2014

New North American records of Pyraloidea (Lepidoptera: Crambidae, Pyralidae) from southern Florida

James E. Hayden
Florida Department of Agriculture and Consumer Services, James.Hayden@FreshFromFlorida.com

Terhune S. Dickel

Follow this and additional works at: http://digitalcommons.unl.edu/insectamundi

http://digitalcommons.unl.edu/insectamundi/865

This Article is brought to you for free and open access by the Center for Systematic Entomology, Gainesville, Florida at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Insecta Mundi by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.
New North American records of Pyraloidea
(Lepidoptera: Crambidae, Pyralidae) from southern Florida

James E. Hayden
Florida Department of Agriculture and Consumer Services
Division of Plant Industry
1911 SW 34th Street
Gainesville, FL 32608 USA

Terhune S. Dickel
P.O. Box 567
Anthony, FL 32617 USA

Date of Issue: April 25, 2014
James E. Hayden and Terhune S. Dickel
New North American records of Pyraloidea (Lepidoptera: Crambidae, Pyralidae) from southern Florida
Insecta Mundi 0361: 1–16

ZooBank Registered: urn:lsid:zoobank.org:pub:089BAA5E-27CC-4F3A-B3B0-DB6D0F3128BF

Published in 2014 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 are available at the CSE website.

**Managing editor:** Eugenio H. Nearns, e-mail: gino@nearns.com
**Production editors:** Michael C. Thomas, Paul E. Skelley, Brian Armitage, Ian Stocks, Eugenio H. Nearns
**Editorial board:** J. H. Frank, M. J. Paulsen
**Subject editors:** G.B. Edwards, Joe Eger, A. Rasmussen, Gary Steck, Ian Stocks, A. Van Pelt, Jennifer M. Zaspel, Nathan P. Lord, Adam Brunke
**Spanish editors:** Julieta Brambila, Angélico Asenjo
**Website coordinator:** Eugenio H. Nearns

**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, Great Britain
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 (On-Line 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

**Author instructions** available on the Insecta Mundi page at:
http://centerforsystematicentomology.org/insectamundi/

Copyright held by the author(s). This is an open access article distributed under the terms of the Creative Commons, Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original author(s) and source are credited. http://creativecommons.org/licenses/by-nc/3.0/
New North American records of Pyraloidea (Lepidoptera: Crambidae, Pyralidae) from southern Florida

James E. Hayden
Florida Department of Agriculture and Consumer Services
Division of Plant Industry
1911 SW 34th Street
Gainesville, FL 32608 USA
James.Hayden@freshfromflorida.com

Terhune S. Dickel
P.O. Box 567
Anthony, FL 32617 USA

Abstract. We report six new North American records, one new state record, and one rare record of pyraloid moths from southern Florida, together with diagnostic characters for all taxa. We transfer *Ennomosia* Amsel from Spilomelinae to Glaphyriinae, *Cangetta micralis* (Hampson) n. comb. from *Deuterophyssa* Warren, and *Microthyris lelex* (Cramer) n. comb. from *Cyclocena* Möschler. We revise *Pseudocabotia* Blanchard and Knudson rev. stat. to a subgenus of *Ancylosis* Zeller, with its type species *A. (P.) balconiensis* (Blanchard and Knudson) n. comb., and discuss the classification of *Cabotia* Ragonot as a subgenus of *Ancylosis*.

Key Words: Florida, distribution, Glaphyriinae, Phycitinae, Spilomelinae.

Introduction

We summarize new records of pyraloid moths collected in southern Florida from the 1970s to 2013. TSD collected the majority in the 1980s and 1990s. A few have been supplemented by recent collections by JEH and plant inspectors with the Florida Department of Agriculture and Consumer Services, Division of Plant Industry (FDACS-DPI). Most were collected with mercury vapor light in weedy areas. In one case, larvae were discovered in one location several years after the first adults were caught elsewhere. Otherwise, actual breeding populations have not been discovered, although the time and distance among the collection events suggest that some of these species are established in the environment. We note host records from other places if breeding populations are to be sought. Since the species are poorly known, we take the opportunity to transfer some of them to other taxa, supported by evidence of shared characters.

Abbreviations used herein include:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Institution/Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMNH</td>
<td>The Natural History Museum (London, UK)</td>
</tr>
<tr>
<td>CMNH</td>
<td>Carnegie Museum of Natural History (Pittsburgh, PA, USA)</td>
</tr>
<tr>
<td>CUIC</td>
<td>Cornell University Insect Collection (Ithaca, NY, USA)</td>
</tr>
<tr>
<td>FSCA</td>
<td>Florida State Collection of Arthropods (Gainesville, FL, USA)</td>
</tr>
<tr>
<td>JEHC</td>
<td>James E. Hayden Collection (Gainesville, FL, USA)</td>
</tr>
<tr>
<td>MGCL</td>
<td>McGuire Center for Lepidoptera and Biodiversity, UF FLMNH (Gainesville, FL, USA)</td>
</tr>
<tr>
<td>NMNH</td>
<td>National Museum of Natural History (Washington, D.C., USA)</td>
</tr>
<tr>
<td>TSDC</td>
<td>Terhune S. Dickel Collection (Anthony, FL, USA), to be deposited in the FSCA</td>
</tr>
<tr>
<td>ZMHB</td>
<td>Museum für Naturkunde (Berlin, Germany)</td>
</tr>
</tbody>
</table>

Complete synonymies may be found in Nuss et al. (2013). Label data in quotation marks are verbatim. Images of similar species may be found at the Moth Photographers’ Group Website (North American Moth Photographers Group 2013).
**Ennomosia basalis** (Hampson)
Figures 1A–B, 3A–B, 4A, 5C–E.

*Clupeosoma basale* Hampson, 1897: 217 (Barbados).


**Discussion.** The Florida specimens are similar to the lectotype, slightly more yellow, although that could be attributed to fading of the type specimen. The species is smaller than the type of the genus, *E. geometridalis* Amsel, 1956 of Venezuela, and the outer edge of the brown basal area of the forewing is transverse rather than oblique. We transfer *Ennomosia* Amsel, 1956 to Glaphyriinae based on the following characters. Males of both species possess a costal retinacular hook. The tympanic bullae are round, and the fornix tympani protrudes over the venula prima (Fig. 5E). The male valvae are broad and simple (narrower in *E. basalis*, Fig. 4A), and the tegumen is elongate. In the female of *E. basalis*, the ductus seminalis is wide and emerges from the lateral wall of the corpus bursae. The maculation unmistakably resembles that of many glaphyriines. It shares genitalic characters with *Chilozela* Munroe, 1964, *Eupoca* Warren, 1891, and *Macreupoca* Munroe, 1964: broad valvae, a simple juxta without processes, and a membranous corpus bursae without abundant sclerotization (Munroe 1964). However, the falcate forewing more resembles that of *Scybalistodes* Munroe, 1964. The position of the genus in Glaphyriinae remains unclear.


**Neoleucinodes torvis** Capps
Figures 1C–D, 3C–D, 4B, 5F, 6.

*Neoleucinodes torvis* Capps, 1948: 77 (Cuba); Munroe, 1995: 63.


**Discussion.** Only one other species of *Neoleucinodes* Capps, 1948, *N. prophetica* (Dyar, 1914), has been previously recorded in North America. It is larger and has more abundant black scaling on the wings, including a black subbasal line and forewing apical orange spot suffused with black. The orange spot on the forewing posterior edge is nearly triangular, and the hind wing apical spot is well developed with orange and black scales. *Neoleucinodes torvis* has less black scaling, the orange forewing spot is oblique, and the hind wing apical spot is pale orange, as weakly colored as the other faint lines. Female
**New Records of Pyraloidea**

*N. torvis* have labial palpi with an elongate apical meron, almost as long as the second meron, similar to *N. elegantalis* (Guenée, 1854). Male *N. torvis* have the valva apically broader and a short, hook-shaped cornutus, whereas *N. prophetica* and *N. elegantalis* have a long, nearly straight cornutus. Female *N. torvis* have an appendix bursae that is absent in the other two species.

Most Florida specimens of *N. prophetica* come from Key Largo (Monroe Co.), but we have also seen specimens from Homestead (Miami-Dade Co.) and near Copeland, Janes Scenic Drive (Collier Co.) (FSCA, NMHH). Kimball (1965) listed the first specimen from Siesta Key. The small number of specimens caught by TSD and the absence of other collections initially suggested that the species was localized to Homestead. Remarkably, while drafting this paper, a DPI inspector and JEH collected *N. torvis* as larvae in Broward County, FL. They were boring in fruit of a large *Solanum torvum* Sw. tree in a community garden. The pink larvae (Fig. 6) bore a hole usually next to the calyx of the immature green fruits. Pupation lasted 11–12 days, like that reported for *N. elegantalis* (Molet 2012). *Neoleucinodes torvis* has been previously reared from *S. torvum* (Capps 1948) and also fruit of *Solanum rudepannum* Dunal (Diaz and Solis 2007). *Neoleucinodes prophetica* has been raised on *Solanum erianthum* D. Don (FL: Key Largo, 14 Feb. 1984, H. Glenn; FSCA).

**Other material examined.** *Neoleucinodes torvis* Capps: 1M: Dominica, NMNH slide 114945 (NMNH); 1F: Dominica, NMNH slide 114946 (NMNH). *Neoleucinodes elegantalis* Guenée: 1M: Bolivia: Sara, JEH slide 1098 (CMNH); 1M: Costa Rica: Alajuela, MGCL slide 1148 (MGCL); 1F: Costa Rica: Turrialba, NMNH slide 114950 (NMNH); 1M: Brazil: MG, NMNH slide 114955 (NMNH); 1F: Brazil: PA, NMNH slide 114959 (NMNH); 1F: Mexico: Tamps., NMNH slide 114960 (NMNH); 1M: Guatemala, MGCL slide 1239 (MGCL). *Neoleucinodes prophetica* (Guenée): 1M, 3F: FL: Key Largo, MGCL slides 187, 188, 1191, 1212 (FSCA); 1M: FL: Collier Co., MGCL slide 1145 (FSCA); 1M, 1F: Honduras: Pico Bonito, MGCL slides 1192, 1197 (MGCL); 1M: Dom. Rep.: El Seibo, NMNH slide 114964 (NMNH); 1F: PR: Toro Negro, MGCL slide 712 (JEHC).

**Lineodes triangulalis** Möschler

Figures 1E, 3E, 4C.

*Lineodes triangulalis* Möschler, 1890: 305 (Puerto Rico).
*Lineodes cyclophora* Hampson, 1913b: 316 (Mexico).
*Lineodes triangularis* Walsingham, 1915: 456 (unjust. emend.)
*Lineodes serpulalis?* Druce 1895: 265 (nec Lederer, 1863)


**Discussion.** This species is not new to Florida, having been raised on leaves of pepper plant (“*Capsicum frutescens*”; Dyar 1901). However, this is the only specimen seen since then. It can be distinguished from other Nearctic species of *Lineodes* Guenée, 1854 and *Atomopteryx* Walsingham, 1891 by maculation and the male fibula, which is straight, needle-like, and oblique to the sacculus. The other species have either no fibula, or one that has a distal expansion with a hook or teeth and that does not reach to the sacculus.

**Other material examined:** *Lineodes triangulalis*: Lectotype, Puerto Rico (ZMHB); 1M, 1F: Dominica, NMNH slides 114920, 114921 (NMNH); 1F, 1M: USA, TX, Brownsville, NMNH slides 114953, 114956 (NMNH).

**Cangetta micralis** (Hampson) n. comb.

Figures 1F, 3F, 4D, 5G.

*Deuterophysa micralis* Hampson, 1907: 7 (Jamaica).

Discussion. Cangetta micralis (Hampson, 1907) is a small spilomeline widespread in the Caribbean and South America. Distinctive characters include glossy violet maculation, the toothed fibula, and the rectangular, laterally setose uncus. In Florida, the more common Deuterophysa fernaldi Munroe, 1983 is larger, has long, porrect palpi, and has a triangular, yellowish-white costal spot and a fovea on the forewing. The larval behavior of C. micralis in Florida is unknown, but in the Brazilian cerrado, they feed on the buds and flowers of Palicourea rigida Kunth (Rubiaceae) (Diniz and Morais 2002).

The species is transferred from Deuterophysa Warren to Cangetta Moore, 1886 on the basis of the following characters: the labial palpi are slightly upturned, protruding about the length of the head, and the maxillary palpi are prominent and narrow. The wings are concolorous and have dark transverse lines that are relatively straight on the forewing, with only slight basal curvature on the costa and anal fold. Forewing Rs₁ is stalked with Rs₂+₃, and a fovea is absent; M₃ and M₄ are stalked in the hind wing. In the male genitalia, the valve fibula is directed ventrodistad and bears three to five digitiform processes. The uncus is broad and bears several large, elongate, non-bifid setae on the ventrolateral margins. The female genitalia are simple and have only minor sclerotization about the antrum. The curved digiti of the fibula, which resemble the teeth of salad tongs, and the broad uncus with large setae along the ventrolateral margins are unusual among spilomelines.

Cangetta micralis is the only described representative of its genus in the New World. It differs from congeners by its uniformly dark gray-violet maculation, without a pale costal triangle or terminal spots on the forewing. It differs from the type of the genus, C. rectilinea Moore, 1886, by vein Rs₄ of the forewing arising separately from the cell and by the presence of three metathoracic tibial spurs. Males have an uncus with parallel sides (rather than an ovate uncus), and females have one frenular bristle and lack an obvious appendix bursae.

Examined species of Deuterophysa Warren, 1889 differ in several characters. The antennal flagellomeres are thick and have one row of dorsal scales, with ventral side bare. The labial palpi are at least as long as the head, often longer. The whitish forewing costal spot is lunate and distinctly margined. The male genitalia have broad valvae, a fibula that lacks digitiform projections, a prominent sacculus, and a transtilla consisting of two acute projections. The simple uncus is nearly bare, and the gnathos is well-developed with an obvious medial process. The phallus has a caecum penis. The tympanal organs are similar to those of Cangetta but have a shallow putozo posterior of the tympanic ridge. Based on available material, the female genitalia of Cangetta are indistinctive and qualitatively similar to those of Deuterophysa, lacking distinct sclerotizations except around the antrum.

Collection of the specimens over two decades suggests that C. micralis was resident in the Florida Keys at least from 1975–1995, and it is probably still present but not detected for lack of collecting effort. The species is also present on the mainland, as evidenced by one specimen from Long Pine Key.

Other material examined. Cangetta rectilinea Moore: 1M, 1F: Sri Lanka, NMNH slides 114733, 114768 (NMNH). Cangetta sp. near rectilinea: 1M, 1F: Taiwan: Taichung, 1100m MGCL slides 389, 390 (FSCA). Deuterophysa fernaldi Munroe: 1M, 1F: USA, FL: Collier Co., MGCL slides 380, 381 (FSCA). Deuterophysa spp.: 2M: USA, Puerto Rico, Bosq. Est. Toro Negro, JEH slides 790 (CMNH) and 1551 (JEHC); 1F: USA, Puerto Rico, Sierra Luquillo, JEH slide 791 (CMNH); 1M: Venezuela: Rancho Grande, MGCL slide 388 (FSCA).
New Records of Pyraloidea

Nomophila triticalis Berg
Figures 2A, 3G, 4E.

Nomophila triticalis Berg, 1875b: 155; Munroe, 1973: 180 (Argentina).
Nomophila squalidalis Hampson, 1913a: 511 (Argentina).


Discussion. Heppner (2011) listed this species for Florida without comment. It is much smaller than the widespread and abundant N. nearctica Munroe, 1973. It is also distinguished by a short, slight cornutus, a separate, quadrate sclerotization on the wall of the phallus, and an uncus that is not apically split (unique among species of Nomophila Hübner, 1825). The species is native to Argentina and not recorded elsewhere, so artificial transport would best explain its appearance. The time and distance between the collection events could reflect separate introductions, but considering that it is a small, obscurely marked species and the 2012 specimen was not from near a port, it is probably already more widely distributed in Florida.

Microthyris lelex (Cramer) n. comb.
Figures 2B, 3H, 5A.

Phalaena lelex Cramer, 1777: 2, pl. 97 fig. C (Surinam).
Botis flexalis Möschler, 1881: 424 (Surinam).
Botis janiralis Möschler, 1886: 78 (Jamaica).
Cyclocena gestatalis Möschler, 1890: 309, fig. 20 (Puerto Rico).
Haritala foviferalis Hampson, 1895: 335 (Grenada).
Lygropia (Cyclocena) lelex: Hampson, 1899: 727.
Cyclocena lelex: Munroe, 1995: 77.


Discussion. The record is of a single specimen, but the species’ uniqueness deserves comment. Microthyris lelex is widespread in the Caribbean, Central, and northern South America, and it has been traditionally placed in the monotypic genus Cyclocena Möschler, 1890 n. syn. Although Munroe (1995) did not assign Cyclocena to a genus group of Spilomelinae, Möschler (1890) had already recognized its close relationship to Microthyris Lederer, 1863. Microthyris anormalis (Guenée, 1854) breeds in southern Florida, and M. prolongalis (Guenée, 1854) has been recorded as a stray. They uniquely share with M. lelex a pincer-shaped apex of the phallus. Other shared characters are 1) gnathos complete, V-shaped, without a medial process, 2) one simple, narrow fibula closer to the sacculus than to the costa of the valva, 3) costa of valva membranous and wider distad than proximad, 4) the postmedial line of the fore- and hind wings is contracted near the wing costa and extended distad between M₄ and CuA₃, 5) in females (not shown), the posterior third of the ductus bursae is expanded and lightly sclerotized, and 6) the corpus bursae has one granulose, thorn-shaped signum. Microthyris species other than M. lelex differ primarily in the male sexual characters, which include large leg tufts, antennal modifications, a hind wing extension in M. prolongalis, and tufts of hairs on the valvae. In M. lelex, the legs are not tufted and antennae not modified, but the forewing has a large fovea distal of the cell between M₁ and M₂ that compresses the cell into the basal quarter of the wing. The fovea may be homologous...
to the transparent maculae in the other species. The simple presence of secondary sexual characters, regardless of particular expression, could be a deeper-level synapomorphy. Females lack the fovea and other secondary characters.

In size and color, *M. lelex* can be confused with several other spilomelines, such as the common *Herpetogramma phaeopteralis* (Guenée, 1854) (Tropical sod webworm). That species lacks a fovea, and the forewing postmedial line is not distinctly projected distad as in *M. lelex*. Another is *Penestola bufalis* (Guenée, 1854), which does have a male fovea but very different genitalia; it inhabits coastal mangrove swamps and shorelines.

Munroe (1995) placed *Microthyris* in his “Syllepte group,” although he left *Cyclocena* unplaced. From our observations, we characterize this group by a reduced uncus that is usually truncate and lacks robust, bifid chaetae (in some cases with a few elongate, simple setae). Members also generally share rectangular or oval valvae with straight costae, a cyclindrical, slightly bulbous saccus, and a tegumen with a broad medial extension. In females, the colliculum is broad and flat rather than tightly cylindrical, and the one or two signa are round and granulose, sometimes extended as horn(s) or an elongate trough.

*Microthyris* species are leaf-tiers on *Ipomoea*. *Microthyris anormalis* is a pest on sweet potato (*Ipomoea batatas*) in Peru (Vergara de Sánchez and Sánchez 1989), the Virgin Islands (Wolcott 1948) and rarely in Florida (FDACS-DPI regulatory database 2013). In Cuba, it has been raised on the same host and on *Turbinia corymbosa* (Bendicho-Lopez 1998). Dyar (1901) raised *M. anormalis* on morning glory (*Ipomoea* sp.) in southern Florida. Records of *M. lelex* are rare, but Wolcott (1948) recorded it on sweet potato in Puerto Rico, and it has been raised on *Ipomoea batatas* in Guanacaste, Costa Rica (e.g. 09-SRNP-44557 in Janzen and Hallwachs 2013). A few other members of the *Syllepte* group, such as *Lygropia tripunctata* (Fabricius, 1794), *Pleuroptya silicalis* (Guenée) and species of *Phostria* Hübner, 1819, also feed on *Ipomoea* and other Convolvulaceae.


**Ancylosis (Cabotia) bonhoti** (Hampson) n. comb.

Figures 2C, 3I, 5B, H.

*Encystia Bonhoti* Hampson, 1901: 256 (Bahamas).


Discussion. TSD collected the Fuchs Hammock specimens, and H. Neunzig identified them as “Cabotia sp.” in 1987. They will be published in a forthcoming Moths of North America fascicle. More recently, a female was collected by a FDACS-DPI plant inspector at a residence in Miami in March 2013, and the next month, JEH collected a male and females at the University of Florida’s Tropical Research and Education Center in Homestead.

Cabotia Ragonot, 1888 is widespread in the Caribbean and South America; its type species, C. semidiscella Ragonot, 1888, is Argentine. Heinrich (1956) notes that the differences among the species are slight and that some of the names may be conspecific. We identify ours as A. (C.) bonhoti based on proximity to the type locality in the Bahamas, and the genitalia of the single male are like those illustrated by Heinrich (1956). The New World species of Cabotia can be characterized by the fusion of some of the thumbtack-shaped signa into a line, but the distribution of the unfused signa seems to follow no consistent pattern.

Roesler (1973) revised Cabotia to a subgenus of Ancylosis Zeller, 1839. We provisionally follow this classification because it reflects many shared characters of venation and genitalia, including stalked forewing Rs₂ and Rs₃, hind wing M₂ and M₃ fused entirely and stalked with CuA₁, the generally similar male genitalia, and the corpus bursae with numerous tack-shaped signa. However, Roesler’s description of Cabotia does not agree in certain key characters with Heinrich’s (1956) nor with our specimens, and it may be questioned whether the Palaearctic species placed in Ancylosis (Cabotia) are monophyletic with the New World ones. The male antennae of New World Cabotia do have a distinct sinus, the male maxillary palpi are brush-like and nest inside a groove in the labial palpi, which are porrect, and each valva has a clasper near the base. Roesler’s descriptions of Ancylosis and Cabotia accordingly need revision. Nevertheless, subgenera are useful for reflecting the unity of and divisions within the genus.

Ancylosis (Pseudocabotia) balconiensis (Blanchard and Knudson) n. comb.
Figures 2D, 3J, 5I.


Discussion. The species was described from central Texas. The Florida specimen was collected among Coccoloba trees and weeds on the barrier island adjacent to Port Everglades. The high-traffic location is less than surprising, but without knowledge of its host plants, the introduction pathway remains speculative. It is smaller and paler than A. bonhoti, and the cluster of fused tack-shaped signa in the crook of the diverticulum bursae is unique.

We revise Pseudocabotia Blanchard and Knudson, 1985 as a subgenus of Ancylosis. Ancylosis (Pseudocabotia) balconiensis actually fits Roesler’s (1973) characterization of Palaearctic Cabotia better than does A. bonhoti in its possession of non-sinuate male antennae, simple maxillary palpi, and absence of valve claspers. In view of the classificatory problems discussed under A. bonhoti, we refrain from assigning A. balconiensis to another subgenus. Indeed, Old World “Cabotia” species might be better assigned to Pseudocabotia, but such further actions should depend on phylogenetic analysis.

Acknowledgments

We thank Thomas Simonsen (BMNH) for providing a photograph of the type of E. basalis. FDACS-DPI inspectors Andrew Derksen and Olga Garcia collected specimens, and Derksen enthusiastically assisted JEH in the field. Herb Neunzig identified the first specimens of Cabotia, and the late Douglas
Ferguson identified the first *N. torvis*. Koen Maes (Agrobiosys International) generously provided perceptive insight into the diagnostic characters and generic limits of *Cangetta*. After external reviews, the Honduras Lepidoptera survey of the MGCL, led by Jacqueline Miller and Deborah Matthews Lott, provided a female *M. lelex* that confirmed our initial predictions about genitalic characters. Personnel of the NMNH assisted with a loan of specimens of other material. We thank Koen Maes, Brian Scholtens (College of Charleston), and FDACS-DPI personnel Louis Somma, Susan Halbert, Paul Skelley, Greg Hodges and Wayne Dixon for constructively reviewing the manuscript. Research and travel were facilitated by USDA APHIS agreement 12-8130-0149-CA with FDACS-DPI, “Digital Identification of Microlepidoptera on Solanaceous Plants.” This is Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Entomology Contribution Number 1254.

**Literature Cited**


Received March 12, 2014; Accepted April 13, 2014.
Figure 3. Heads in lateral aspect (not to scale): A) *Ennomosia basalis* male (same as Fig. 1A). B) *E. basalis* female (same as Fig. 1B). C) *Neoleucinodes torvis* male (Dominica, Mar. 1965; NMNH). D) *N. torvis* female (Dominica, Oct. 1964; NMNH). E) *Lineodes triangulalis* (same as Fig. 1E). F) *Cangetta micralis* (FL, Upper Key Largo, 22 Feb. 1992; TSDC). G) *Nomophila triticalis* (same as fig. 2A). H) *Microthyris lelex* (same as Fig. 2B). I) *Ancylosis bonhoti* (FL, Fuchs Hammock, 28 Dec. 1986; TSDC). J) *Ancylosis balconiensis* (same as Fig. 2D).
Figure 6. *Neoleucinodes torvis* larvae on fruit of *Solanum torvum*, FL, Davie, April 2013. Scale in mm.