, femur dark reddish-brown anterolaterally, basal fifth yellow, yellow posterolaterally with reddish-brown spots at one-fourth length posteriorly and at apex, spines reddish-brown, tibia with basal fourth yellow, remainder dark reddish-brown with posterolateral surface yellow, tarsus reddish-brown. Pterothorax with scuta brown, midline and wing bases yellow, yellow anterolaterally except at anterolateral angle of mesonotum, scutella yellow with midline brown; pleura yellow, anterior membrane with midline brown along basal third, mesopreepisternum brown dorsomedially, mesanepisternum speckled lightly with brown, katepisterna with posteroventral corner brown, metanepisternum and katepimera sometimes with brown along anterior margin; legs each with coxa yellow with outer condyle brown, remainder of leg yellow; forewing membrane hyaline, Sc space light amber, pterostigma brick red, 1AP with asperous region brown, most veins brown, RA basad of sc-ra yellow dorsally, Cu, AA, and AP1 yellow basally; hindwing similar to forewing, RA and Cu entirely brown. Abdomen with tergites yellow, sometimes with light reddish-brown posteromedially, ectoprocts light reddish-brown basally; pleura yellow with reddish-brown medially or entirely reddish-brown; sternites yellow, sternite IX with apex light reddish-brown medially, midline sometimes light reddish-brown.

Female coloration. Same as for males, except for the following. Head with frons with posterior half pale reddish-brown; yellow markings on profemur, protibia, and all three thoracic nota obscure; pterothorax with pleura reddish-brown, sutures between anepisterna and katepisterna dull yellow, coxae reddish-brown, trochanter reddish-brown posterolaterally; abdomen with sclerites light reddish-brown to reddish-brown.

Thoracic morphology. Pronotum 5.5–6.5 times as long as width at maculae in dorsal view; pterothoracic scutella with combined 3–5 pores on each side, tarsal claws with 3–5 teeth each, males and females with both wings collectively on each side with combined 6–8 veins leaving RP posteriorly, forewing lengths of males 6.2–10.3 mm, of females 6.3–11.3 mm.

Male pregenital abdominal apparatus. Tergites III–IV each with paired patches of 8–15 small circular pores total in one transverse row on posterior margin on each side, IV–V each with paired patches of 20–40 small circular pores total closely packed into inverted U-shaped band on each side anterolaterally, posterior arm of U-shaped band shorter than anterior arm, especially on tergite IV, tergites V–VI with intersegmental membrane invaginated into single-lobed anteriorly-truncate pocket extending anteriorly two-fifths length of tergite V, tergite V 2.5–3.0 times as long as VI.

Male terminalia. Ectoprocts each ovoid in dorsal view (Fig. 9), dorsolateral lobe is much expanded laterad and extends well posteriad of the ventromedial lobe which is sclerotized, flattened posteriorly, abruptly truncate along inner margin, with 20–30 short thickened setae dorsally and posteriorly; sternite IX pentagonal in ventral view, posterior margin broadly rounded medially; gonarcus with median lobe projecting from posterior surface (Fig. 8), flattened posteriorly and projecting slightly posteriad from gonarcus before curving dorsally, slightly curved anteriorly, twice as long as wide, apex rounded; gonocoxites (Fig. 7) each as wide distally as basally in lateral view, distal three-fifths slightly curved laterally, apex rounded; mediuncus with anterior third subquadrate to semicircular in lateral view, 2–3 times as high as remainder, apex forked in posterior view; pseudopenal membrane nearly circular in posterior view, covered with golden dorsally-projecting microspines; hypomeres present as paired, small, circular sclerites; pseudopenis sclerotized, spine like in posterior view, slightly longer than pseudopenal membrane and as long as gonarcal median lobe, flattened laterally.

Female terminalia. Ectoprocts as long as to slightly longer than gonocoxites; sternite VIII strongly curved posteriorly, slightly longer medially than laterally, medial fifth with posterior margin shallowly concave; bursa with entrance lightly sclerotized, remainder membranous to lightly sclerotized; spermatheca with proximal section as wide as medial section (Fig. 10–11), distal section 2.0–2.5 times as wide as proximal, diverticulae present as thin transverse rod connected medially to inner margin of spermatheca, proximal section with first bend right laterad of medial section, medial section with 2–3 bends, fertilization canal duct slightly curved at base, remainder inverted U-shaped in ventral view, fertilization canal sloping basad of apex.

Size. Length of forewing: male 6.2 – 10.3mm; female 6.3 – 11.3mm.
Biology. Adults have been captured at lights and have been collected year round.

Distribution. PUERTO RICO; BRITISH VIRGIN ISLANDS (Great Camanoe, Guana, Tortola); UNITED STATES VIRGIN ISLANDS (St. Croix, St. John, St. Thomas); ANGUILLA; DOMINICA; GUADALUPE.

Etymology. Named for the general name of the island group, the Antilles, where the species is found.

Type material. Holotype male (USNM), 103 paratype males, and 115 paratype females (AMNH, BPBM, CMNH, CNC, LSAC, MCZ, MSU, PMNH). Holotype label data: "BRIT. VIRGIN ISLS. / Guana Island / 1-14 July 1984/ S. E. & P. M. Miller", "HOLOTYPE ♂ / Leptomantispa / antillesensis Hoffman/ det: K. M. Hoffman 1991". Condition of holotype: color excellent, left protarsomeres II-V absent, wings unspread, forewing length 9.0 mm; abdominal segments III-X detached, cleared, in glycerin filled microvial on pin beneath labels.
Paratypes. PUERTO RICO: Carib[bean] Nt[ational] For[est], Luquillo Div[ision], EI Yunque Rec[reation] Ar[ea], 26.v.1986, E. G. Riley & D. A. Rider, 1♀ (LSAC); Carib. Nat. For., El Yunque, 600 m, 18°20'N, 65°10'W, 6-8.i.1988, M.S. Adams, 1♀ (CMNH); Carib. Nat. For., El Yunque, 600 m, 18°20'N, 65°30'W, 22-25.v.1987, M.S. Adams, 3♂ (CMNH); Cayey, Carite Forest, 25.viii.1969, R. Bonilla, blacklight trap, 1♂ (NMNH); EI Verde, vi.1967, J. Maldonado, 1♂, 1♀ (NMNH); Maricao, Bosque Estatal de Maricao, 3.3. km SW Maricao, 18-09-39N, 67-00-08W, 550 m, 10-11.vi.1996, J. Rawlins, C. Young, R. Davidson, W. Zanol, S. Thompson, M. Klingler, forest, 2♀ (CMNH); Salines, 6.x.1945, light trap, 1♀ (NMNH); Vista la Sierra, Luquillo Forest, 14.vii.1969, H. & A. Howden, 1♀ (CNC); Maricao St[ate] Forest, vii.1987, J. Maldonado C., at light, 2♂, 1♀ (NMNH); same locality except, 10.viii.1987, 1♂ (NMNH); Rio Grande, El Verde Station, 3.1 km WNW Pico El Yunque, Sierra de Luquillo, 18-19-15N, 65-49-11W, 355 m, 3-6.vi.1996, C. Young, R. Davidson, M. Klingler, J. Rawlins, S. Thompson, 1♂, 1♀ (CMNH). BRITISH VIRGIN ISLANDS: Great Camanoe Island, 1/3mi ESE Cam Bay, 20.iii.1974, C.L. Remington, 2♂, 1♀ (PMNH). Guana Island, 1-14.vii.1984, S.E. & P.M. Miller, 6♂, 5♀ (NMNH); same data, except, 0-80m, 5-23.vii.1985, 8♂, 10♀ (NMNH); same locality, 19-22.vii.1985, plus North Bay, *Coccoloba* forest, sea level, U.V. light trap, 20♂, 31♀ (NMNH); same locality, except, 13-26.vii.1986, S.E. Miller & M. G. Pogue, 13♂, 6♀ (NMNH); same data plus, clubhouse, 40-60m, light trap, 4♂, 2♀ (NMNH); same locality, 18-19.vii.1988, S.E. Miller & C. O'Connell, Bishop Museum +Acc. #1988.350, 1♂ (BPBM); same data except l1.vii.1988, 2♀ (BPBM); same data except 12.vii.1988, 1♂, 1♀ (BPBM); same data except 13.vii.1988, 3♂ (BPBM); same data except 12.vii.1988, UV light trap, 1♂, 1♀ (BPBM); same data except 10.vii.1988, 1♂ (BPBM); same locality, 0-80 m, 9-23.vii.1987, S.E. Miller & V.O. Becker, 2♂, 7♀ (BPBM); same locality, 0-80 m, 24-31.x.1990, 2♂, 3♀ (BPBM). Tortola, Sopers Hole, 5.iv.1958, J.F.G. Clarke, 1♂, 2♀ (NMNH). U S VIRGIN ISLANDS: St. Croix, Orangegrove, W. End, 6-16.vii.1967, E. L. Todd, 1♀ (NMNH); St. Croix, Southwest Cape, 15.ii.1967, H.E. & M.A. Evans, 1♂ (MCZ); St. Croix, West, Sprat Hall Estate, 1-15.i.1983, ETOH/lite trap of John Yntema, leg. Paul A. Godwin, 2♀ (PMNH); same data except 1-15.xii.1983, 1♀ (PMNH); same data except 1-15.iv.1983, 1♀ (PMNH); same data except 16-31.x.1982, 1♀ (PMNH); same data except 1-15.xii.1982, 1♀ (PMNH); same data except 1-15.ix.1983, 1♀ (PMNH); same data except 1-15.xi.1982, 1♂ (PMNH); same data except 16-31.viii.1983,1♂ (PMNH); same data except 1-15.v.1984, 1♂ (PMNH); same data except 16-31.xii.1982, 1♀ (PMNH); same data except 16-30.xi.1983, 1♀ (PMNH); same data except 1-15.iv.1984, 1♀ (PMNH); same data except 1-14.ii.1983, 1♂, 2♀ (PMNH); same data except 1-15.iii.1983, 1♂, 1♀ (PMNH); same data except 16-30.vi.1984, 1♂, 1♀ (PMNH); same locality, 7.ii.1986, at lite, leg. Paul

A. Godwin, 09109, 1♂ (PMNH); same data except ii.1987, 09110-09112, 2♂, 1♀ (PMNH); same data except 13.ii.1986, 1♂ (PMNH). St. John, Cinnamon Bay, 10-17.ii.1969, H. E. Evans, 2♂ (MCZ); same locality, 19-24.ii.1967, H. E. Evans, 1♂ (MCZ); St. John, Coral Harbor, 12-14.ii.1969, H. E. Evans, 1♂, 1♀ (MCZ); St. John, Est. Carolina, NW of Coral Bay, 250ft, 20.v.1982, W.B. Muchmore, at uv light, 1♀ (MSU); same data, except 26.v.1982, 1♂ (MSU); St. John, Lameshur Bay, VIERS, ii-iii.1984, W.B. Muchmore, 1♀ (MSU); St. John, Leinster Bay, 21.ii.1967. H.E. & M.A. Evans, 1♂ (MCZ); St. John, Virgin Island Natl. Park, 19-27.vii.1972, Alice Gray, 3♂, 8♀ (AMNH). St. Thomas, C.V.I., 10.iii.1979, M. Ivie, 1♂ (MSU); St. Thomas, Estate Lilliendahl, 1000ft, 15.x.1978, M. Ivie, 1♂ (MSU); St. Thomas, Magens Bay, gut at S end, 1.viii.1980, M. Ivie & C.A. Jennings, at UV light, 1♂ (MSU); St. Thomas, Red Hook, 1.viii.1980, M. Ivie, at uv light, 1♂, 1♀ (MSU). ANGUILLA: Rendevous Bay, 11-VIII-1993, R.M. Baranowski, 1♂, 2♀ (FSCA). DOMINICA: 0.5mi. S of Pont Casse, 8.iv.1964, O.S. Flint, Jr., 2♀ (NMNH); 0.4mi. E of Pont Casse, 6.v.1964, O.S. Flint, Jr., 1♀ (NMNH); Fond Figues, 6. iv.1964, O.S. Flint, Jr., 1♀ (NMNH); same, but 7.v.1964, 1♀ (NMNH); Cent[ral] For[est] Res[erve], 25.iv.1965, D.R. Davis, 1♀ (NMNH): South Chiltern, 25-27.v.1965, D.R. Davis 1♂ (NMNH). GUADALUPE: Grande Terre, July 1963, J. Maldonado C., 2♂, 2♀ (NMNH).

***Leptomantispa hispaniolaensis* Hoffman, new species**
(Fig. 5, 12–15)

Diagnosis. The male of this species is easily distinguished from *L. antillesensis* by the ectoproct in dorsal view. In *L. hispaniolaensis*, the dorsolateral lobe is barely rounded laterally and it extends posteriad only as far as the base of the ventromedial lobe. In coloration it differs from its Antillean congeners by: having the face with a mesal, vertical stripe extending from between the antennae to and across the labrum; by the antennal flagellomeres colored dark brown for the basal half, then the next quarter pale yellow and the terminal quarter dark brown; by the pale brown pronotum, that is darker laterally with a short antero-and posteromesal longitudinal dark stripe, rarely with a thin mesal stripe extending part way between them; by the yellow mesonotum with a sharply defined, very dark brown, narrowly V-shaped, mesal mark, open anteriad, continued as a dark mesal macula on the scutellum; by having metanotum and scutellum yellow with a very dark brown mesal stripe; meso- and metanota with irregularly darker bands sublaterally; all marks varying only slightly.

Male coloration. Head pale yellow, vertex dark reddish-brown except along ocular margins, paired longitudinally-ovoid yellow spots near midline posteriorly, paired transversally-elliptical smaller yellow spots anterior of larger ones, wide dark reddish-brown stripe along midline from antennae and onto labrum; mandibles pale yellow with apex reddish-brown, other mouthparts yellow-brown; antenna with scape yellow with reddish-brown spot posterodistally, brown posterodistally, pedicel pale yellow anteriorly, light brown posteriorly, flagellum with basal 12 flagellomeres brown, next six yellow, and distal five brown; eyes metallic purple. Prothorax with pronotum yellow-brown dorsally, brown ventrally, short brown stripe along midline from anterodorsal margin and not reaching maculae, maculae brown, diffuse brown stripe along midline dorsally from two-thirds length to posterior margin, posterodorsal membrane yellow anteriorly, brown posteriorly, posteroventral membrane brown with midline yellow; pleural sclerites brown, sternum light brown, membrane yellow; leg with coxa dull yellow, trochanter yellow-brown, femur reddish-brown anterolaterally, dull yellow basally, dark reddish-brown medially at base of major spine, pale yellow posterolaterally, reddish-brown dorsally, at third length, and at apex, spines light orange, tibia light brown with distal fourth yellow posterolaterally, tarsus light brown. Pterothorax with nota dark brown, wing bases yellow, longitudinal yellow stripes at one-third width on either side, stripes thinner on metanotum; pleura yellow, somewhat speckled with brown, anterior membrane dark brown with yellow spot medially, mesopreepisternum dark brown; legs each with coxa yellow-brown, remainder of legs pale yellow; forewing membrane hyaline, pterostigma with basal third yellow, remainder red, 1AP with asperous region brown, most veins brown, C, posterior wing margin, RA basad of pterostigma dorsally, most of CuA, AA, and AP1 basally dull yellow; hindwing similar to forewing, MP yellow at base, CuA entirely brown. Abdomen with tergites yellow, midline dark brown and widened posteriorly on each segment, ectoprocts dark brown; pleura dark brown, yellow medially; sternites yellow, lateral margins dark brown, sternite IX dark brown.

Female coloration. Same as for male, except for the following. Prothorax with sternum light brown; pterothorax with pleura brown with yellow at anterior and posterior margins; legs each with coxa brown.

Thoracic morphology. Pronotum 5.5 times as long as width at maculae in dorsal view; pterothoracic scutella with two pores total on each side, tarsal claws with four teeth each, male with both wings collectively on each side with combined 10 veins leaving RP posteriorly, forewing length male 6.7 – 10 mm.

Male pregenital abdominal apparatus. Tergites III–IV each with paired patches of 14–16 small circular pores total in one irregular transverse row on posterior margin on each side, rows somewhat angled anteriorly near midline, tergites IV–V each with paired patches of 23–28 small circular pores in two transverse rows on each side anterolaterally, rows on each side meeting near midline, pores with small conical collars internally, tergites V–VI with intersegmental membrane invaginated into single-lobed pocket extending anteriorly two-fifths length of tergite V, tergite V 2.2 times as long as VI.

Male terminalia. Ectoprocts each ovoid in dorsal view (Fig. 14), posterolateral lobe barely convex and extending posteriad only to base of ventromedial lobe, apex rounded, sclerotized ventrad of ventromedial lobe, ventromedial lobe slightly flattened dorsoventrally, rounded posteriorly, abruptly truncate along inner margin, with 20–25 short thickened setae over entire surface; tergite IX with anterior surface concave near anteroventral corner, sternite IX pentagonal in ventral view, posterior margin broadly rounded medially; gonarcus with median lobe projecting from dorsal surface, flattened anteroposteriorly, wider basally than apically, slightly longer than wide, apex rounded; gonocoxites at two-thirds length each widened to three times width at base in lateral view (Fig. 13), narrowed apically to a point; mediuncus with anterior two-fifths ovoid in lateral view, three times as high as remainder, apex shallowly concave in posterior view; pseudopenal membrane rectangular in posterior view (Fig. 12), 2.5 times as long as wide, covered with golden dorsally-projecting microspines; hypomeres present as paired, small, circular sclerites; pseudopenis sclerotized, spinelike in posterior view, as long as pseudopenal membrane and as gonarcal median lobe, slightly narrowed at base anteriorly in lateral view, slightly curved anteriorly, apex anteroposteriorly flattened, rounded in posterior view.

Female terminalia. Ectoprocts as long as to slightly longer than gonocoxites; sternite VIII strongly curved posteriorly, slightly longer medially than laterally, medial fifth with posterior margin shallowly concave; bursa with entrance lightly sclerotized, remainder membranous to lightly sclerotized; spermatheca broken and incomplete in the one specimen examined.

Size. Length of forewing: male 6.7 – 10mm, female 7.5mm.

Biology. The holotype was collected in May and the paratype series in March and July. The locality for most of the paratypes is in the lower elevations (about 300 meters) of Sierra Martin Garcia in the southern portion of Azua Province. The vegetation was a transitional mix to more montane and wet conditions and the whole forest was in rather good state of preservation.

Distribution. DOMINICAN REPUBLIC.

Etymology. Named for the island of Hispaniola, which is the only location where this species has been collected.

Type material. Holotype male (FSCA). Holotype label data: "R. DOMINICANA, / 14 KM W PUERTO PLATA / MAY 10-11, 1985 / E. GIESBERT, COLL.", " 'Mantispilla' / sp. ♂ / det L. Stange '85" [folded over], "HOLOTYPE ♂ / Leptomantispa hispaniolaensis / Hoffman / det: K. M. Hoffman 1991". Condition of holotype: color excellent, both flagella absent, right protarsomeres IV-V absent, right metatarsomeres III-V absent, left metatarsal claws absent; wings unspread, forewing length 8.7 mm; abdomen detached, cleared, in glycerin-filled microvial attached to specimen's pin beneath labels. This locality would be in the Province of Puerto Plata.

Paratypes. DOMINICAN REPUBLIC: Azua Prov., La Furnia, Barreras, 18°19.289'N, 70°54.755'W, 18.vii.2003, D. Perez, R. Bastardo, B. Hierro, (night), RD-156, 16♂, 1♀ (NMNH, MNHNSD); Bahoruco

Prov., Sierra de Neiba, RD-103, Rd to Majagual, 669 m, 18°32.340'N, 71°18.118'W, 25.iii.2003, D. Perez, R. Bastardo, & B. Hierro, (n), 1♀ (NMNH).

***Leptomantispa pulchella* (Banks)**
(Fig. 6)
Mantispilla pulchella Banks, 1912:179.
Leptomantispa pulchella (Banks). Hoffman, 2002:270.
Mantispilla zayasi Alayo, 1968: 13(new synonymy).

The Cuban record is based on 6 examples recorded by Alayo (1968) from Oriente, the types of *Mantispilla zayasi*. The synonymy was recognized in the thesis of Hoffman (1992) but not previously published.

Coloration. Head yellow, vertex brown except along ocular margins and between antennal bases and others posteriad of each antenna, frons with vertical mesal dark stripe extending from antennae onto labrum. Antenna with scape pale on anterior face, dark on posterior face, pedicel and flagellomeres, fuscous. Pronotum varying from being almost completely brown to brown, yellowish dorsally, especially anteriad and with a large, pale anteromesal macula. Pterothorax variable, usually with dark brown longitudinal band mesally, paler laterally, to almost uniformly brown. Abdomen with tergites dark brown, yellow band along lateral margin.

Size. Length of forewing, male 5.2 – 11.3mm, female 7.2 – 12.0mm; Cuban examples vary from 7 – 12mm (Alayo 1968),

Distribution. This is a widely distributed species in North and Central America, being recorded from British Columbia in Canada, south throughout the United States, and on south to Cuba in the West Indies, and in Central America from Mexico, Nicaragua, and the NMNH has a specimen from Belize. It was listed in error from Costa Rica by Hoffman (2002).

Material examined. No material from West Indies seen.

Genus *Zeugomantispa* Hoffman

This is a small, exclusively New World, genus of three species. They are found in the United States east of the 100th Meridian and south to Cuba and Hispaniola in the Antilles, and throughout Central America and South America well into Argentina. The genus is easily recognized by the protuberant bases of the pronotal setae. The immatures of *Zeugomantispa minuta* (Fabricius) are associated with many spider species, including several web-building species, belonging to 14 families (Hoffman and Brushwein 1992). The first instar larvae of *Z. minuta* are obligate egg sac penetrators and are able to orient toward isolated egg sacs from a distance (Redborg and Macleod 1985).

***Zeugomantispa minuta* (Fabricius)**
(Fig. 3)
Mantis minuta Fabricius, 1775:278.
Zeugomantispa minuta (Fabricius). Hoffman 2002:273.
Mantispilla taina Alayo, 1968:13 (new synonymy).
Mantispa viridis (Walker). Perez-Gelabert and Flint, 2001:19.

This is the common, little green mantispid of the eastern United States and thus its presence in the Antilles is not surprising. It is here recorded from Andros Island in the Bahamas for the first time. The Cuban record is based on 4 examples recorded by Alayo (1968) from Camagüey, the types of *Mantispilla taina*. The synonymy was recognized in the thesis of Hoffman (1992) but not previously published. The identity of the Dominican material has presented problems, as the angle of aa-ap is more nearly erect

(as in *Z. viridula* (Erichson)) than is usual in this species (Fig. 8A in Alayo 1968 shows much of the same effect). However, it was discovered that the antennal flagellomeres are black in *Z. viridula* and it never shows a clearly defined mid-dorsal yellow stripe on the pterothorax. The Dominican specimens have yellowish antennal flagellomeres and at least 1 male shows a distinct yellow mid-dorsal stripe, both characteristics agree only with *Z. minuta*. To confirm its identity the abdomen from a Dominican male was cleared and the genitalia were found to be in full agreement with *Z. minuta*.

Coloration. Usually green when alive, but generally fading to yellowish shades after death. Head green often with red along ocular margins and on face. Antennae yellowish, often with red wash, mostly on basal segments. Pronotum greenish to yellowish, often with broad, but ill-defined dorsal yellowish band, sometimes with reddish wash laterally. Pterothorax green, generally with a broad, mid-dorsal yellow stripe. Abdomen green with a broad, mid-dorsal yellow stripe.

Size. Forewing length, males 7.3 – 15.2 mm, females 6.5 - 16.5 mm; Dominican Republic examples, males 5.7 – 10 mm (n=4), females 10 – 12 mm (n=2); Cuban examples 10 mm (Alayo 1968).

Distribution. United States, east of the 100th meridian, south through Bahamas, Cuba to Hispaniola in the Antilles, and south through Mexico, Belize, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama to Venezuela in South America.

Material examined.-BAHAMAS: Andros Island, Forfer Field Station, nr. Stafford Cr., 25.vii.2006, M. Thomas & T. Smith, 4♂ (FSCA, NMNH). DOMINICAN REPUBLIC: Azua Prov., La Jarda (monte abajo), Padre Las Casas, 18°44.094'N 70°52.208'W, 5.iv.2003, D. Perez, B. Hierro, S. Medrano, D. Veloz, (night), RD-122, 4♂, 3♀ (MNHNSD, NMNH); Azua Prov., La Furnia, Barreras, 18°19.289'N 70°54.755'W, 18.vii.2003, D. Perez, R. Bastardo, B. Hierro, (night), RD-156, 2♂, 1♀ (MNHNSD, NMNH); Azua Prov., east side of crest Sierra Martin Garcia, 7km WNW Barrero, 18˚21'N, 70˚58'W, 860m, 25-26.vii.1992, C. Young, R. Davidson, S. Thompson, J. Rawlins, 1♂ (CMNH); Independencia Prov., 1km SE caseta no. 1, Parque Nacional Sierra de Bahoruco, 1153m, 18°15.771'N, 71°52.233'W, 4.vii.2003, D. Perez, R. Bastardo, B. Hierro, (day/night), RD-140, 1♂, 1♀ (NMNH); Santo Domingo Norte Prov., Parque Mirador del Norte, xii.2014, C.S. Molinari, 1♂ (NMNH).

Acknowledgments

We thank the curators of the many museums that made material under their care available during the thesis work of the first author, especially the following whose material is cited in this paper: Dr. Randall T. Schuh (AMNH); Dr. Scott E. Miller (BPBM); Dr. John E. Rawlins (CMNH); Dr. Robert E. Skidmore (CNC); Dr. Lionel E. Stange and Dr. Paul E Skelley (FSCA); Ms Vicky Moseley (LSUC); Dr. David G. Furth (MCZ); Dr. Michael A. Ivie (MSU); Dr. Raymond J. Pupedis (PMNH). We gratefully acknowledge the fine work of the Smithsonian's Entomology Scientific Illustrator, Ms Karolyn Darrow, for taking the habitus photos and for arranging the plates. KMH is grateful to the members of his thesis advisory committee at Clemson University: Dr. Peter H. Adler, Dr. Joseph D. Culin, Dr. David G. Heckel and his major advisor Dr. John D. Morse, those agencies that provided financial support, and to his parents for support and encouragement during his studies. The authors are indebted to the two reviewers, Dr. Atilano Contreras Ramos and Dr. Michael Ohl for their valuable reviews. Any remaining errors are the responsibility of the authors.

Literature Cited

Alayo, D. P. 1968. Los Neurópteros de Cuba. Poeyana, Serie B, no. 2, 127 p.

Ardila-Camacho, A., and A. García. 2015. Mantidflies of Colombia (Neuroptera, Mantispidae). Zootaxa 3937: 401–455.

Banks, N. 1897. New North American neuropteroid insects. Transactions of the American Entomological Society 24: 21–31.

Banks, N. 1912. Notes on Nearctic Mantispidae. Proceedings of the Entomological Society of Washington 14: 178–179.

Enderlein, G. 1910. Klassifikation der Mantispiden nach dem material des Stettiner Zoologischen Museums. Stettin Entomologische Zeitung 71: 341–379.

Fabricius, J. C. 1775. Systema entomologiae, sistens insectorum classes, ondines, genera, species, adiectis synonymis, locis, descriptionibus, observatioibus. Flensburgi et Lipsiae: *In*:Officina Libraria Kortii. 832 p.

Hoffman, K. M. 1992. Systematics of the Mantispinae (Neuroptera: Mantispidae) of North, Central, and South America. Ph. D. Dissertation, Clemson University, 501 p.

Hoffman, K. M. 2002. Mantispidae, p. 251–275. *In*: N.D. Penny (ed.) A guide to the lacewings (Neuroptera) of Costa Rica. Proceedings of the California Academy of Sciences 53: 161–457.

Hoffman, K. M., and J. R. Brushwein. 1989. Species of spiders (Araneae) associated with the immature stages of *Mantispa pulchella* (Neuroptera, Mantispidae). Journal of Arachnology 17: 7–14.

Hoffman, K. M., and J. R. Brushwein. 1992. Descriptions of the larvae and pupae of some North American Mantispinae (Neuroptera: Mantispidae) and development of a system of larval chaetotaxy for Neuroptera. Transactions of the American Entomological Society 118: 159–196.

Machado, R. J. P., and J. A. Rafael. 2010. Taxonomy of the Brazilian species previously placed in *Mantispa* Illiger, 1798 (Neuroptera: Mantispidae), with the description of three new species. Zootaxa 2454: 1–61.

Ohl, M. 2004. Annotated catalog of the Mantispidae of the world (Neuroptera). Contributions on Entomology, International 5: 131–262.

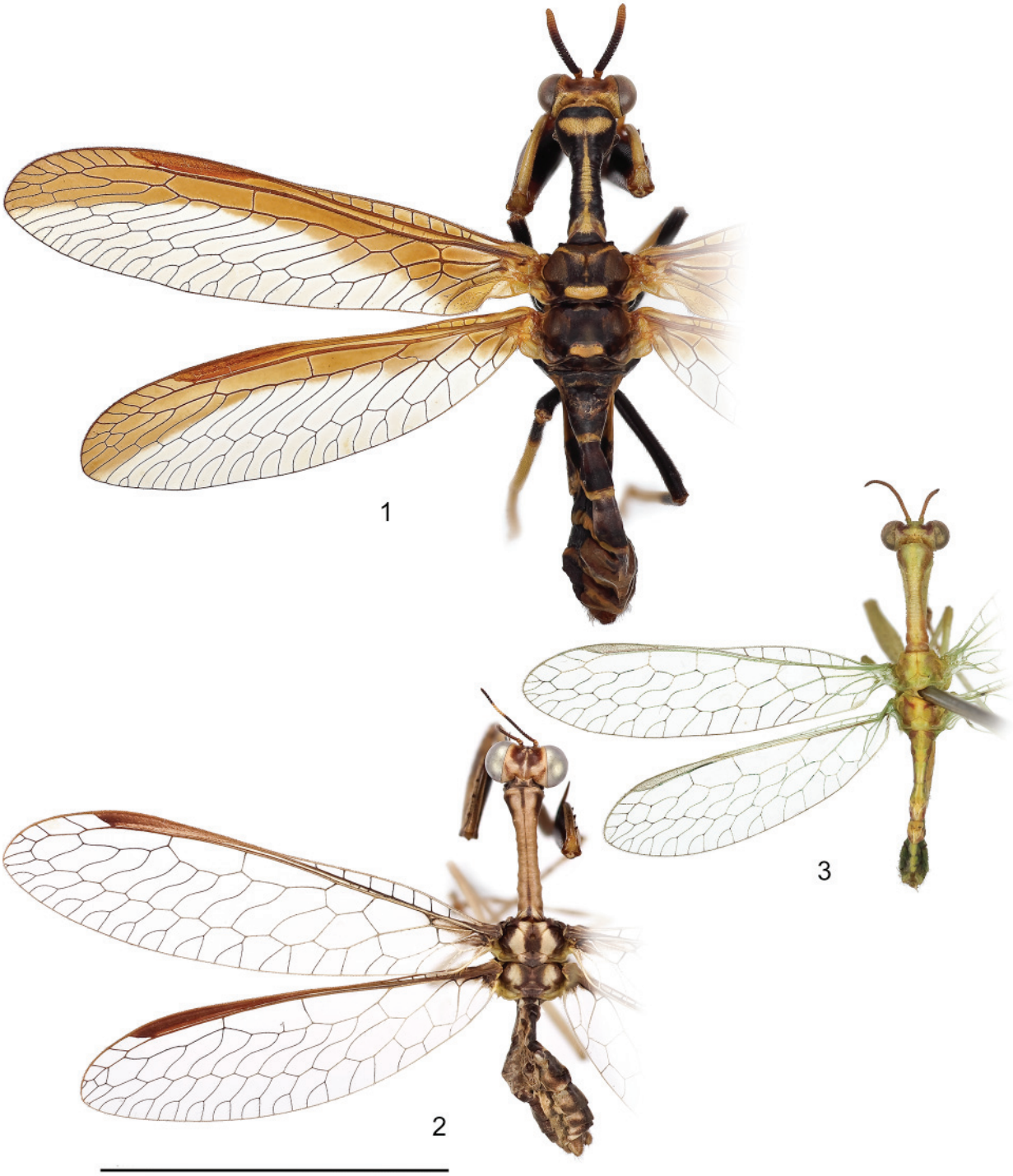
Perez-Gelabert, D. E., and O. S. Flint, Jr. 2000 (2001). Annotated list of the Neuroptera of Hispaniola, with new faunistic records of some species. Journal of Neuropterology 3: 9–23.

Redborg, K. E., and E. G. MacLeod. 1983. *Climaciella brunnea* (Neuroptera: Mantispidae): a mantispid that obligately boards spiders. Journal of Natural History 17: 63–73.

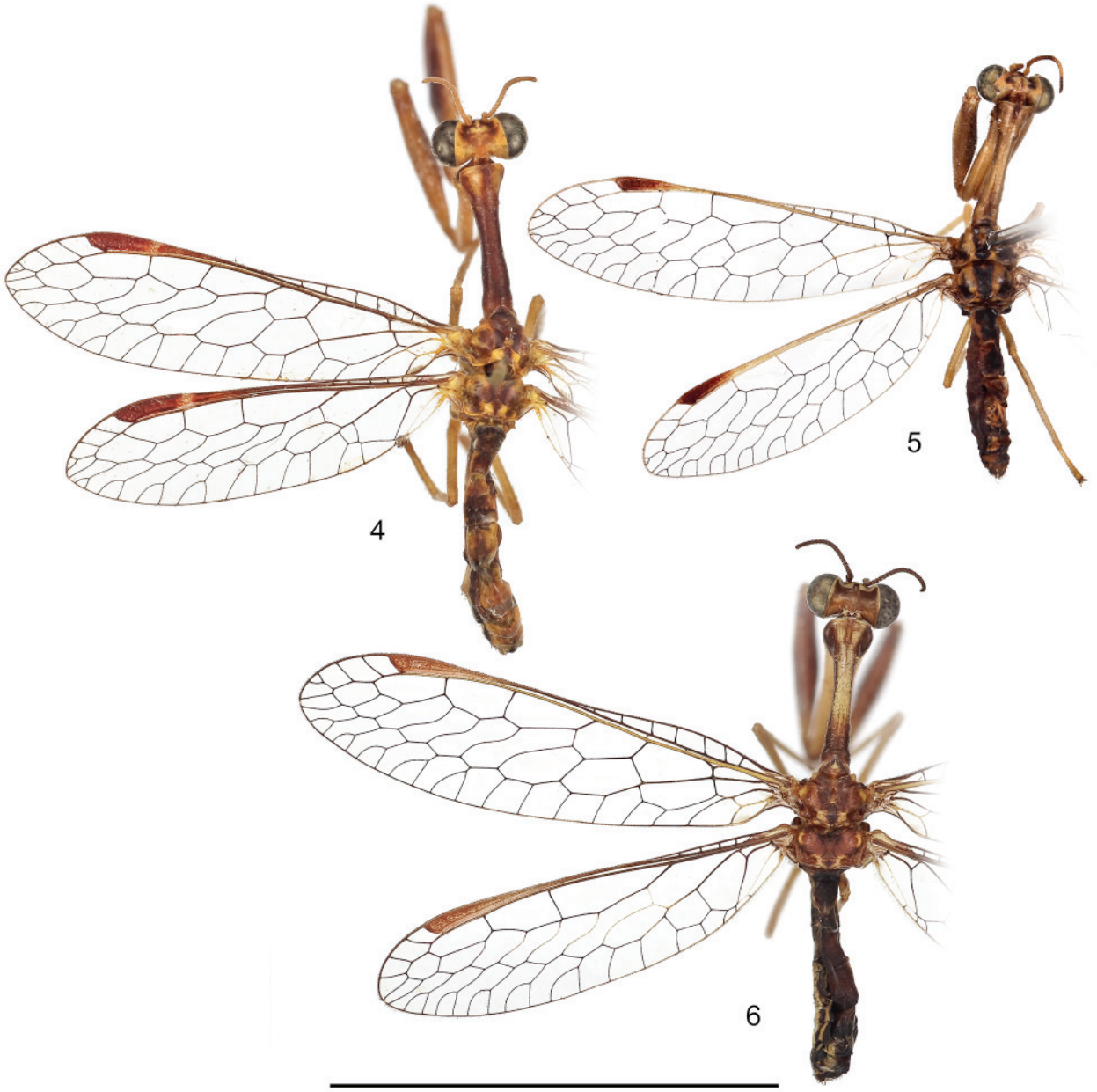
Redborg, K. E., and E. G. MacLeod. 1985. The developmental ecology of *Mantispa uhleri* Banks (Neuroptera: Mantispidae). Illinois Biological Monographs 53: 1–130.

Wolcott, G. N. 1948. The insects of Puerto Rico. Journal of Agriculture of the University of Puerto Rico 32: 1–224.

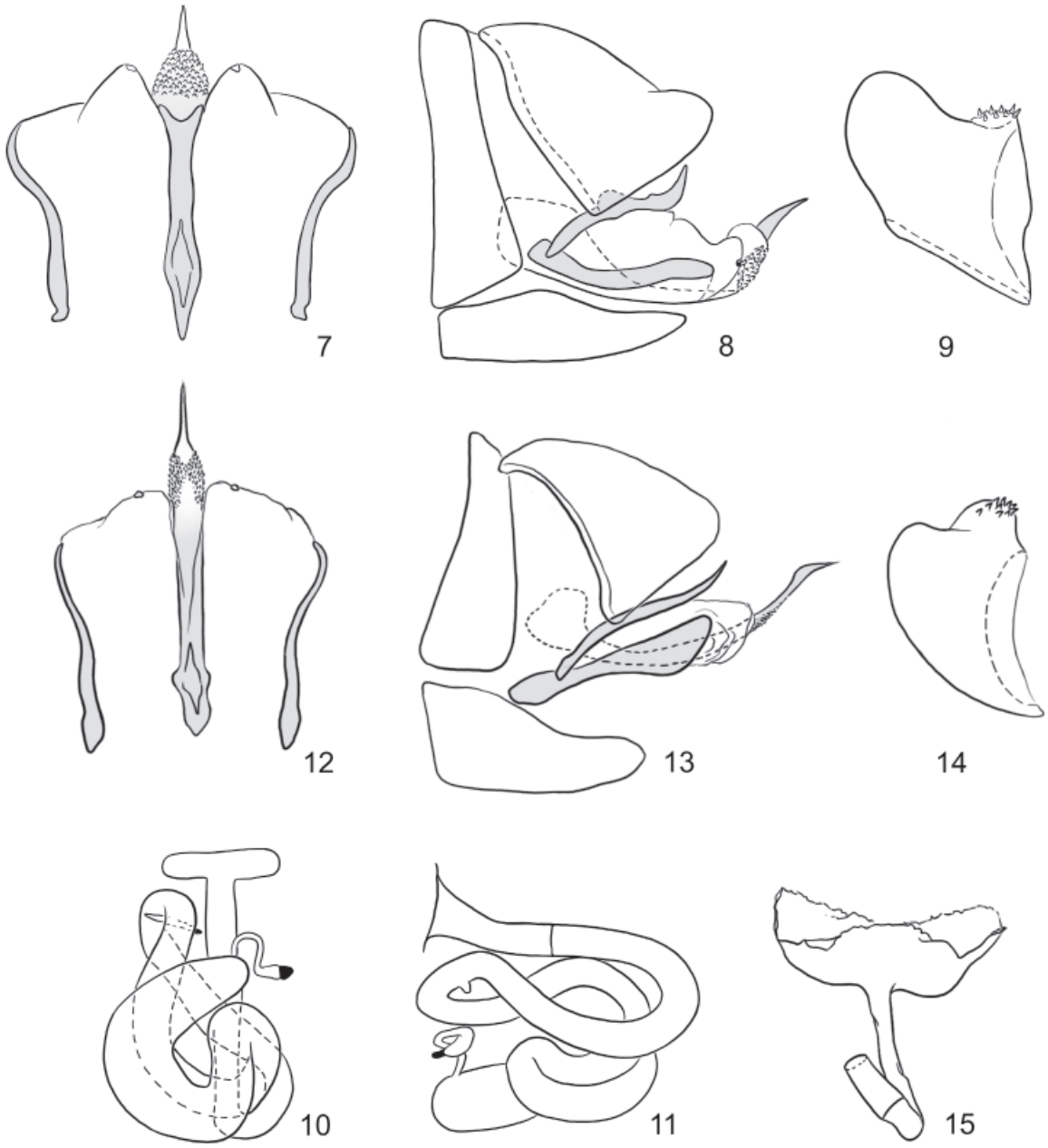
Received March 3, 2017; Accepted May 14, 2017;
Review Editor David E. Bowles.



Figures 1-3. Adult habitus dorsal. **1)** *Climaciella cubana,* Dominican Republic, La Vega Prov., La Cienaga. **2)** *Dicromantispa sayi*, Dominican Republic, Independencia Prov., Parque Nacional Sierra de Bahoruco. **3)** *Zeugomantispa minuta*, Venezuela, Sucre State, Las Piedras de Cocollar.



Figures 4-6. Adult habitus dorsal. **4)** *Leptomantispa antillesensis,* Brit. Virgin Isls., Guana Island. **5)** *Leptomantispa hispaniolaensis*, Dominican Republic, Azua Prov., La Furnia. **6)** *Leptomantispa pulchella*, USA, Maryland, Worcester Co., 3 km. W. Pocomoke City.



Figures 7-15. Adult male and female genital structures. **7–11)** *Leptomantispa antillesensis*. **7)** Male, mediuncus and gonocoxites, ventral view. **8)** Male, terminalia, left lateral view. **9)** Male, right ectoproct, dorsal view. **10)** Female, spermatheca, ventral view. **11)** Female, spermatheca, right lateral view. **12-15)** *Leptomantispa hispaniolaensis*. **12)** Male, mediuncus and gonocoxites, ventral view. **13)** Male, terminalia, left lateral view. **14)** Male, right ectoproct, dorsal view. **15)** Female, spermatheca, ventral view.