

ANNOTATED CHECKLIST OF THE COCKROACHES  
OF FLORIDA (DICTYOPTERA: BLATTARIA: BLATTIDAE,  
POLYPHAGIDAE, BLATTELLIDAE, BLABERIDAE)

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ABSTRACT

Synonymy, distribution, and ecological data are summarized for 38 species of cockroaches in 24 genera in 4 families which occur in Florida. We include information on other species known from nearby areas which may also be collected in the state. Thirteen of these species, including most of the important pests, have been introduced from Africa (7), the Neotropics (3), and Asia (3). Most exotic species appear to be dependent on human disturbance and only two, *Pycnoscelus surinamensis* (L.) and *Periplaneta australasiae* (F.), are commonly found in natural communities away from human disturbance. *Blattella germanica* (L.) and *Supella longipalpa* (F.), both introduced, are strictly domiciliary. Most of the native species (15) have neotropical distributions and are not found north of Florida. Four species, *Chorisoneura texensis* Saussure & Zehntner, *Euthlastoblatta gemma* (Hebard), *Eurycotis floridana* (Walker), and *Ischnoptera deropeltiformis* (Brunner), are restricted to the southeastern U.S. and are the northernmost representatives of neotropical genera. Five species of *Parcoblatta*, distributed widely in the Southeast, reach their southern limits in Florida. There is one endemic species, *Arenivaga floridensis* Caudell, restricted to sandy areas of central Florida.

RESUMEN

Se resume sinonimia, distribución, y datos ecológicos para 38 especies de cucarachas en 24 géneros en 4 familias que ocurren en la Florida. Incluimos información sobre otras especies conocidas de áreas cercanas las cuales pueden colectarse en el estado. Trece de éstas, incluyendo la mayor parte de las plagas importantes, se han introducido de Africa (7), del Neotrópico (3), y de Asia (3). La mayoría de las especies exóticas parecen depender del disturbio humano y solo dos, *Pycnoscelus surinamensis* (L.) y *Periplaneta australasiae* (F.), se encuentran comúnmente en comunidades naturales lejos de disturbio humano. *Blattella germanica* (L.) y *Supella longipalpa* (F.), ambas introducidas, son estrictamente domiciliarias. La mayoría de las especies nativas (15) tienen distribuciones neotropicales y no se encuentran al norte de Florida. Cuatro especies, *Chorisoneura texensis* Saussure & Zehntner, *Euthlastoblatta gemma* (Hebard), *Eurycotis floridana* (Walker), y *Ischnoptera deropeltiformis* (Brunner), se limitan al sureste de los EE. UU. y son las representantes más septentrionales de géneros neotropicales. Cinco especies de *Parcoblatta*, distribuidas ampliamente en el sureste, alcanzan sus límites australes en Florida. Hay una especie endémica, *Arenivaga floridensis* Caudell, restringida a áreas arenosas de la Florida central.

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The Asian cockroach, *Blattella asahinai* Mizukubo (Roth 1986), is probably the most recent addition to the rich cockroach fauna of Florida. Unlike its close relative, the

German cockroach, *B. germanica* (L.), the Asian cockroach is essentially an outdoor species, only entering homes occasionally (Brenner et al. 1988). We began reviewing the literature on species already present in the state, both native and introduced, for purposes of identification of this new exotic and similar species and as preparation for studies on its potential interactions with other outdoor species. We were struck by the general paucity of up-to-date information on the cockroach fauna, exclusive of the well-documented domestic and peridomestic pest species.

The most recent comprehensive taxonomic treatment of the cockroaches of the continental United States was that of Hebard (1917) and included 46 species from the U.S. More recent general works include keys by Blatchley (1920) and Helfer (1963) and a list of names by Pratt (1988) which added virtually no new biological or distributional information. Pratt (1988) included 66 species for the U.S. Some of this increase was due to introduction and establishment of exotic species. More thorough collection in southern Florida and the Southwest also resulted in descriptions of new species and detection of other species which were previously known from neighboring areas and probably do not represent introductions.

This checklist was prepared to summarize synonymy, distributions, and ecology of all species of cockroaches known from Florida and adjacent areas. We were particularly interested in analyzing and comparing distribution and ecology of native and introduced species, with emphasis on their pest status.

#### METHODS

The majority of the information presented here is summarized from an exhaustive literature review. Specimens deposited in the Florida State Collection of Arthropods were studied by the senior author for additional distributional information. We have also included information from an unpublished inventory of the entomofauna of the Archbold Biological Station, Lake Placid, Highlands Co. (M. A. Deyrup, personal communication). The bulk of the available information on distributions in Florida is based on collections made prior to 1920 by Hebard, Rehn, Davis, and Blatchley (Blatchley 1920, Davis 1914, 1915, Hebard 1916, Rehn & Hebard 1904, 1905, 1907, 1910, 1914a,b). Subsequent information has been scattered among ecological studies (e.g. Friauf 1953, Peck & Beninger 1989) or miscellaneous taxonomic notes.

Hebard's (1917) monograph was taken as our starting point and no attempt was made to review prior literature. Previous publications, including those of Hebard himself, contained many misidentifications and other incorrect usage of names. Synonymies and overall distributions were summarized from Princis' treatment of the Blattaria in the Orthopterorum Catalogus (1962, 1963, 1964, 1965, 1966, 1967, 1969, 1971). These were modified by more recent treatments when applicable.

The order of superfamilies and families follows McKittrick (1964), and differs considerably from that used by Princis. Species are listed alphabetically within genera, and genera alphabetically within families.

We include complete synonymy for each species. Genera in which a given species name has been published are included in parentheses if these combinations have not been used in the North American literature. Novel combinations or important misidentifications in North American usage are indicated. The nomenclatorial usage of important taxonomic and general references is indicated but our listings are not exhaustive in this regard. We have listed in the synonymy all references in the North American literature since 1917 that deal with taxonomy, identification and description of life stages, and ecology, particularly with reference to outdoor habitats and distribution with respect to structures. Not all of these are cited in the text of the article, but the full bibliographic citations are included among the references cited as an aid to readers.

All common names which have been used in the literature are listed also. Most were invented by Blatchley (1920), Helfer (1963), or Pratt (1988) and do not reflect common use. Common names that are on the approved list of the Entomological Society of America (Werner 1982) are indicated with an asterisk. The name "palmettobug" is indiscriminately used for any large cockroach, principally species of *Periplaneta* and *Eurycotis* (Gurney & Walker 1976).

Distributional information includes a summary of worldwide distribution, list of states and provinces in the U.S. and Canada, and counties in Florida. We have used numbered superscripts in the distribution lists to indicate literature citations to save space and to reduce distraction. An asterisk indicates a previously unreported locality. Biological and ecological information is summarized where available with emphasis on relative abundance in and about structures, disturbed areas, and natural habitats. Biological information on the important domestic and peridomestic pest species is covered more adequately in references such as Cornwell (1968) and is not repeated.

## RESULTS

Four additional species have been reported from Florida that were not on Pratt's list (1988): *Blaberus discoidalis* Serville (Roth 1969), *Myrmecoblatta wheeleri* Hebard (Deyrup & Fisk 1984), *Neoblattella detersa* (Walker) (Peck & Beninger 1989), and *Symploce morsei* (Peck & Beninger 1989). *Chorisoneura parishi* Rehn, apparently established in Miami, is reported from Florida and the U.S. for the first time here. Pratt (1988) and Princis (1969) listed *Euthlastoblatta diaphana* (F.) for the southeastern U.S., but it does not occur in the U.S. They apparently overlooked Hebard's comments (1917) on misidentifications of *E. gemma* Hebard under this name. Taking these additions and deletions into account, there are at least 69 species of cockroaches in 31 genera in 5 families known from the continental U.S.

Cockroaches generally are associated with litter and decaying wood in forest ecosystems. They reach their greatest taxonomic diversity in the humid tropics and subtropics (Schal et al. 1984). Not surprisingly, Florida, with its mild humid climate and variety of subtropical and temperate forest ecosystems has the richest cockroach fauna of any part of the U.S. Currently 38 of the 69 species known from the U.S. are found in Florida. Thirteen of these have been introduced. More native and introduced species likely would be detected with more field work by knowledgeable collectors.

Distributions of the 25 native species known from Florida are summarized in Table 1. A very strong tropical bias is immediately evident. Most of the genera (15 of 7) are neotropical and 15 of the 25 species are found in the Caribbean and/or Mesoamerica, reaching their northern limits in Florida. Several of these neotropical species are known only from the Keys and have been considered by previous authors to be introduced (e.g., Hebard 1917:260 re *Blaberus craniifer* Burmeister, *Phoetalia pallida* (Brunner), *Holocompsa nitidula* (F.)). In the absence of any convincing evidence to the contrary (e.g., *Panchlora nivea* (L.)), we take the conservative approach of treating most of these as natives (i.e., not introduced by man).

*Chorisoneura texensis* Saussure & Zehntner, *Euthlastoblatta gemma* (Hebard), *Eurycotis floridana* (Walker), and *Ischnoptera deropeltiformis* (Brunner), are restricted to the southeastern U.S., but are the northernmost representatives of neotropical genera.

Five species of *Parcoblatta*, a nearctic genus, reach their southernmost limits in Florida, only 1 of which is found into southern Florida. Two other species of *Parcoblatta*, *P. bolliana* (Saussure & Zehntner) and *P. pennsylvanica* (DeGeer), are known from adjoining counties in southern Georgia and probably occur in northern Florida.

TABLE 1. SUMMARY OF DISTRIBUTIONAL PATTERNS OF NATIVE COCKROACHES IN FLORIDA AND ADJACENT AREAS. GENUS DISTR., AREA WITH GREATEST NUMBER OF SPECIES; FL, TOTAL SPECIES IN FLORIDA; SFL, CFL, NFL, SOUTHERN, CENTRAL, AND NORTHERN FLORIDA; NTRP, NEOTROPICS; GC, GULF COAST; EUS, TEMPERATE EASTERN U.S.

Family	Genus	Genus dist.	Number of Species						
			FL	SFL	CFL	NFL	NTRP	GC	EUS
Blattidae									
	<i>Eurycotis</i>	Neotropical	2	2	1	1	1	1	0
Polyphagidae									
	<i>Arenivaga</i>	SW Nearctic	1	-	1	1	-	-	-
	<i>Compsodes</i>	Neotropical	2	2	-	-	1	-	-
	<i>Holocompsa</i>	Neotropical	1	1	-	-	1	-	-
	<i>Myrmecoblatta</i>	Neotropical	1	?	1	?	1	?	-
Blattellidae									
	<i>Caribblatta</i>	Neotropical	2	2	2	1	2	1	1
	<i>Chorisonaura</i>	Neotropical	1	1	1	1	-	1	1
	<i>Euthlastoblatta</i>	Neotropical	1	1	1	1	1	-	-
	<i>Ischnoptera</i>	Neotropical	1	1	1	1	-	1	1
	<i>Latiblattella</i>	Neotropical	1	1	1	-	1	-	-
	<i>Neoblattella</i>	Neotropical	1	1	-	-	1	-	-
	<i>Parcoblatta</i>	Nearctic	5	1	1	5	-	5	5
	<i>Plectoptera</i>	Neotropical	1	1	-	-	1	-	-
	<i>Symploce</i>	Neotrop/Afr.	1	1	-	-	1	-	-
Blaberidae									
	<i>Blaberus</i>	Neotropical	2	2	-	-	1	-	-
	<i>Hemiblaberus</i>	Neotropical	1	1	-	-	1	-	-
	<i>Phoetalia</i>	Neotropical	1	1	-	-	1	-	-
Totals			25	19	10	11	15	10	8

The only endemic cockroach species known from Florida, *Arenivaga floridensis* Caudell, is restricted to sandy areas of central Florida and is the only eastern representative of the genus. The remaining species of *Arenivaga* are known from temperate desert and semiarid areas of southwestern North America (Hebard 1920).

The only native species which might be considered a pest is the Florida woods roach or palmetto bug, *Eurycotis floridana*, which breeds around houses in shaded, moist environments, and occasionally enters buildings. All our major pest species are exotics.

Information on the 13 introduced species is summarized in Table 2. Most species originated in Africa (7), followed by Asia (3) and the Neotropics (3). Infestations of *Nauphotea cinerea* Olivier were reported from feed mills in the Tampa area in the early 1950's (Gresham 1952). Since that time there have been no further notices of its activities or indication that it has spread, suggesting that the infestation did not persist. The only species which have successfully invaded naturally occurring communities in the state are the Australian cockroach, *Periplaneta australasiae*, and the Surinam cockroach, *Pycnoscelus surinamensis* (L.). The Cuban cockroach, *Panchlora nivea* (L.), is common in wooded lots within the urbanized area of Gainesville, FL, and may also be established in similar forested areas further removed from human activity. Most of the other species appear to depend on human disturbance to persist, with the possible exception of some of other species of *Periplaneta* (e.g., *fuliginosa*). *Blattella germanica* (L.) and *Supella longipalpa* (F.) represent the extreme of dependency and could be considered obligate domiciliary species in Florida. While individuals of these species may be found out of doors, breeding populations either do not occur or do not persist.

TABLE 2. SUMMARY OF ECOLOGY AND DISTRIBUTIONS OF COCKROACHES INTRODUCED INTO FLORIDA. D, BREEDS INSIDE STRUCTURES; P, COMMONLY BREEDS AROUND STRUCTURES, URBANIZED AREAS; N, COMMONLY FOUND IN NATURAL COMMUNITIES.

Family/Species	D	P	N	Origin	Distribution in U.S.
<b>Blattidae</b>					
<i>Periplaneta americana</i>	+	+	-	Africa	throughout U.S. as urban-domiciliary, outdoors in Southeast
<i>P. australasiae</i>	+	+	+	Africa	outdoors in central & southern Florida, further northwards as domicil.-urb.
<i>P. brunnea</i>	-	+	-	Africa	southeastern U.S. to southern Fla.
<i>P. fuliginosa</i>	-	+	?	Africa	southeastern U.S., not in peninsular Fla.
<b>Blattellidae</b>					
<i>Blattella asahinai</i>	?	+	?	Asia	peninsular Fla.
<i>B. germanica</i>	+	-	-	Asia	entire U.S., obligate domiciliary
<i>Chorisoneura parishi</i>	-	+	-	Caribbean	southern Fla.
<i>Supella longipalpa</i>	+	-	-	Africa	entire U.S., obligate domiciliary
<i>Symploce pallens</i>	+	-	-	Africa	Key West
<b>Blaberidae</b>					
<i>Epilampra maya</i>	?	-	?	Mesoamerica	Arcadia
<i>Nauphoeta cinerea</i>	+	?	-	Africa	Tampa
<i>Panchlora nivea</i>	-	+	?	Neotropics	peninsular Fla., Gulf Coast
<i>Pycnoscelus surinamensis</i>	-	+	+	trop. Asia	outdoors in Fla., Gulf Coast, further north in greenhouses, etc.

ANNOTATED CHECKLIST OF THE COCKROACHES OF FLORIDA

Blattidae

1. *Blatta orientalis* L.  
Oriental cockroach\*

*Blatta orientalis* Linnaeus 1758:424 Syst. Nat., X ed.; Hebard 1917:173 (tax, fig); Blatchley 1920:94 (tax, fig); Hebard 1943:271 (tax); Rehn 1945:266 (dispersal); Froeschner 1954:180 (tax); Helfer 1963:50 (key, fig); Princis 1965:475 (tax); Cornwell 1968 (biol, ecol, econ status); Dakin & Hays 1970:12 (tax); Pratt 1988:883 (tax). (*Kakerlac*, *Periplaneta*, *Stylopyga*).

*Blatta secunda* Schaeffer 1769:155 Icones Ins. circa Ratisbonam indigen.

*Blatta tertia* Schaeffer 1769:155 Icones Ins. circa Ratisbonam indigen.

*Blatta culinaria* DeGeer 1773:530 Mem. Hist. d. Ins.

*Blatta ferruginea* Thunberg 1810:187 Vetenskapsakad. nya Handl.

*Blatta europaea* 1846:30 Saros magye helyirata.

*Kakerlac castanea* Blanchard 1851:18 Hist. Fis. Polit. Chile.

*Pulex imperator* Westwood 1858:70 Trans. Entomol. Soc. Lond.

*Blatta badia* Saussure 1863:150 Mem. Soc. Geneve.

*Kakerlac pallipes* Philippi 1863:222 Z. Ges. Naturwiss. (*Periplaneta*, *Stylopyga*).

*Kakerlac platystetho* Philippi 1863:222 Z. ges. Naturwiss. (*Periplaneta*).

*Blatta germanica* (not *germanica* L.) Burr 1904:120 Entomol. Rec.

*Stylopyga orientalis* var. *gracilis* Adelung 1910:337 Soc. Entomol. Ross.

DISTRIBUTION: Cosmopolitan in temperate areas. AL<sup>5,12</sup> AZ<sup>12</sup>, CA<sup>12</sup>, CO<sup>12</sup>, CT<sup>12</sup>, IA<sup>8,12</sup> IL<sup>15</sup>, IN<sup>1</sup>, KS<sup>14</sup>, MI<sup>3</sup>, MN<sup>12</sup>, MO<sup>12</sup>, NC<sup>12</sup>, NE<sup>12</sup>, NJ<sup>12</sup>, NM<sup>12</sup>, PA<sup>12</sup>, TN<sup>12</sup>, TX<sup>12,15</sup>, WI<sup>12</sup>.

Blatchley (1920) reported this species from Florida (Miami and West Palm Beach), however these records are undoubtedly based on adventive collections because there is no evidence that breeding populations *B. orientalis* occur anywhere in Florida or on the Southeastern Coastal Plain. We are aware of unconfirmed anecdotal reports of this species in the Jacksonville area, but have seen no specimens. Given its abundance and pest status in cooler parts of the U.S., it is likely to be introduced periodically and specimens may be found occasionally.

ECOLOGY: This species occurs commonly in and about houses and other structures over most of the temperate U.S. It apparently does not occur in natural communities away from human disturbance in the parts of the country where it is found.

### 2. *Eurycotis floridana* (Walker)

Florida cockroach, Florida woods roach, palmettobug

*Periplaneta floridana* Walker 1868:135 Cat. Blatt. British Mus. (*Pelmatosilpha*).

*Eurycotis floridana*: Hebard 1917:166 (tax, fig); Blatchley 1920:97 (tax, fig); Friauf 1953:122 (ecol); Helfer 1963:49 (fig male, female); Princis 1966:553 (tax); Dakin & Hays 1970:13 (tax); Gurney & Walker 1976:824 (biol., ecol.); Hagenbuch et al. 1988:378 (ecol); Brenner 1988:583 (ecol); Pratt 1988:883; Patterson & Koehler 1989:39 (ecol, cont); Peck & Beninger 1989:614.

*Periplaneta semipicta* Walker 1868:141 Cat. Blatt. British Mus.

*Platyzosteria ingens* Scudder 1877:92 Proc. Boston Soc. Nat. Hist.

*Platyzosteria sabalianus* Scudder 1877:93 Proc. Boston Soc. Nat. Hist.

DISTRIBUTION: Peninsular Florida, lower Gulf and Atlantic coasts: AL<sup>5</sup>, FL<sup>12,11</sup> GA<sup>12</sup>, MS<sup>12</sup>. In Florida: Alachua<sup>11</sup>, Clay<sup>12</sup>, Dade<sup>12</sup>, Duval<sup>12</sup>, Escambia<sup>12</sup>, Levy<sup>12</sup>, Highlands (M.A. Deyrup pers. comm. 1989), Hillsborough<sup>12</sup>, Polk<sup>12</sup>, Putnam<sup>8</sup>, Charlotte<sup>12</sup>, Citrus<sup>12</sup>, Collier<sup>12</sup>, Broward<sup>12</sup>, Dade<sup>12</sup>, Monroe<sup>12,20</sup>.

ECOLOGY: Common in native vegetation as well as near human habitation, this species will enter houses occasionally, but does not commonly breed indoors. This species releases an oily, irritating liquid with a strong odor when disturbed and is sometimes referred to as the "stinking cockroach" or "Florida stinkbug" (Blatchley 1920, Gurney & Walker 1976). Breeding has been detected in attics (R. J. Brenner, pers. comm.). It is found in many native communities throughout Florida (Peck & Beninger 1989, Friauf 1953).

### 3. *Eurycotis lixa* Rehn

Hustler cockroach

*Eurycotis lixa* Rehn 1930:45 Trans. Amer. Entomol. Soc.; Gurney 1959:75 (occurrence in Florida, tax, fig female); Helfer 1963:49 (key); Princis 1965:550 (tax); Pratt 1988:883 (checklist).

DISTRIBUTION: Jamaica<sup>10</sup>. Florida: Monroe (Key West)<sup>10</sup>. Gurney (1959) considered this to be an introduced species, but it is also present in the West Indies and its "immigrant" status is questioned.

### 4. *Periplaneta americana* (L.)

American cockroach\*

*Blatta americana* L. 1758:424 Syst. Nat., 10th ed. (*Kakerlae*)

*Periplaneta americana*: Hebard 1917:176 (tax, fig), Blatchley 1920:99 (tax, fig); Hebard 1943:269 (tax); Rehn 1945:269 (dispersal); Friauf 1953:122 (ecol); Froeschner 1954:181 (tax); Helfer 1963:51 (key, fig); Princis 1965:405 (tax); Cornwell 1968 (gen info, biol, econ status); Dakin & Hays 1970:12 (tax); Powell & Robinson 1980:216 (1st instar

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nymph); Hagenbuch et al. 1988:378 (ecol); Brenner 1988:583 (ecol); Pratt 1988:883 (checklist).

*Blatta ferrugineo-fusca* Gronovius 1764:174 Zoophylac. Gronov. 2.

*Blatta kakkerlac* DeGeer 1773:535 Mem. l'Hist. Ins.

*Blatta aurelianensis* Fourcroy 1785:177 Entomol. Parisiensis 1.

*Blatta siccifolia* Stoll 1813:5 Repres. exact. coloree nature d. Spectres . . .

*Blatta heros* Eschscholtz 1822:83 Entomographica Erste Lief.

*Periplaneta stolidus* Walker 1868:129 Cat. Blatt. Brit. Mus.

*Periplaneta americana colorata* Rehn 1901:220 Trans. Amer. Entomol. Soc.

DISTRIBUTION: Cosmopolitan, northwards to New York City in eastern U.S.: AL<sup>12,5</sup>, AZ<sup>12</sup>, CA<sup>12</sup>, FL<sup>12,11</sup>, GA<sup>12</sup>, IA<sup>9</sup>, IL<sup>15</sup>, LA<sup>12</sup>, MI<sup>3</sup>, MS<sup>12</sup>, NC<sup>12</sup>, NY<sup>12</sup>, PA<sup>12</sup>, TX<sup>12</sup>. In Florida: Alachua<sup>11</sup>, Highlands (M.A. Deyrup pers. comm. 1989); Polk<sup>12</sup>, Monroe (incl. Keys)<sup>12</sup>, Putnam<sup>9</sup>. This species is probably found in all Florida counties and all of the U.S. states. It is generally considered to be widely distributed and we have no reason to doubt this. Nonetheless it is curious that there is relatively little documentation of its current distribution in the U.S. In the southern part of its range this species may breed outdoors.

ECOLOGY: In an ecological study in northeastern Florida this species was found only around buildings, not in native habitats (Friauf 1953). A similar situation occurs at the Archbold Biological Station in sandhill communities in central Florida (M.A. Deyrup pers. comm. 1989). It is a common peridomestic species in northern Florida (Hagenbuch et al. 1988).

5. *Periplaneta australasiae* (F.)

Australian cockroach\*

*Blatta australasiae* Fabricius 1775:217 Syst. Entomol.

*Periplaneta australasiae*: Hebard 1917:185 (tax, fig); Blatchley 1920:101 (tax, fig); Rehn 1945:269 (dispersal); Friauf 1953:122 (ecol); Froeschner 1954:182 (tax); Helfer 1963:51 (key, fig); Princis 1965:447 (tax); Lawson 1967:269 (ecol, dist); Cornwell 1968 (gen info, biol, econ status); Powell & Robinson 1980:222 (1st instar nymph); Hagenbuch et al. 1988:378 (ecol); Pratt 1988:883 (checklist); Patterson & Koehler 1989:39 (ecol, cont).

*Blatta domingensis* Palisot de Beauvois 1805:182 Ins. Rec. Afr. et Amer.

*Blatta aurantiaca* Stoll 1813:5 Represent. exact. coloree d'apres des Spectres . . .

*Periplaneta zonata* Haan 1842:49 Verhand. naturl. Gescheid. Nederl. overz. Bezitt.

*Periplaneta repanda* Walker 1868:125 Cat. Blatt. Brit. Mus.

*Periplaneta subcincta* Walker 1868:126 Cat. Blatt. Brit. Mus.

*Periplaneta inclusa* Walker 1868:126 Cat. Blatt. Brit. Mus.

*Polyzosteria subornata* Walker 1871:35 Cat. Derm. Salt. Brit. Mus., Suppl. Blatt.

*Periplaneta emittens* Walker 1871:37 Cat. Derm. Salt. Brit. Mus., Suppl. Blatt.

DISTRIBUTION: Florida: Alachua<sup>11</sup>, Charlotte<sup>12</sup>, Clay<sup>1</sup>, Collier<sup>12</sup>, Dade<sup>12</sup>, Highlands (M.A. Deyrup pers. comm. 1989), Hillsborough<sup>12,18</sup>, Levy<sup>12</sup>, Monroe (incl. Keys)<sup>12</sup>, Orange<sup>12</sup>, Pinellas<sup>1</sup>, Seminole<sup>1</sup>. This species is occasionally found indoors in many parts of the U.S. but apparently breeds outdoors only in central and southern Florida.

ECOLOGY: In an ecological study in northeastern Florida this species was found only around buildings, not in native habitats (Friauf 1953). At the Archbold Biological Station in sandhill communities in central Florida this species is found in and near buildings and is also common in native vegetation (M. A. Deyrup pers. comm. 1989). It is a common peridomestic species in north-central Florida (Hagenbuch et al. 1988) and occurs in treeholes, palm trees, and voids in block walls used in landscaping (R. J. Brenner, pers. comm.).

6. *Periplaneta brunnea* Burmeister  
brown cockroach\*

*Periplaneta brunnea* Burmeister 1838:503 Handbuch Entomol.; Hebard 1917:182 (tax, fig); Blatchley 1920:101 (tax); Hebard 1943:270 (tax); Rehn 1945:270 (dispersal); Friauf 1953:122 (ecol); Edmunds 1957:283 (biol); Helfer 1963:52 (key, fig); Princis 1965:438 (tax); Cornwell 1968 (gen info, biol, econ status); Dakin & Hays 1970:13 (tax); Powell & Robinson 1980:223 (1st instar nymph); Hagenbuch et al. 1988:378 (ecol); Brenner 1988:583 (ecol); Pratt 1988:883 (checklist); Patterson & Koehler 1989:39 (ecol, cont).

*Periplaneta patens* Walker 1868:127 Cat. Blatt. Brit. Mus.

*Periplaneta concolor* Walker 1868:135 Cat. Blatt. Brit. Mus.

*Periplaneta truncata* Krauss 1892:165 Zool. Anzeig.

*Periplaneta fuliginosa*: of Caudell, Rehn, and Hebard prior to 1917 (*fide* Hebard 1917).

*Periplaneta ignota* Shaw 1925:205 Proc. Linn. Soc. N.S. Wales.

DISTRIBUTION: Circumtropical, outdoors in the southeastern U.S.: AL<sup>5</sup>, FL<sup>12,11</sup>, GA<sup>12</sup>, NC<sup>7</sup>, SC<sup>7</sup>, TX<sup>12</sup>. Florida: Alachua<sup>11</sup>, Charlotte<sup>12</sup>, Collier<sup>12</sup>, Dade<sup>12</sup>, Hendry<sup>12</sup>, Lee<sup>12</sup>, Monroe (Keys and mainland)<sup>1,12</sup>, Polk<sup>12</sup>, Putnam<sup>12</sup>, Sarasota<sup>1</sup>, Volusia<sup>1</sup>.

ECOLOGY: In an ecological study in northeastern Florida this species was found only around buildings, not in native habitats (Friauf 1953). It is a common peridomestic species in north-central Florida and is sometimes found in palms, treeholes, and attics (Hagenbuch et al. 1988, R. J. Brenner, pers. comm.).

COMMENTS: According to Hebard (1917) many earlier references to this species actually were due to misidentification of *P. fuliginosa*.

7. *Periplaneta fuliginosa* (Serville)  
smokybrown cockroach\*, palmetto bug

*Kakerlac fuliginosa* Serville 1839:70 Hist. Nat. Ins.

*Periplaneta fuliginosa*: Hebard 1917:188 (tax, fig); Blatchley 1920:103 (tax); Hebard 1943:270 (tax); Froeschner 1954:182 (tax); Helfer (1963:50 (key, fig); Princis 1965:442 (tax); Cornwell 1968 (gen info, biol, econ status); Dakin & Hays 1970:13 (tax); Powell & Robinson 1980:225 (1st instar nymph); Appel & Rust 1987:175 (bibliography); Hagenbuch et al. 1988:377 (ecol); Brenner 1988a:583 (ecol); Brenner 1988b:33 (ecol); Pratt 1988:883 (checklist); Patterson & Koehler 1989:39 (ecol, cont); Brenner 1990 (ecol).

*Periplaneta pallipalpis* Rehn 1904:555 Proc. U.S. Natl. Mus.

*Periplaneta picea* Shiraki 1906:17 Annot. Zool. Japan.

*Periplaneta filchnerae* Karny 1908:18 Wiss. Ergebn. Exp. Filchner nach China u. Tibet.

*Periplaneta emarginata* Karny 1908:19 Wiss. Ergebn. Exp. Filchner nach China u. Tibet.

*Periplaneta brunnea*: of Rehn & Hebard prior to 1917 (*fide* Hebard 1917).

*Periplaneta truncata*: of Caudell, Rehn & Hebard prior to 1917 (*fide* Hebard 1917).

DISTRIBUTION: Eastern Asia<sup>23</sup>; Found outdoors in southeastern states from Texas to north Florida: AL<sup>12,5</sup>, FL<sup>12</sup>, GA<sup>12</sup>, LA<sup>12</sup>, MS<sup>12</sup>, TX<sup>12</sup>. Florida: Duval<sup>12</sup>, Leon<sup>12</sup>, Nassau<sup>1</sup>, Walton<sup>12</sup>. No specimens have been reported from central and southern Florida where it is replaced ecologically by *P. australasiae*. In other parts of the U.S. this species is sometimes found in greenhouses or inside buildings.

ECOLOGY: Common outdoors near houses (Blatchley 1920). Found in greenhouses in Iowa (Froeschner 1954). It was the most common peridomestic species found around houses in north-central Florida, particularly in treeholes and attics (Hagenbuch et al. 1988, Brenner 1988a,b, 1990).

COMMENTS: According to Hebard (1917) most earlier records of *P. brunnea* actually refer to this species.



Polyphagidae

8. *Arenivaga floridensis* Caudell  
Florida sand cockroach

*Arenivaga floridensis* Caudell 1918:156 Proc. Entomol. Soc. Wash.; Hebard 1920:206 (key, fig male, male genitalia); Blatchley 1920:110 (tax); Friauf 1953:122 (ecol); Princis 1962:59 (tax); Pratt 1988:883 (checklist).

DISTRIBUTION: Central Florida: Alachua\*, Highlands\* (M. A. Deyrup pers. comm. 1989), Lake\*, Levy\*, Marion<sup>20</sup>, Polk<sup>1</sup>, Pinellas<sup>1</sup>, Putnam<sup>8</sup>, Volusia\*. This is an isolated eastern species of a genus that otherwise occurs in the deserts and drylands of the southwestern U.S. and Mexico (Hebard 1920).

ECOLOGY: Friauf (1953) found this species occasionally in longleaf pine flatwoods in an ecological study of native vegetation in northern Florida. It is found in native vegetation at the Archbold Biological Station in central Florida, an area dominated by sandhill communities (M. A. Deyrup pers. comm. 1989). It has been reported from burrows of the oldfield mouse, *Peromyscus polionotus rhoadsi* (Bangs) in sandhill areas of the Ocala National Forest (Young 1949).

9. *Compsodes cucullatus* (Saussure & Zehntner)  
hooded cockroach

*Latindia cucullatus* Saussure & Zehntner 1894:111 Biol. Cent.-Amer., Orth.

*Compsodes cucullatus*: Blatchley 1920:108 (tax); Princis 1963:103 (tax); Helfer 1963:55 (key); Pratt 1988:883 (checklist).

DISTRIBUTION: Guatemala<sup>1</sup>, Panama<sup>21</sup>. FL: Dade<sup>1</sup>, Highlands Co. (M. A. Deyrup pers. comm. 1989 data); Indian River\*.

ECOLOGY: This species has been found in native habitats in central Florida (M. A. Deyrup pers. comm. 1989) and pinelands in southern Florida (Blatchley 1920).

10. *Compsodes schwarzi* (Caudell)  
Schwarz's hooded cockroach

*Latindia schwarzi* Caudell 1903:165 Proc. Entomol. Soc. Wash.

*Compsodes schwarzi*: Hebard 1917:210 (tax, fig); Hebard 1943:272 (tax); Princis 1963:103 (tax); Helfer 1963:55 (key, fig); Pratt 1988:883 (checklist); Peck & Beninger 1989:614 (ecol).

DISTRIBUTION: Baja California<sup>12</sup>, Southwestern U.S.: AZ<sup>12</sup>, Southeastern U.S.: FL<sup>20</sup>, TX<sup>12</sup>. In Florida: Dade<sup>20</sup>.

ECOLOGY: Peck & Beninger (1989) reported a single specimen from open pine lands in Everglades National Park in a flight-intercept trap.

11. *Holocompsa nitidula* (F.)  
small hairy cockroach

*Blatta nitidula* Fabricius 1781:345 Spec. Ins.

*Holocompsa nitidula*: Hebard 1917:206 (tax, fig); Blatchley 1920:107 (tax); Gurney 1942:55, Helfer 1963:55 (key, fig male, female); Princis 1963:93 (tax); Pratt 1988:883 (checklist).

*Corydia collaris* Burmeister 1838:491 Handb. Entomol. (*Blatta*).

*Holocompsa cyanea* Saussure 1864:150 (not Burmeister 1838) Mem. Hist. Nat. Mexique.

*Holocompsa capsoides* Shelford 1911:8 Ann. Mag. Nat. Hist.

DISTRIBUTION: American tropics, Cuba<sup>12</sup>, FL: Key West<sup>12</sup>.

ECOLOGY: Collected inside structures in Key West (Hebard 1917).

### 12. *Myrmecoblatta wheeleri* Hebard

*Myrmecoblatta wheeleri* Hebard 1917:361 Entomol. News: Princis 1963:109 (tax); Deyrup & Fisk 1984:183 (dist, biol, key, fig).

DISTRIBUTION: Costa Rica<sup>6</sup>, Guatemala<sup>21</sup>. Florida: Highlands<sup>6</sup>. Deyrup & Fisk (1984) consider this species to be a native, previously undetected because of its cryptic habits, rather than an introduced species.

ECOLOGY: In Florida it is associated with nests of carpenter ants, *Camponotus abdominalis floridanus* (Buckley), and with other ant species in Central America (Deyrup & Fisk 1984).

## Blattellidae

### 13. *Blattella asahinai* Mizukubo

Asian cockroach\*

*Blattella asahinai* Mizukubo 1981:149 Esakia; Brenner 1988b:38 (ecol); Brenner et al. 1988:432 (ecol, behav, dist); Carlson & Brenner 1988:711 (tax); Pratt 1988:883 (checklist); Brenner 1990 (ecol).

*Blattella beybienkoi* Roth 1985:28 (desc, key, fig); Roth 1986:371 (tax).

DISTRIBUTION: India<sup>27</sup>, Southeastern Asia<sup>27</sup>, recently introduced into Florida. Florida: Collier, Lee (Brenner 1990), Hillsborough<sup>2</sup>, Marion, Manatee (Brenner 1990), Pinellas<sup>2</sup>, Polk<sup>2</sup>.

ECOLOGY: Found outdoors in shaded areas with abundant litter. Attracted to lights and flies actively (Brenner et al. 1988).

### 14. *Blattella germanica* (L.)

German cockroach\*

*Blatta germanica* L. 1767:668 Syst. Nat., ed. 12. (*Ectobius*, *Phyllodromia*).

*Blattella germanica*: Hebard 1917:57 (tax, fig); Blatchley 1920:73 (tax, fig); Hebard 1943:262 (tax); Rehn 1945:268 (dispersal); Friauf 1953:122 (ecol); Froeschner 1954:178 (tax); Helfer 1963:47 (fig, ootheca); Cornwell 1968 (gen info, biol, econ status); Princis 1969:307 (tax); Dakin & Hays 1970:14 (tax); Roth 1985:14 (tax, key, fig); Carlson & Brenner 1988:711 (tax); Pratt 1988:883 (checklist).

*Blatta lapponica* Houttuyn 1768:132 Nat. Hist.

*Blatta daurica* Laxmann 1769:48 Sibirische Briefe.

*Blatta flavescens* Buc'hoz 1771:174 Aldrovandus Lotharingiae. (*Kakerlac*).

*Blatta asiatica* Pallas 1773:727 Riesen Prov. Russ. Reichs. (*Phyllodromia*).

*Blatta obliquata* Daldorf 1793:64 Ski'rivter Naturhist.-Selskabet.

*Blatta bivittata* Serville 1839 Hist. Nat. Ins. Orth. (*Phyllodromia*, *Ischnoptera*).

*Ischnoptera parallela* Tepper 1893:53 Trans. Roy. Soc. S. Aust.

*Phyllodromia magna* Tepper 1895:19 Trans. Roy. Soc. S. Aust.

*Phyllodromia cunei-vittata* Hanitsch 1925:86 Sarwak Mus. J. (*Blattella*, *Eublattella*).

*Phyllodromia niitakura* Shiraki 1931 Ins. Matsumurana.

*Blattella stylifera* Chopard 1938:91 Zool. Mem. Mus. Nat. Paris n.s.

DISTRIBUTION: Cosmopolitan. Found in and around human habitations throughout the world, originally from eastern Asia (Roth 1985).

ECOLOGY: In an ecological study in northeastern Florida this species was found inside

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and around buildings, not in native habitats (Friauf 1953). A similar situation occurs at the Archbold Biological Station in central Florida (M. A. Deyrup pers. comm. 1989). Based on our experience this species is an obligate domiciliary species in the U.S.

15. *Cariblatta lutea lutea* (Saussure & Zehntner)  
small yellow cockroach

*Ceratinoptera lutea* Saussure & Zehntner 1893:48 Biol. Cent.-Amer., Orthoptera.

*Cariblatta lutea lutea*: Hebard 1917:51 (tax, fig); Blatchley 1920:71 (tax, fig); Hubbard and Goff 1939:154 (ecol); Gurney 1942:17 (tax); Lawson 1952:296 (ootheca); Friauf 1953:122 (ecol); Helfer 1963:48 (key, fig); Lawson 1967:269 (ecol); Princis 1969:779 (tax); Dakin & Hays 1970:14 (tax); Hagenbuch et al. 1988:378 (ecol); Brenner 1988:583 (ecol); Pratt 1988:883 (checklist); Patterson & Koehler 1989:39 (ecol, cont).

DISTRIBUTION: Cuba<sup>12</sup>, Southeastern U.S.: AL<sup>12,5</sup>, FL<sup>12,11</sup>, GA<sup>12</sup>, LA<sup>17</sup>, MS<sup>12</sup>, NC<sup>12</sup>, SC<sup>12</sup>, TN<sup>18</sup>. In Florida: Alachua<sup>11</sup>, Brevard<sup>12</sup>, Duval<sup>12</sup>, Franklin<sup>12</sup>, Glades<sup>12</sup>, Hendry<sup>1</sup>, Highlands (M. A. Deyrup pers. comm. 1989), Hillsborough<sup>18</sup>, Pinellas<sup>1</sup>, Polk<sup>12</sup>, St. Johns<sup>12</sup>, Sarasota<sup>1</sup>, Seminole<sup>1</sup>, Volusia<sup>12</sup>.

ECOLOGY: This species is found commonly in a variety of natural plant communities in Florida (Blatchley 1920, Friauf 1953, Dakin & Hays 1970). It also has been found near houses and disturbed areas (Lawson 1967, Hagenbuch et al. 1988). Hubbard & Goff (1939) found immatures in burrows of pocket gophers, *Geomys* sp.

16. *Cariblatta lutea minima* Hebard  
least yellow cockroach

*Cariblatta lutea minima* Hebard 1916:170 Trans. Amer. Entomol. Soc.; Hebard 1917:54 (tax, fig); Blatchley 1920:72 (tax, fig); Friauf 1953:122 (ecol); Helfer 1963:48, Princis 1969:780 (tax); Pratt 1988:883 (checklist); Peck & Beninger 1989:614 (ecol).

*Ceratinoptera lutea* Davis & Leng 1912:121 (not Saussure & Zehntner 1893) J. New York Entomol. Soc.

DISTRIBUTION: Cuba<sup>26</sup>, Florida: Collier<sup>12</sup>, Dade<sup>12</sup>, Glades<sup>12</sup>, Hillsborough (R. J. Brenner, pers. comm.); Lee<sup>12</sup>, Monroe<sup>12</sup>, Palm Beach<sup>12</sup>, Pinellas<sup>1</sup>, Putnam<sup>8</sup>, Sarasota<sup>1</sup>.

ECOLOGY: This species was collected in hardwood hammocks in southern peninsular Florida and the upper and lower Keys, and in open pinelands in Dade Co. (Peck & Beninger 1989). Friauf (1953) found this species commonly in a variety of scrub, flatwoods, and hammock communities in northeastern Florida. It was the only species found in *Spartina* marshes and sawgrass marshes where it was frequent. Blatchley (1920) collected this species in grasses behind the beach at Cape Sable (Monroe Co.).

COMMENTS: Hebard (1917) proposed the name *Cariblatta lutea minima* for smaller, shorter-winged individuals. The broad overlap of this and *C. lutea lutea* though most of peninsular Florida and habitat differences observed by Friauf (1953) suggest that it may merit recognition as a separate species.

17. *Chorisoneura parishi* Rehn

*Chorisoneura parishi* Rehn 1918:163 Proc. Acad. Nat. Sci. Philadelphia; Princis 1965:336 (tax).

DISTRIBUTION: Panama, Colombia, Venezuela, Guyana, Surinam, French Guiana, Brazil<sup>28</sup>. Florida: Dade Co.\*. Two specimens are in the FSCA from Miami, with the following collection data: 6-VII-53, O. D. Link, sweeping; International Airport sewage plant, light trap, 24-X-61. Specimens were identified by A. B. Gurney, but apparently these records were never published. The localities and widely separated collection dates suggest that this species was introduced and is established in Miami.

18. *Chorisoneura texensis* Saussure & Zehntner  
small Texas cockroach

*Chorisoneura texensis* Saussure & Zehntner 1893:80 Biol. Cent.-Amer., Orthoptera; Hebard 1917:247 (tax, fig); Blatchley 1920:111 (tax, fig); Hebard 1943:260 (tax); Friauf 1953:122 (ecol); Helfer 1963:58 (key, fig); Princis 1965:334 (tax); Dakin & Hays 1970:14 (tax); Pratt 1988:883 (checklist); Peck & Beninger 1989:614 (ecol).

*Chorisoneura plocea* Rehn 1904:186. Entomol. News.

DISTRIBUTION: Southeastern U.S.: AL<sup>5</sup>, FL<sup>12</sup>, GA<sup>12</sup>, MS<sup>12</sup>, NC<sup>12</sup>, SC<sup>12</sup>, TX<sup>12,16</sup>. In Floridas: Duval<sup>12</sup>, Highlands (M.A. Deyrup pers. comm. 1989), Lake<sup>1</sup>, Monroe (incl. Keys)<sup>12</sup>, Orange<sup>12</sup>, Pinellas<sup>1</sup>, Polk<sup>12</sup>, Putnam<sup>8</sup>, Seminole<sup>1</sup>, Volusia<sup>1</sup>.

ECOLOGY: This species was collected in tropical hardwood hammocks in Dade Co. (Peck & Beninger 1989). Friauf (1953) found this species occasionally in xeric hammocks in northeastern Florida. It is also found in native sandhill vegetation in central Florida (M.A. Deyrup pers. comm. 1989).

*Euthlastoblatta diaphana* (F.)

Hebard (1917) noted that previous records of *Ceratinoptera diaphana* (referred to genus *Aglaopteryx*) from the United States were based on misidentifications and actually referred to a distinct species, *A. gemma*, which he described in the same publication. Princis (1969) and Pratt (1988) failed to note this distinction and erroneously listed this species from the U.S. *Euthlastoblatta diaphana* is known from Cuba, Hispaniola, Puerto Rico, Jamaica, and the Lesser Antilles (Princis 1969).

19. *Euthlastoblatta gemma* (Hebard)  
shortwing gem cockroach

*Aglaopteryx gemma* Hebard 1917:30 Mem. Amer. Entomol. Soc. (tax, fig); Blatchley 1920:68 (tax, fig male); Hebard 1943:261 (tax); Friauf 1953:122 (ecol); Helfer 1963:37 (key, fig adult); Princis 1969:757 (tax); Dakin & Hays 1970:13 (tax); Gorham et al. 1971:133 (ecol, cont).

*Euthlastoblatta gemma*: Princis 1969:757 Orth. Cat., Pratt 1988:883 (checklist); Peck & Beninger 1989:615 (ecol).

*Ceratinoptera diaphana* (not *diaphana* F.): of Rehn & Hebard, Davis prior to 1917 (*vide* Hebard 1917).

DISTRIBUTION: Bahamas<sup>12</sup>; Southeastern U.S.: AL<sup>12,5</sup>, FL<sup>12</sup>, GA<sup>12</sup>, LA<sup>12</sup>, MS<sup>12</sup>, TX<sup>12</sup>. In Florida: Alachua<sup>1</sup>, Dade<sup>12</sup>, Duval<sup>12</sup>, Escambia<sup>12</sup>, Gadsen<sup>12</sup>, Highlands (M. A. Deyrup pers. comm. 1989), Monroe<sup>12,20</sup>, Putnam<sup>8</sup>.

ECOLOGY: This species is found in a wide variety of native habitats throughout its range (Peck & Beninger 1989, Friauf 1953, Blatchley 1920, Dakin & Hays 1970, M. A. Deyrup pers. comm. 1989). Gorham et al. (1971) reported infestations of this species around houses in southern Georgia, but apparently no indoor breeding was involved.

COMMENTS: According to Hebard (1917) previous records of this species from the U.S. consistently had been misidentified as *Ceratinoptera diaphana* (especially Rehn & Hebard 1914a,b; Davis 1914, 1915).

20. *Ischnoptera deropeltiformis* (Brunner)  
dark wood cockroach

*Temnopteryx deropeltiformis* Brunner 1865:87 Nouv. Syst. Blatt.

*Ischnoptera deropeltiformis*: Hebard 1943:262 (tax); Friauf 1953:122 (ecol); Froeschner 1954:173 (tax); Helfer 1963:38 (key, fig male, female); Lawson 1967:269 (ecol); Princis 1969:747 (tax); Dakin & Hays 1970:15 (tax); Gorton 1980:21 (ecol); Pratt 1988:884 (checklist); Peck & Beninger 1989:615 (ecol).

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*Ischnoptera nigricollis* Walker 1868:118 Cat. Blatt. Br. Mus.

*Ischnoptera johnsoni* Rehn 1903:234 Entomol. News; Hebard 1917:63.

*Ischnoptera intricata* Blatchley 1903:186 Orthoptera of Indiana.

DISTRIBUTION: Eastern U.S.: AL<sup>12,5</sup>, DC<sup>12</sup>, FL<sup>12,18,20</sup>, GA<sup>12</sup>, IA<sup>9</sup>, IL<sup>15</sup>, IN<sup>12</sup>, KS<sup>12,18</sup>, LA<sup>12</sup>, MD<sup>12</sup>, MO<sup>12</sup>, NC<sup>12</sup>, NJ<sup>12</sup>, PA<sup>12</sup>, SC<sup>12</sup>, TN<sup>18</sup>, TX<sup>12,16</sup>, VA<sup>12</sup>. In Florida: Broward (M. A. Deyrup pers. comm. 1989); Collier<sup>12</sup>, Dade<sup>12</sup>, Duval<sup>12</sup>, Gadsen<sup>12</sup>, Highlands (M. A. Deyrup pers. comm. 1989), Hillsborough<sup>18</sup>, Levy<sup>12</sup>, Monroe (incl. Keys)<sup>12,20</sup>, Polk<sup>12</sup>, St. Johns<sup>12</sup>, St. Lucie<sup>12</sup>, Seminole<sup>12</sup>, Volusia<sup>12</sup>, Walton<sup>12</sup>.

ECOLOGY: This species has been reported from tropical hardwood hammocks in Dade Co., and the upper and lower Keys and pinelands in Dade Co. (Peck & Beninger 1989). Friauf (1953) found this species very commonly in a wide variety of scrub, flatwoods, and hammock communities in northeastern Florida. Gorton (1980) observed this species frequently in shrub and grassland communities in Kansas.

21. *Latiblattella rehni* Hebard  
Rehn's cockroach

*Blattella adpersicollis*: (not *adpersicollis* Stal) Rehn & Hebard 1905:32 Proc. Acad. Nat. Sci. Phil. (*vide* Hebard 1917:38).

*Neoblattella adpersicollis*: (not *adpersicollis* Stal) Rehn & Hebard 1912:239 Proc. Acad. Nat. Sci. Phil. (*vide* Hebard 1917:38).

*Neoblattella detersa*: (not *detersa* Walker) Rehn & Hebard 1914:379 Proc. Acad. Nat. Sci. Phil. (*vide* Hebard 1917:38); Rehn & Hebard 1914:98 (*vide* Hebard 1917:38).

*Ceratinoptera diaphana*: (not *diaphana* F.) Davis 1914:192 J. New York Entomol. Soc. (*vide* Hebard 1917:38).

*Latiblattella rehni* Hebard 1917:38 (tax, fig); Blatchley 1920:69 (tax, fig female); Helfer 1963:38, Princis 1969:769 (tax); Pratt 1988:884 (checklist).

DISTRIBUTION: Bahamas, Cuba<sup>25</sup>, Florida: Alachua<sup>12</sup>, Broward<sup>12</sup>, Charlotte<sup>12</sup>, Collier<sup>12</sup>, Dade<sup>12</sup>, Highlands (M. A. Deyrup pers. comm. 1989), Lee (M. A. Deyrup pers. comm. 1989), Monroe (incl. Keys)<sup>12</sup>, Palm Beach<sup>12</sup>, Pinellas<sup>1</sup>, Polk<sup>12</sup>.

ECOLOGY: This species is found in native habitats (Blatchley 1920, M. A. Deyrup pers. comm. 1989). It has also been found in attics in north-central Florida (R. J. Brenner pers. comm.).

COMMENTS: Before Hebard described this species (1917) it was widely misidentified under the names listed above.

22. *Neoblattella detersa* (Walker)

*Blatta detersa* Walker 1868:215 Cat. Blatt. Brit. Mus. (*Phyllodromia*).

*Neoblattella detersa*: Hebard 1917:262 Mem. Amer. Entomol. Soc. (tax); Princis 1969:791 (tax); Peck & Beninger 1989:615 (ecol).

*Blattella azteca*: (not *azteca* Saussure & Zehntner 1893) Rehn 1903:268 Trans. Amer. Entomol. Soc.

DISTRIBUTION: Haiti<sup>12</sup>, Jamaica<sup>12</sup>, Florida<sup>20</sup>: Monroe<sup>20</sup>.

ECOLOGY: Peck & Beninger (1989) collected this species in tropical hardwood hammocks of Dade Co and the upper and lower Keys and in open pinelands in Dade Co.

COMMENTS: Previous reports of this species prior to Peck & Beninger (1989) were based on misidentifications of *Latiblattella rehni* Hebard.

23. *Parcoblatta bolliana* (Saussure & Zehntner)  
Boll's wood cockroach

*Ischnoptera bolliana* Saussure & Zehntner 1893:4 Biol. Cent.- Amer., Orthoptera.

*Kakerlac schaefferi* Rehn 1904:72 Psyche. (*Loboptera*).

*Parcoblatta bolliana*: Hebard 1917:77 (tax, fig); Blatchley 1920:80 (tax); Hebard

1943:263 (tax); Froeschner 1954:175 (tax); Helfer 1963:40 (key, fig); Lawson 1967:267 (ecol); Princis 1969:715 (tax); Dakin & Hays 1970 (tax); Gorton 1980:21 (ecol); Pratt 1988:884 (checklist)

DISTRIBUTION: AL<sup>5</sup>, GA<sup>12</sup>, IA<sup>12</sup>, IL<sup>12</sup>, KS<sup>12,18</sup>, LA<sup>12</sup>, MO<sup>12</sup>, NC<sup>12</sup>, NE<sup>12</sup>, OK<sup>12</sup>, SC<sup>12</sup>, TX<sup>12</sup>. This species is likely to occur in northern Florida because it has been reported from Brunswick, Georgia (Hebard 1917).

ECOLOGY: In Alabama it is found in wooded areas, associated with leaf litter and loose bark (Dakin & Hays 1970). In Kansas it has been reported from grasslands (Lawson 1967) and shrub communities (Gorton 1980). According to Lawson (1967), young nymphs are consistently associated with nests of ants of the genus *Crematogaster*.

#### 24. *Parcoblatta divisa* (Saussure & Zehntner)

southern wood cockroach

*Ischnoptera divisa* Saussure & Zehntner 1893:40 Biol. Cent.-Amer., Orthoptera.

*Parcoblatta divisa*: Hebard 1917:133 (tax, fig); Hebard 1943:267 (tax); Helfer 1963:42 (key, fig); Lawson 1967:268 (ecol); Princis 1969:723 (tax); Dakin & Hays 1970:17 (tax); Pratt 1988:884 (checklist).

*Parcoblatta pennsylvanica divisa*: Blatchley 1920:88 (tax, fig).

*Ischnoptera coulouiana*: (not *coulouiana* Saussure 1862) Brimley 1908:16 Entomol. News.

DISTRIBUTION: AL<sup>12,5</sup>, AR<sup>16,18</sup>, DE<sup>12</sup>, FL<sup>16</sup>, GA<sup>12</sup>, KS<sup>18</sup>, LA<sup>12</sup>, MD<sup>12</sup>, MS<sup>16</sup>, NC<sup>12</sup>, NJ<sup>12</sup>, OK<sup>16,18</sup>, PA<sup>12</sup>, TN<sup>16,18</sup>, TX<sup>16</sup>, VA<sup>12</sup>, WI<sup>18</sup>. In Florida: Alachua<sup>16</sup>, Jefferson<sup>16</sup>, Liberty<sup>16</sup>.

ECOLOGY: It has been collected in dry pinelands, oak scrub and moist hammocks in northern Florida and in deep cool ravines along the Apalachicola River (Hebard 1943). In Kansas this species overwinters as nymphs; it is found on borders of woodlands, pastures, sometimes invading houses built in wooded areas (Lawson 1967).

COMMENTS: According to Hebard (1943), a pale phase of this species has been collected in Alachua Co. which is different from the usual coloration.

#### 25. *Parcoblatta fulvescens* (Saussure & Zehntner)

fulvous wood cockroach

*Ischnoptera unicolor*: (not *unicolor* Scudder 1862) Scudder 1877:92 Proc. Boston Soc. Nat. Hist.

*Ischnoptera uhleriana* var. *fulvescens* Saussure & Zehntner 1893:36 Biol. Cent.-Amer., Orthoptera.

*Parcoblatta fulvescens*: Hebard 1917:114 (tax, fig); Blatchley 1920:83 (tax, fig); Hubbard & Goff 1939:154 (ecol); Hebard 1943:265 (tax); Friauf 1953:122 (ecol); Froeschner 1954:176 (tax); Helfer 1963:43 (key, fig); Lawson 1967:268 (ecol); Princis 1969:721 (tax); Dakin & Hays 1970:16 (tax); Pratt 1988:884 (checklist); Peck & Beninger 1989:615 (ecol).

*Temnopteryx texensis* Saussure & Zehntner 1893:52 Biol. Cent.-Amer., Orthoptera. (*Ceratinoptera*).

*Ischnoptera borealis*: (not *borealis* Brunner 1865) Rehn & Hebard 1910:62 Proc. Acad. Nat. Sci. Phil.

*Ischnoptera coulouiana*: (not *coulouiana* Saussure 1862) Rehn & Hebard 1914:98 J. NY Entomol. Soc.

DISTRIBUTION: Eastern U.S.: AL<sup>5</sup>, AR<sup>12</sup>, DC<sup>12</sup>, FL<sup>12,20</sup>, GA<sup>12</sup>, IA<sup>12</sup>, IL<sup>15</sup>, IN<sup>1</sup>, KS<sup>18</sup>, MD<sup>12</sup>, MS<sup>12</sup>, MO<sup>12</sup>, NC<sup>12</sup>, NJ<sup>12</sup>, NY<sup>12</sup>, SC<sup>12</sup>, VA<sup>12</sup>, TX<sup>12,16</sup>. In Florida: Alachua<sup>12</sup>, Broward<sup>12</sup>, Charlotte<sup>12</sup>, Dade<sup>12</sup>, Duval<sup>12</sup>, Highlands (M. A. Deyrup pers. comm., 1989), Hillsborough<sup>12</sup>, Lake<sup>12</sup>, Lee<sup>12</sup>, Monroe<sup>12</sup>, Pinellas<sup>1</sup>, Polk<sup>12</sup>, Putnam<sup>7</sup>, St. Johns<sup>12</sup>, Sarasota<sup>12</sup>, Seminole<sup>12</sup>, Suwannee<sup>12</sup>, Volusia<sup>12</sup>.

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ECOLOGY: This species has been reported from pinelands of Dade Co., and tropical hardwood hammocks of the upper and lower Keys (Peck & Beninger 1989). Friauf (1953) found this species only in hammock communities in an ecological study in northeastern Florida (Putnam Co.). It was more abundant in xeric communities than in mesic or hydric communities. Hubbard & Goff (1939) found females and immatures in burrows of pocket gophers, *Geomys* spp.

26. *Parcoblatta lata* (Brunner)  
broad wood cockroach

*Ischnoptera lata* Brunner 1865:135 Nouv. Syst. Blatt.

*Parcoblatta lata*: Hebard 1917:126 (tax, fig); Blatchley 1920:84 (tax) Hebard 1943:266 (tax); Froeschner 1954:176 (tax); Friauf 1953:122 (ecol); Helfer 1963:44 (key, fig male, female); Lawson 1967:268 (ecol); Princis 1969:722 (tax); Dakin & Hays 1970 (tax); Gorton 1980:21 (ecol); Pratt 1988:884 (checklist).

*Ischnoptera hyalina* Scudder 1869:307 Trans. Amer. Entomol. Soc.

*Temnopteryx major* Saussure & Zehntner 1893:54 Biol. Cent.-Amer., Orthoptera.

*Ischnoptera major*: Blatchley 1903:183 27th Annu. Rep. Dept. Geol. Nat. Res. Indiana.

*Ischnoptera inaequalis* (not *inaequalis* Saussure & Zehntner): Rehn & Hebard 1905:779 (fide Hebard 1917:126).

*Ischnoptera coulöniana* (not *coulöniana* Saussur and Zehntner): Rehn & Hebard 1910:433 (fide Hebard 1917).

DISTRIBUTION: Eastern U.S. : AL<sup>12,5</sup>, DC<sup>12</sup>, DE<sup>12</sup>, FL<sup>12</sup>, GA<sup>12</sup>, IA<sup>9</sup>, IL<sup>16</sup>, IN<sup>12</sup>, KS<sup>16</sup>, KY<sup>16</sup>, LA<sup>12</sup>, MD<sup>12</sup>, MO<sup>12</sup>, MS<sup>12</sup>, NC<sup>12</sup>, OK<sup>16</sup>, SC<sup>12</sup>, VA<sup>12</sup>, TN<sup>16,18</sup>, TX<sup>12,16</sup>. In Florida: Alachua<sup>15</sup>, Duval<sup>12</sup>, Gadsen<sup>12</sup>, Jackson<sup>12</sup>, Leon<sup>12</sup>, Levy<sup>12</sup>, Walton<sup>12</sup>.

ECOLOGY: Friauf (1953) found this species rarely in low lying mesic hammocks in northeastern Florida. Dakin & Hays (1970) considered this the most common species of the genus in Alabama. Hebard (1943) considered it abundant in pinelands of the southeastern coastal plain. Gorton (1980) reported it from grassland and shrub communities in Kansas.

27. *Parcoblatta pensylvanica* (DeGeer)  
Pennsylvania wood cockroach

*Blatta pensylvanica* DeGeer 1773:537 Mem. l'Hist. Ins. (*Platamodes*, *Ischnoptera*, *Periplaneta*).

*Parcoblatta pensylvanica*: Hebard 1917:139 (tax, fig); Blatchley 1920:86 (tax, fig); Rau 1940:4 (biol); Hebard 1943:268 (tax); Froeschner 1954:177 (tax); Helfer 1963:42 (key); Lawson 1967:268 (ecol); Cornwell 1968 (gen info, biol, econ status); Princis 1969:724 (tax); Dakin & Hays 1970:17 (tax); Gorton 1980:21 (ecol); Pratt 1988:884 (checklist).

*Blatta cincta* Fabricius 1787:226. Mantissa Ins. (*Ischnoptera*).

*Blatta borealis* Saussure 1862:166 Rev. Mag. Zool. (*Phyllodromia*, *Ectobia*).

*Ischnoptera coulöniana* Saussure 1862:169 Rev. et Mag. Zool.

*Ischnoptera nortoniana* Saussure 1862:169 Rev. et Mag. Zool.

*Ectobia flavocincta* Scudder 1862:419 Boston J. Nat. Hist.

*Periplaneta curta* Walker 1871:38 Cat. Derm. Salt. Brit. Mus., Suppl. Blatt.

*Temnopteryx marginata* Scudder 1872:251 Final Rep. U.S. Geol. Surv. Nebraska.

*Ischnoptera inaequalis* Saussure & Zehntner 1893:366 Biol. Cent.-Amer., Orthoptera.

*Ischnoptera pensylvanica inaequalis*: Rehn & Hebard 1910:427 Proc. Acad. Nat. Sci. Philadelphia.

DISTRIBUTION: Southeastern Canada: ONT<sup>12</sup>, QUE<sup>12</sup>, Eastern U.S.: AL<sup>12,5</sup>, DC<sup>12</sup>, GA<sup>12</sup>, IA<sup>9</sup>, IL<sup>12</sup>, IN<sup>12</sup>, KS<sup>12,18</sup>, LA<sup>12</sup>, MA<sup>12</sup>, ME<sup>12</sup>, MD<sup>12</sup>, MI<sup>12</sup>, MN<sup>12</sup>, MO<sup>12</sup>, MS<sup>12</sup>, NC<sup>12</sup>, NE<sup>12</sup>, NJ<sup>12</sup>, NY<sup>12</sup>, OH<sup>12,18</sup>, OH<sup>12,18</sup>, OK<sup>12</sup>, PA<sup>12</sup>, SD<sup>18</sup>, TN<sup>12,18</sup>, TX<sup>12,16</sup>, WI<sup>12</sup>. This species probably occurs in Florida because it has been collected near Thomasville, Georgia (Hebard 1917).

ECOLOGY: Froeschner (1954) considered this to be the commonest native cockroach in Iowa. In Kansas, it is found in open timbered areas with little ground cover (Lawson 1967) and forest, shrub and grassland communities (Gorton 1980).

28. *Parcoblatta uhleriana* (Saussure)

Uhler's wood cockroach

*Ischnoptera uhleriana* Saussure 1862:169 Rev. Mag. Zool.

*Parcoblatta uhleriana*: Hebard 1917:105 (tax, fig); Blatchley 1920:81 (tax, fig); Froeschner 1954:175 (tax); Helfer 1963:43 (key, fig male, female); Lawson 1967:268 (ecol); Princis 1969:719 (tax); Dakin & Hays 1970:16 (tax); Gorton 1980:21 (ecol); Pratt 1988:884 (checklist).

*Platamodes unicolor* Scudder 1862:417 Boston J. Nat. Hist. (*Platamodes*)

*Ectobia lithophila* Scudder 1862:418 Boston J. Nat. Hist.

*Platamodes borealis*: (not *boreaqlis* Brunner) Osborn 1862:117. Proc. Iowa Acad. Sci.

*Ischnoptera intricata* Blatchley 1903:186. Orthoptera of Indiana.

DISTRIBUTION: Eastern U.S.: AL<sup>12,5</sup>, CT<sup>12</sup>, DC<sup>12</sup>, DE<sup>12</sup>, FL<sup>12</sup>, GA<sup>12</sup>, IA<sup>12</sup>, IL<sup>12</sup>, IN<sup>12</sup>, KS<sup>18</sup>, MA<sup>12</sup>, MD<sup>12</sup>, MI<sup>1</sup>, MO<sup>12</sup>, MS<sup>1</sup>, NC<sup>12</sup>, NJ<sup>12</sup>, NY<sup>12</sup>, PA<sup>12</sup>, TN<sup>12</sup>, VA<sup>12</sup>. In Florida: Duval<sup>12</sup>.

ECOLOGY: Reported from forested areas in Kansas (Lawson 1967, Gorton 1980).

29. *Parcoblatta virginica* (Brunner)

Virginia wood cockroach

*Temnopteryx virginica* Brunner 1865:86 Nouv. Syst. Blatt. (*Ischnoptera*).

*Parcoblatta virginica*: Hebard 1917:96 (tax, fig); Blatchley 1920:82 (tax, fig); Hebard 1943:265 (tax); Friauf 1953:122 (ecol); Froeschner 1954:176 (tax); Helfer 1963:41 (key, fig); Lawson 1967:269 (ecol); Princis 1969:718 (tax); Dakin & Hays 1970:15 (tax); Gorton 1980:21 (ecol); Pratt 1988:884 (checklist).

*Ischnoptera borealis* Brunner 1865:133 Nouv. Syst. Blatt.

*Ischnoptera unicolor* Brunner 1865:134 Nouv. Syst. Blatt.

*Parcoblatta uhleriana* (not *uhleriana* Saussure): Blatchley 1903 (*vide* Blatchley 1920:83).

DISTRIBUTION: Eastern U.S.: AL<sup>12,3</sup>, CT<sup>12</sup>, FL<sup>8,12</sup>, GA<sup>12</sup>, IA<sup>9</sup>, IN<sup>12</sup>, WI<sup>12</sup>, IL<sup>12</sup>, KS<sup>12</sup>, KY<sup>12</sup>, MA<sup>12</sup>, MD<sup>12</sup>, ME<sup>12</sup>, MI<sup>3</sup>, MO<sup>12</sup>, MN<sup>12</sup>, NC<sup>12</sup>, NE<sup>12,16</sup>, NJ<sup>12</sup>, NY<sup>12</sup>, OK<sup>16</sup>, PA<sup>12</sup>, SD<sup>16</sup>, TX<sup>16</sup>, VA<sup>12</sup>, VT<sup>12</sup>. In Florida: Nassau<sup>12</sup>, Putnam<sup>8</sup>. Hebard (1917) listed Fernandina (Nassau Co.) as a locality but suggested that it might represent an error in labelling. Dakin & Hays (1970) found this species in southern Alabama, including the Mobile area. Its presence in Florida was confirmed by Friauf (1953).

ECOLOGY: Friauf (1953) found this species infrequently in scrub habitats in northeastern Florida. Lawson (1967) and Gorton (1980) reported it from woodlands in Kansas, while Froeschner (1954) reported it from woodland borders in Iowa.

30. *Plectoptera picta* Saussure & Zehntner

pictured beetle cockroach

*Plectoptera picta* Saussure & Zehntner 1893:85 Biol. Cent.-Amer., Orth.; Hebard 1917:273 (tax); Princis 1965:362 (tax); Nickle & Gurney 1985:187 (tax, dist, fig); Pratt 1988:884 (checklist).

DISTRIBUTION: Mexico, Costa Rica. U.S.: LA<sup>19</sup>, NC<sup>19</sup>, TX<sup>19</sup>, VA<sup>19</sup>. Nickle & Gurney (1985) confirmed the presence of this species in the southeastern U.S. They suggested that it might be an uncommonly collected native species or an introduced species, favoring the latter conjecture. In either event the species should eventually be found in Florida because it is also found in Mexico and Central America.



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31. *Plectoptera poeyi* (Saussure)  
Florida beetle cockroach

*Blatta poeyi* Saussure 1862:164 Rev. Mag. Zool. (*Ceratinoptera*).

*Plectoptera poeyi*: Helfer 1963:58 (key, fig); Princis 1965:364 (tax); Pratt 1988:884 (checklist); Peck & Beninger 1989:615 (ecol).

*Plectoptera floridana* Hebard 1917:251 Mem. Amer. Entomol. Soc. 2, Blatchley 1920:112 (tax).

DISTRIBUTION: Florida: Monroe (Keys)<sup>12,20</sup>, Cuba<sup>12</sup>.

ECOLOGY: This species has been collected in tropical hardwood hammocks of the lower Keys (Peck & Beninger 1989). It has been observed in hollow mangrove twigs on several occasions in the Keys (M. A. Deyrup pers. comm. 1989).

32. *Supella longipalpa* (F.)  
brownbanded cockroach\*

*Blatta longipalpa* Fabricius 1798:185 Suppl. Entomol. Syst.

*Supella longipalpa*: Princis 1969:917 (tax); Gurney 1970:752 (tax); Pratt 1988:884 (checklist).

*Blatta supellectilium* Serville 1839:114 Nat. Hist. Ins., Orth. (*Phyllodromia*).

*Supella supellectilium*: Hebard 1917:47 (tax, fig); Blatchley 1920:70 (tax); Hebard 1943:261 (tax); Rehn 1945:271 (dispersal); Foreschner 1954:179 (tax); Helfer 1963:46 (key, fig male, female); Cornwell 1968 (gen info, biol, econ status); Dakin & Hays 1970 (tax).

*Blatta cubensis* Saussure 1862:165 Rev. Mag. Zool. (*Phyllodromia*).

*Blatta phalerata* Saussure 1963:151 Mem. Soc. Geneve.

*Blatta incisa* Walker 1868:109 Cat. Blatt. Brit. Mus. (*Phyllodromia*).

*Ischnoptera quadriplaga* Walker 1868:109 Cat. Blatt. Brit. Mus.

*Ischnoptera vacillans* Walker 1868:114 Cat. Blatt. Brit. Mus.

*Blatta exstenuata* Walker 1868:221 Cat. Blatt. Brit. Mus. (*Phyllodromia*).

*Blatta transversalis* Walker 1868:221 Cat. Blatt. Brit. Mus.

*Blatta subfasciata* Walker 1871:26 Cat. Derm., Salt. Brit. Mus., Suppl. Blatt.

*Ectobia vittiventris*: (not Costa 1847) Azam 1901:25 Miscell. Entomol.

DISTRIBUTION: Tropical regions of the world. All states of the U.S. except Vermont (Cornwell 1968).

ECOLOGY: In an ecological study in northeastern Florida this species was found only around buildings, not in native habitats (Friauf 1953). This species appears to be an obligate domiciliary in the U.S.

33. *Symploce morsei* Hebard

*Symploce morsei* Hebard 1916:365 Trans. Amer. Entomol. Soc.; Rehn & Hebard 1927:131; Princis 1969:879 (tax); Roth 1984:28 (tax, fig); Peck & Beninger 1989:615 (ecol).

DISTRIBUTION: Bahamas, Haiti<sup>26</sup>. Florida: Monroe<sup>20</sup>. Peck & Beninger (1989) reported this species from the U.S. for the first time.

ECOLOGY: This species was found in tropical hardwood hammocks on the upper and lower keys (Peck & Beninger 1989).

34. *Symploce pallens* (Stephens)  
smooth cockroach

*Ectobius pallens* Stephens 1835:46. Illus. Brit. Entomol., Mandib. (*Phyllodromia*).

- Symploce pallens*: Roth 1985:214 (tax); Pratt 1988:884 (checklist).  
*Blatta capitata* Saussure 1862:167 Rev. Mag. Zool. (*Ischnoptera*, *Symploce*).  
*Blatta deprivata* Walker 1868:215 Cat. Blatt. Brit. Mus. (*Ischnoptera*, *Symploce*).  
*Phylldromia hospes* Perkins 1899:5 Fauna Hawaii (*Symploce*).  
*Symploce lita* Hebard 1916:15, Hebard 1917:151 (tax); Blatchley 1920:90 (tax); Helfer 1963:48 (key, fig); Roth 1984:51 (tax, fig).  
*Ischnoptera platystyla* Chopard 1938:93 Mem. Mus. Hist. Nat. Paris (n.s.) (*Symploce*).  
*Symploce benzoni* Princis 1451:57 Spolia Zool. Mus. Haun.  
*Symploce kevani* Chopard 1954:176 Ann. Mag. Nat. Hist.  
*Symploce vicentina* Princis 1959:280 Eos.  
DISTRIBUTION: Circumtropical, originally from Africa (Roth 1984). Florida: Key West<sup>12</sup>.

## Blaberidae

35. *Blaberus craniifer* Burmeister  
death's head cockroach

- Blaberus craniifer* Burmeister 1838:516 Handb. Entomol.; Hebard 1917:201 (tax, fig); Blatchley 1920:106 (tax); Helfer 1963:52 (key, fig); Dakin & Hays 1970:17 (tax); Princis 1963:126 (tax); Pratt 1988:884 (checklist).  
*Blaberus varians* Serville 1839:78 Hist. Nat. Ins., Orth.  
*Blaberus luctuosa* Stal 1855:351 Ofv. Sv. Vet. Acad. Forhandl.  
*Blaberus atropos* (not Stoll 1813) Guerin-Meneville 1857:333 in Sagra, Hist. Phys. Polit. et Nat. de l'île de Cuba.  
*Blaberus fusca* Brunner 1865:376 Nouv. Syst. Blatt.  
*Libiscoa aequalis* Walker 1868:12 Cat. Blatt. Brit. Mus. (*Blaberus*).  
DISTRIBUTION: Dominican Republic<sup>22</sup>, Cuba<sup>12</sup>, Yucatan<sup>12</sup>, Belize<sup>12</sup>. Florida: Monroe (Key West)<sup>12</sup>. Recorded in central Alabama as an adventive (Dakin & Hays 1970).  
ECOLOGY: Hebard (1917) treated this species as introduced into the Florida Keys, stating that it "has become firmly established at Key West." Since it is widely distributed throughout Central America and the Antilles (including Cuba), there is no way to tell whether it was introduced into the Keys via human transport or whether it occurred there naturally (presumably having dispersed there unaided at some time in the recent or distant past). For the present we are treating this species as native. It was collected by Rehn & Hebard (1914a) in wood piles, refuse, and around buildings. No information is available on its present or past occurrence in natural communities in the Keys.

36. *Blaberus discoidalis* Serville

- Blaberus discoidalis* Serville 1839:76 Hist. Nat. Ins., Orth.; Princis 1963:127 (tax); Roth 1969:242 (tax, male genitalia, fig).  
*Blatta gigantea* (not *gigantea* L.) Drury 1773:66 Illustr. Nat. Hist.  
*Blabera atropos* (not Stoll 1813) Serville 1839:77 Nat. Hist. Ins., Orth.  
*Blabera varians* Serville 1839:78 Nat. Hist. Ins., Orth.  
*Blabera cubensis* Saussure 1864:367 Rev. Mag. Zool.  
*Blabera trapezoidea* Brunner 1865:367 Rev. Mag. Zool.  
*Blabera subspurcata* Walker 1868:4 Cat. Blatt. Brit. Mus.  
*Blabera rufescens* Saussure & Zehntner 1894:119 Biol. Cent.-Amer., Orth.  
DISTRIBUTION: Costa Rica<sup>26</sup>, Nicaragua<sup>26</sup>, Panama<sup>21</sup>, Colombia<sup>21</sup>, Venezuela<sup>21</sup>, Ecuador<sup>21</sup>, Trinidad<sup>21</sup>, Vieques Island<sup>21</sup>, Dominican Republic<sup>26</sup>, Haiti<sup>21</sup>, Jamaica<sup>21</sup>, Cuba<sup>21</sup>, Florida: Broward (J. R. Mangold pers. comm. 1990), Dade\*, Monroe\*. Roth (1969:248) cited specimens of *B. discoidalis* from Key West in a footnote to a table on distributions

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of species in a study of male genitalia in the genus *Blaberus*. This obscure reference was overlooked by Pratt (1988). There are many specimens in the FSCA collected between 1960 and 1970 from Key West, Stock Island, and Coral Gables. It is commonly found in crawl spaces under houses in Dade and Broward counties (J. R. Mangold pers. comm. 1990). We have no basis for judging whether it is native to southern Florida and previously has been overlooked, or whether it is a recent arrival via natural dispersal or inadvertent introduction.

ECOLOGY: Specimens in the FSCA were collected under bark of a dead tree and under a board on the ground. The pest status of this species is unknown, but is apparently slight to none since such a large species (> 5 cm) would surely attract notice if it were common near residences.

37. *Epilampra maya* Rehn  
Maya cockroach

*Epilampra maya* Rehn 1902:3 Trans. Amer. Entomol. Soc.; Hebard 1917:265 (tax); Roth & Gurney 1969:617 (tax); Nickle & Sibson 1984:487 (introduction into Florida, habits, fig); Pratt 1988:884 (checklist).

*Epilampra sodalis* (not *sodalis* Walker 1868) Caudell 1914:79 Insecutor Inscit. Menstr.

*Epilampra maya brachyptera* Hebard 1921:210 Trans. Amer. Entomol. Soc.

*Epilampra wheeleri* (not *wheeleri* Rehn 1910) Sein 1923:344 Circ. Est. Exp. Insul. Rio Piedras, Puerto Rico.

*Epilampra abdomen-nigrum*: (not DeGeer 1773) Rehn & Hebard 1927:219 (tax); Princis 1967:691 (world catalog).

DISTRIBUTION: Mexico<sup>28</sup>, Guatemala<sup>28</sup>, Honduras<sup>28</sup>, Nicaragua<sup>28</sup>, Costa Rica<sup>28</sup>, Panama<sup>28</sup>. FL: Reported from Arcadia (Desoto Co.) by Nicle & Sibson (1984), where it was apparently well established.

ECOLOGY: Nicle & Sibson (1984) reported this species from in and around houses in Arcadia. It was also abundant near a small stream close to an infested house. *Epilampra maya* has been reported from aquatic and other moist habitats in Central America.

COMMENTS: Rehn & Hebard (1927) and Princis (1967) treated *E. maya* as a synonym of *E. abdomen-nigrum*. Roth & Gurney (1969) presented biological evidence for recognizing these as distinct species.

38. *Hemiblabera tenebricosa* Rehn & Hebard  
broad Keys cockroach

*Hemiblabera tenebricosa* Rehn & Hebard 1927:247 (tax); Caudell 1931:204 (occurrence in Fla); Gurney 1953:46 (tax); Gurney 1959:78 (dist); Princis 1963:138 (tax); Helfer 1963:52 (key, fig); Pratt 1988:884 (checklist).

DISTRIBUTION: Bahamas<sup>21</sup>, Haiti<sup>21</sup>. FL: Monroe (Keys)<sup>4</sup>, Dade (Elliot Key<sup>10</sup>). This species has not been collected from the Florida mainland.

ECOLOGY: Specimens in the FSCA were collected under boards.

39. *Nauphoeta cinerea* (Olivier)  
cinereous cockroach\*, lobster cockroach

*Blatta cinerea* Olivier 1789:314 Encycl. Meth., Hist. Nat.

*Nauphoeta cinerea*: Rehn & Hebard 1927:254 (tax); Rehn 1945:274 (dispersal); Gresham 1952:77 (introd. Florida); Gurney 1953:46 (tax); Helfer 1963:54 (key, fig); Princis 1965:289 (tax); Cornwell 1968 (gen info, biol, econ status); Pratt 1988:884 (checklist).

*Blatta maderae* (not *maderae* Fabricius 1781) Herbst 1786:170 Arch. Insectengesch.

*Blatta gallica* Fabricius 1793:8 Entomol. Syst.

*Blatta elegans* Eschscholtz 1822:84 Entomographien.

*Nauphoeta grisea* Burmeister 1838:508 Handb. Entomol.

*Nauphoeta bivittata* Burmeister 1838:508 Handb. Entomol.

DISTRIBUTION: Circumtropical, including Cuba, Hispaniola, and Mexico. It is probably of African origin (Rehn 1945). Florida: Hillsborough (Gresham 1952). This species became established in the Tampa area and was reported to breed in feed mills. There have been no further records or reports of this species since then, suggesting that the introduction may not have persisted.

ECOLOGY: In tropical areas this species is found commonly in and around structures (Cornwell 1968).

40. *Panchlora nivea* (L.)  
Cuban cockroach\*

*Blatta nivea* L. 1758:424 Syst. Nat., X ed.

*Panchlora nivea*: Gurney 1955:285 (tax); Princis 1964:180 (tax); Helfer 1963:53 (key, fig); Pratt 1988:884 (checklist).

*Blatta chlorotica* Pallas 1772:10 Spicilegia Zool.

*Blatta alba* Strom 1783:65 Nye Saml. Danske Vidensk. Selsk. Skiffer.

*Blatta hyalina* Stoll 1813:5 Represent. Exact. Coloree d' Apres Nature des Spectres . . .  
(*Panchlora*).

*Blatta virescens* Thunberg 1826:278 Mem. Acad. Sci. St. Petersburg. (*Panchlora*).

*Panchlora poeyi* Saussure 1862:230 Rev. Mag. Zool.

*Panchlora cubensis* Saussure 1862:730 Rev. Mag. Zool.; Hebard 1917:161 (tax, fig);  
Blatchley 1920:105 (tax); Hebard 1943:272 (tax); Froeschner 1954:184 (tax).

*Panchlora luteolus* Saussure 1864:342 Rev. Mag. Zool.

*Ischnoptera lucida* Walker 1868:120 Cat. Blatt. Brit. Mus.

*Panchlora viridis* Walker 1868:27 Cat. Blatt. Brit. Mus.

*Panchlora peruana* Saussure & Zehntner 1893:95 Biol. Cent.-Amer., Orth.

*Panchlora exoleta* Smith 1900:151 Ins. New Jersey.

*Panchlora fraterna* Kirby 1908:195 Zoologist.

*Panchlora acolhua* Kirby 1912:172 Can. Entomol.

*Pycnoscelus aporus* Hebard 1919:30 Trans. Amer. Entomol. Soc.

DISTRIBUTION: Greater Antilles, Mexico, Central America<sup>23</sup>, U.S.: FL\*, LA\*, TX<sup>12</sup>. In Florida: Alachua\*, Broward\*, Dade\*, Hendry\*, Hillsborough (J. R. Mangold pers. comm. 1990), Marion\*, Pinellas (J. R. Mangold pers. comm. 1990), Polk, St. Lucie (J. R. Mangold pers. comm. 1990). Hebard (1917) and Blatchley (1920) stated that this species was not found in Florida, although specimens were intercepted in ports with some frequency. It was presumably introduced into Florida because it seems unlikely that a green cockroach that is attracted to lights would have been overlooked by earlier collectors, but we have been unable to locate any documentation of when this occurred. As late as the seventies (Helfer 1963, Gurney 1955, Gurney & Roth 1972) this species was considered to occur only in southern Texas in the U.S. Specimens from Florida in the FSCA date from 1940 (Polk Co.). It is presently abundant throughout Florida and along the Gulf Coast in Louisiana and adjacent parts of Texas.

ECOLOGY: This species is common around houses and in wooded areas within the city of Gainesville in moist, shaded areas with abundant leaf litter (Hagenbuch et al. 1988). We do not have any information regarding its occurrence in relatively undisturbed areas, but its habits suggest that it may occur in some natural communities, such as mesic hammocks.

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41. *Phoetalia pallida* (Brunner)  
pallid cockroach

*Blatta laevigata* (not *laevigata* Palisot de Beauvois 1805) Serville 1839:98 Hist. Nat.

Ins., Orth. *preoccupied name*. (*Panchlora*, *Nauphoeta*, *Phoetalia*).

*Nauphoeta pallida* Brunner 1865:286 Nouv. Syst. Blatt.

*Luerolestes pallidus*: Hebard 1917:161 (tax, fig); Blatchley 1920:93 (tax); Rehn 1945:275 (dispersal); Helfer 1963:39 (key, fig).

*Phoetalia pallida*: Princis 1967:652 (tax); Pratt 1988:884 (checklist).

DISTRIBUTION: Circumtropical<sup>25</sup>. Florida: Monroe (Keys)<sup>12</sup>. Rehn (1945) suggested that this species is native to the West Indies, including the Greater Antilles. Its occurrence in the Keys may be natural.

ECOLOGY: This species may be found in and around structures (Blatchley 1920, Rehn 1945).

42. *Pycnoscelus surinamensis* (L.)  
Surinam cockroach\*

*Blatta surinamensis* L. 1758:424 Syst. Nat., ed. 10. (*Panchlora*, *Leucophaea*).

*Pycnoscelus surinamensis*: Hebard 1917:193 (tax, fig); Blatchley 1920:104 (tax, fig);

Hebard 1943:271 (tax); Rehn 1945:271 (dispersal); Friauf 1953:122 (ecol); Froeschner 1954:183 (tax, fig); Helfer 1963:54 (key, fig); Princis 1964:263 (tax); Roth 1967:774 (tax); Lawson 1967:269 (ecol); Cornwell 1968 (gen info, biol, econ status); Dakin & Hays 1970 (tax); Kevan 1980:77 (tax); Hagenbuch et al. 1988:378 (ecol); Brenner 1988:583 (ecol); Pratt 1988:884 (checklist); Peck & Beninger 1989:613 (ecol).

*Blatta indica* Fabricius 1775:272 Syst. Entomol. (*Panchlora*, *Pycnoscelus*).

*Blatta melanocephala* Stoll 1813:7 Repres. Exact. Coloree d'Apres Nat. des Spectres . . .

*Blatta corticum* Serville 1839:90 Hist. Nat. Ins., Orth. (*Panchlora*).

*Perispherus laevis* LeGuillou 1841:292 Rev. Zool.

*Pycnoscelus obscurus* Scudder 1862:122 Boston J. Nat. Hist.

*Panchlora celebesa* Walker 1868:26 Cat. Blatt. Brit. Mus.

*Polyzosteria latipes* Walker 1868:165 Cat. Blatt. Brit. Mus.

*Polyzosteria corassipes* Walker 1871:166 Cat. Blatt. Brit. Mus.

*Panchlora occipitalis* Walker 1871:7 Cat. Derm., Salt. Brit. Mus., Suppl. Blatt.

*Epilampra tatei* Tepper 1894:174 Trans. Roy. Soc. S. Australia.

*Epilampra dimorpha* Shiraki 1906:17 Annot. Zool. Japan.

DISTRIBUTION: Circumtropical<sup>22</sup>, Lower southeastern U.S.: AL<sup>5</sup>, FL<sup>12,11</sup>, LA<sup>12</sup>, TX<sup>12,18</sup>.

In Florida: Alachua<sup>12,11</sup>, Charlotte<sup>12</sup>, Dade<sup>12</sup>, Duval<sup>12</sup>, Highlands (M. A. Deyrup pers. comm. 1990), Hillsborough<sup>12</sup>, Monroe (incl. Keys)<sup>12,20</sup>, Pinellas<sup>1</sup>, Putnam<sup>12</sup>, St. Johns<sup>12</sup>, Sarasota<sup>1</sup>, Volusia<sup>12</sup>. Rehn (1945) stated that this species is native to the Indo-Malayan region and has subsequently been transported around the world.

ECOLOGY: This is one of the few exotic cockroach species in Florida that has become well established in natural communities as well as in highly disturbed areas. It was commonly found in tropical hammocks of southern Dade County and the lower Keys, and open pine-lands in Dade Co. (Peck & Beninger 1989). Friauf (1953) found this species occasionally in xeric and mesic hammocks in an ecological study in northeastern Florida (Putnam Co.). It is common around houses in north-central Florida (Hagenbuch et al. 1988). All populations in North America are completely parthenogenetic with only females known. Bisexual populations occur in southeastern Asia, the native range of this species (Roth 1967).

43. *Rhyparobia maderae* (F.)  
Madeira cockroach\*

*Blatta maderae* Fabricius 1781:341 Spec. Ins. (*Panchlora*, *Periplaneta*, *Blabera*).

*Leucophaea maderae*: Hebard 1917:268 (tax); Rehn & Hebard 1927:242 (tax); Rehn 1945:272 (dispersal); Gurney 1953:40 (introd. U.S., desc, fig); Helfer 1963:53 (tax, key); Princis 1965:298 (tax); Cornwell 1968 (gen info, biol, econ status).

*Rhyparobia maderae*: Kevan 1980:77 (tax); Pratt 1988:884 (checklist).

*Blatta major* Palisot de Beauvois 1805:182 Ins. Rec. Afr. et Amer.

*Blatta tuberculata* Thunberg 1810:187 Vetenskapsakad. nya Handl.

*Blatta maderensis* Jones 1859:110 Natural. in Bermuda.

*Proscratea illepida* Walker 1868:185 Cat. Blatt. Brit. Mus.

*Nauphoeta kukenthali* Shelford 1910:107 Zool. Jahrb., Suppl.

*Blatta gigantea* (not *gigantea* L.) Ballou 1937:187 J. Barbados Mus. Hist. Soc.

DISTRIBUTION: Old World tropics, introduced and widely distributed in Caribbean area (Rehn 1945). It was introduced into New York City, apparently from Puerto Rico (Gurney 1953). Since the initial report of its introduction, there have been no new reports of this species in the U.S., leading us to wonder if the infestation in New York has persisted. Such a large species (almost 5 cm long) should have attracted considerable attention, especially if it were spreading.

Although there have been no records of this species in Florida, its presence on nearby islands (Cuba and the Bahamas) and its probable pest status make it a potential threat.

ECOLOGY: This species is found in and around structures in the Antilles where it is considered a pest (Rehn 1945).

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