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Checklist of Colombian cockroaches (Dictyoptera, Blattaria)

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Abstract
This paper reviews the current state of knowledge about Blattaria for Colombia. Generalities on the suborder are presented and the species present in Colombia are catalogued. This study was made based on the literature and analysis of the various Colombian collections. The species listing obtained is made up of four families with 15 subfamilies, 62 genera and 133 species that account for 3.1% of the 4,330 species recognized worldwide. Moreover, an altitudinal range is given as well as distribution data for Colombia's biogeographical regions and departments. Some notes are made on the distribution for each region and on collection methods.

Resumen
En este trabajo se revisa el estado actual del conocimiento de Blattaria para Colombia. Se presentan generalidades sobre el suborden y se catalogan las especies presentes en Colombia. Este estudio se hizo con base a la literatura y revisión de ejemplares de diferentes colecciones colombianas. El listado de especies que se obtuvo esta conformado por cuatro familias con 15 subfamilias, 62 géneros y 133 especies que representan el 3.1% de las 4,330 especies reconocidas a nivel mundial. Además se da el rango altitudinal y datos de distribución por las regiones biogeográficas y departamentos de Colombia. Se hacen algunas anotaciones sobre la distribución en cada región y sobre los métodos de colecta.

Introduction

Cockroaches are one of humanity's most familiar and least loved insects. They are easily recognised by their flattened, oval-shaped body, head always covered by the pronotum, chewing mouthparts, leathery appearance of their forewings (tegmen), membranous second wings, a very well developed anal area and long spiny legs with large flattened coxae covering all thoracic sternites. They have a pair of cerci in the last abdominal tergite (anal plate). Only in the males, the last abdominal sternite (genital plate) has a pair of accessory structures for copulation, known as styles (Cornwell 1968).

Cockroaches are principally of tropical and subtropical origin, being found in a great variety of habitats, such as dead leaves on the ground, animal dens, caves, tree trunks, bromeliads, ant nests, leaf litter and sometimes in water. Pest species are found inside housing in fissures, drains or rubbish tips. The majority of species are nocturnal; they may be solitary, gregarious or sub-social. Cockroaches are omnivorous, the majority feed on decomposing vegetable material, including wood, for which they have symbiotic organisms, such as protozoa and bacteria inside their intestine (Grandcolas & Deleporte 1996). A characteristic of cockroaches, shared with mantids and some termites such as *Mastotermes darwiniwnsis*, is the formation of a membrane (ootheca) covering the eggs in order to protect them from dehydration, predators and parasitoids (Roth 1970). They possess a pair of collateral glands inside the abdomen which secrete proteins, including quinone, which provides strength as well as the typical brown colour as eggs are laid (Roth 1968). As opposed to mantids, cockroaches perform this action within their abdomen (Grandcolas 1996). Depending on the family, females abandon the ootheca in a safe place (oviparous) or they transport it within an abdominal ventral brood sac until the eggs hatch (ovoviparous). In the latter, the ootheca is not rigid.

Traditionally, it has been thought that cockroaches are a very old group, appearing before the Palaeozoic period (Cornwell 1968). However, according to Grandcolas (1996, 1998) they appear only in the Mesozoic era. Evidence points towards the recent arrival (Grimaldi 1997, 2003) of members of the Dictyoptera in the Jurassic, with radiation taking place in the Tertiary (Grimaldi & Engel 2005).

Determination of many fossil cockroach families was previously based on fragments of certain species (Schneider 1983, 1984) and what was thought to be a cockroach is now thought to have been a cockroach-like insect, one of the most abundant animals during the carboniferous period. Characteristic features of these insects include a large pronotal disc covering part of the head, large flattened coxae, tegminous forewings and a curved CuP vein. One of their most important characteristics was the presence of an external ovipositor, which is thought to have been used to lay eggs on the ground, in decaying logs or in humus, indicating the absence of an ootheca (Grimaldi & Engel 2005). Compared to cockroach-like insects of the Carboniferous period, fossils of existing cockroaches go no further back than the early Cretaceous (Ross 2001; Vršanskỳ *et al.* 2002). Some findings indicate that the ancient polyphagids date to the early cretaceous (Martinez-Delclòs 1993; Ross 2001), the Blattellidae from the early Cretaceous (Ross 2001); the Blattidae from the late Cretaceous (Bekker-Migdisova 1962) and the Blaberidae from the Eocene (Shelford 1910); in the case of *Cryptocercus*, no fossils have been found.

Systematics

Cockroaches are included within the Dictyoptera, with mantids and termites (Grimaldi & Engel 2005). McKittrick (1964) provided the first taxonomic scheme based on a morphological and anatomical study, which did not agree with that proposed previously by Princis (1960), who listed all existing species and genera, assigning a great number of families and subfamilies, based only on morphological characters. Classification at family level is currently unstable, around six families are recognised, but there is considerable dispute over the taxonomic range and composition of each, as well as the monophyly of some (Grimaldi & Engel 2005). Traditionally, the following families have been recognised: Blaberidae, Blattidae, Blattellidae, Cryptocercidae, Nocticolidae and Polyphagidae (Roth 1991).
Given the differences in the treatments by Princis & McKittrick (1964) and other later contributions by Roth (1970, 1972), Grandcolas (1993, 1994), Grandcolas & Deleporte (1992), a re-evaluation of taxa assignation within families and subfamilies is necessary and also to consider the paraphyly of the family Blattellidae which should oblige to consider also the existence of the family Pseudophyllodromiidae. One of the most evident examples is the placement of the genus *Cryptocercus*, which is often put into the monogeneric family Cryptocercidae (McKittrick 1964), however, Grandcolas (1996) concludes that it belongs to Polyphagidae.

Phylogenetic relationships between members of the Dictyoptera, especially, relation between termites and *Crytpocercus* is of much interest today for researchers. Cockroaches within this genus have a special biological significance given their apparent close relation with termites (Cleveland *et al.* 1934) and are often considered to be the living ancestors of the latter group due to their xylophagous condition, having the same symbiotic flagellates protista in the mid intestine (Nalepa 1984) and their subsocial behaviour (Cornwell 1968). According to Grancolas (1996), phylogenetic studies based on molecular and morphological characters show that this hypothesis is not correct, and concludes that characters shown by *Cryptocercus* are convergent, and that their flagellated protists are captured and are not the result of a common ancestor with the termites. The opposite is proposed by Lo *et al.* (2000), who provided strong support to the close relationship between *Cryptocercus* and termites based on molecular data, as well as Deitz *et al.* (2003), who carried out a phylogenetic analysis for Dictyoptera using morphological, biological and molecular characters, with the following result: Mantodea + (Blattaria + (Cryptocercidae + (Mastotermidae + (Kalotermitidae + Termopsidae)))), in which *Cryptocercus* is the sister group to Isoptera.

Currently, phylogenetic relations within the group, based on morphological and molecular data continue to be controversial, according to the studies carried out by McKittrick (1964), Grandcolas (1994, 1996, 1999), Klass (1997, 1998, 2001) and Kambhampati (1995, 1996). The studies by Grandcolas and Klass, based on male morphology and female genitalia coincide on the following grouping:

Blattidae((Polyphagidae+*Crytocercus*)(Anaplectidae(Blattellidae(Blaberidae)))), where Blattidae is considered polyphyletic with respect to the rest of the group (Klass 1997, 1998) and Blattellidae is possibly paraphyletic with respect to Blaberidae.

Economic importance

Cockroaches are surprisingly diverse, with at least 4,337 species belonging to 515 genera (Roth 2003). The most famous domestic cockroaches *Blattella germanica*, *Supella longipalpa*, *Periplaneta americana* and *Blatta orientalis* are present in human dwellings. They are responsible for causing large economic losses and deterioration of public health, given that they act as dispersers of bacteria and viruses which cause illness (Cornwell 1968) in humans.

Grandcolas (1998) found that there are morphological, physiological and behavioural differences between these cockroaches and those not associated with humans, allowing them to colonise and survive in environments changed by humans.

Cockroaches in Colombia

Few authors have provided detailed treatments of this group in Colombia. Hebard (1919, 1921, 1933) carried out the first study, recording 41 genera and 77 species. Princis, in his publication Orthopterorum catalogus (1963, 1964, 1965, 1966, 1967, 1969) cited 53 genera and 121 species, Salazar (2001) mentioned 14 genera and 21 species, whereas Vélez et al (2006) reported 61 genera, seven of which were new country records. Shelford (1907), Gurney (1937) and Grandcolas (1992) have described new species for the country.

There are few identification keys for non-pest cockroaches at genus and species level, furthermore, there are few taxonomists working on the group internationally, among the most well known are P. Grandcolas, E. Gutiérrez and S. López. The most representative collections, housing the greatest number of type specimens, are Academy of Natural Sciences of Philadelphia, Muséum national d'Histoire naturelle de Paris, Museo de Historia Natural de Cuba; Museu Nacional da Universidade Federal do Rio de Janeiro and the Museum of Comparative Zoology at Harvard University. In Colombia, the Entomological Collection at the Universidad de Antioquia (CEUA) has the greatest number of species from a large part of Colombia.

Box. 1. Synopsis of families, subfamilies, genera and species of Blattaria in Colombia
Tabla 1. Synopsis de las familias, subfamilias, géneros y especies de Blattaria en Colombia

Taxon / ***Taxón***	**Genera number** / ***Número de géneros***	**Species number** / ***Número de especie***s
BLABERIDAE	23	48
Blaberinae	9	15
Archimandrita Saussure, 1893		1
Blaberus Serville, 1831		3
Eublaberus Hebard, 1920		2
Hormetica Burmeister, 1838		1
Hyporhicnoda Hebard, 1920		2
Kemneria Princis, 1946		1
Lucihormetica Zombro & Fritszche, 1999		2
Paradicta Grandcolas, 1992		1
Phoetalia Stål, 1874		2
Epilamprinae	6	18
Antioquita Hebard, 1933		1
Capucinella Hebard, 1920		1
Colapteroblatta Hebard, 1919		6
Epilampra Burmeister, 1838		7
Homalopteryx Brunner von Wattenwyl, 1865;		2
Litopeltis Hebard, 1920		1
Oxyhaloinae	1	1
Rhyparobia Krauss, 1892		1
Panchlorinae	2	6
Achroblatta Saussure, 1893		1
Panchlora Burmeister, 1838		5
Pycnoscelinae	1	1
Pycnoscelus Scudder, 1862		1
Zetoborinae	4	7
Capucina Saussure, 1893		1
Lanxoblatta Hebard, 1931		3

Taxon / ***Taxón***	**Genera number** / ***Número de géneros***	**Species number** / ***Número de especie*s**
Phortioeca Saussure, 1862		2
Tribonium Saussure, 1862		1
BLATTELLIDAE	30	67
Anaplectinae	1	3
Anaplecta Burmeister,1838		3
Blattellinae	6	17
Blattella Caudell, 1903		1
Chromatonotus Hebard, 1920		1
Eudromiella Hebard, 1920		1
Ischnoptera Burmeister, 1838		7
Pseudomops Serville, 1831		2
Xestoblatta Hebard, 1916		5
Nyctiborinae	5	13
Eunyctibora Shelford, 1908		1
Megaloblatta Dohrn, 1887		1
Muzoa Hebard, 1921a		1
Nyctibora Burmeister, 1838		6
Paratropes Serville, 1839		4
Pseudophyllodromiinae	18	34
Asemoblattana Strand, 1929		2
Attaphila Wheller, 1900		1
Cahita Hebard, 1923		1
Cariblatta Hebard, 1916		1
Ceratinoptera Brunner von Wattenwyl, 1865		1
Chorisoneura Brunner, 1865		6
Dendroblatta Rehn, 1916		1
Euphyllodromia Shelford, 1908		7
Eurylestes Hebard, 1940		1
Euthlastoblatta Hebard, 1917		1
Imblattella Bruijning, 1959		4
Macrophyllodromia Saussure & Zehnter, 1893		1
Nahublattella Bruijning, 1959		1
Neoblattella Shelford, 1911		1
Plectoptera Saussure, 1864b		1
Riatia Walker, 1868		2
Sciablatta Hebard, 1921		1
Supella Shelford, 1911		1
BLATTIDAE	6	14
Blattinae	3	5
Blatta Linnaeus, 1758		1
Neostylopyga Shelford, 1911		1
Periplaneta Burmeister, 1838		3
Lamproblattinae	1	4
Lamproblatta Hebard, 1919		4
Polyzosteriinae	2	5

Taxon / ***Taxón***	**Genera number** / ***Número de géneros***	**Species number** / ***Número de especie***s
Eurycotis Stål, 1874		2
Pelmatosilpha Dohrn, 1887		3
POLYPHAGIDAE	3	4
Euthyrrhaphinae	1	1
Euthyrrhapha Burmeister, 1838		1
Latindinae	1	1
Buboblatta Hebard, 1920		1
Polyphaginae	1	2
Hypercompsa Saussure, 1864		2

Materials and methods

The object of this listing is to catalogue the Blattaria species occurring in Colombia and to make some notes about their distribution and collection methods. This listing was made based on information obtained in the literature and in the analysis of the specimens present in various Colombian entomological collections. Although the reference literature used is over 30 years old (Hebard 1919, 1921, 1933; Princis 1963, 1964, 1965, 1966, 1967, 1969), these are the only documents in which the species present in Colombia have been catalogued and dealt with. The work of Grandcolas (1996, 1997) and Roth (2003) was used for the correctly assigning the genera within the subfamilies and using valid names for the species.

The main entomological collections that were visites in order to study the Blattaria material, with their respective acronyms, are as follows:
CEUA - Colección entomológica, Universidad de Antioquia; Medellín.
CIB - Colección entomológica, Centro de investigaciones Biológicas; Medellín.
IAvH - Instituto Alexander Von Humboldt; Villa de Leyva
MEPB – Museo Entomologico Piedras Blancas, Comfenalco Antioquia, Medellín.
MUJ - Museo de Historia Natural, Pontificia Universidad Javeriana; Bogotá.
UNAB - Colección entomológica de la facultad de Agronomía, Universidad Nacional; Bogotá.
UNCB - Instituto de Ciencias Naturales, Universidad Nacional; Bogotá.
MEFLG - Museo entomológico "Francisco Luis Gallego", Universidad Nacional; Medellín.

Results

The following listing reports four families with 15 subfamilies, 62 genera, and 133 species, that account for 3.1% of the species recognized worldwide. Additionally, data is given on Biogeographic distribution, Geopolitical distribution and Elevation. There are no distribution data for species with no specimens in the collections visited. Some species have not yet been identified at a species level but they are reported as "sp" nonetheless. The *Asemoblatta pilosa* species described by Salar (2004), initially named with a non-valid name for the genus, was treated in the list as *Asemoblattana pilosa* (Salazar, 2004).

Taxonomic list / *Listado taxonómico*

Abbreviations for biogeographical regions / Abreviaturas para las regiones biogeográficas:
Amazonas (amz), Andes (and), Caribe (car), Orinoquia (ori), Pacífico (pac). In bracket the distribution of the species inside the departments.:

Taxon / ***Taxón***	**Biogeographic region /** ***Región bogeográfica***	**Departmental Distribution Colombia /** ***Departamentos en Colombia***	**Altitude (masl) /** ***Altitud (msnm)***	**References /** ***Referencias***
BLABERIDAE				
Blaberinae				
Archimandrita tessellata Rehn, 1903				Princis 1963
Blaberus discoidalis (Serville, 1839)	and car ori	ant cor cun gv ma met suc to vc (H6 D6 D9 D7 I8)	792-1665	Princis 1963
Blaberus giganteus (Linnaeus, 1758)	amz and car ori pac	ant by cq cho cun gv ma met pu suc to va (G8 H8 H9 P12 M7 F4 J9 C9 D9 K13 J11 N5 J8 K7)	150-1524	Princis 1963
Blaberus parabolicus (Walker, 1868)	amz and car ori	ant at bl cor cun hu met snt suc to vc vch (H7 C8 D8 D7 J8 K7 L7 M7 J11 G11 H11 D7 J8 J6 K5 K6)		Princis 1963
Eublaberus distanti (Kirby, 1903)	and car ori	ant cho met snt to (G8 F4 K13 J10 H11 G9 J8)	150-900	Princis 1963
Eublaberus posticus (Erichson, 1848)	and car	ant cho cor (F8 H7 E5 F4 D7)	100-1050	Princis 1963
Hormetica apolinari Hebard, 1919	amz and	ama cun met (S15 J9 J10)	150-1665	Princis 1963
Hyporhicnoda litomorpha Hebard, 1921	and ori	ant met (H7 J10)	427	Princis 1967
Hyporhicnoda metae Hebard, 1921	ori	met (J1O)	427-1890	Princis 1967
Kemneria colombiana Princis, 1946				Princis 1963
Lucihormetica subcincta (Walker, 1868)	and ori	cun met to (J8 J9 I9 I10 J10 J8)		Zompro y Fritzsche 1999
Lucihormetica verrucosa (Brunner von Wattenwyl, 1865)			1219	Zompro y Fritzsche 1999
Paradicta minima Grandcolas, 1992	and	cun (J9)	2600	Grandcolas 1992
Phoetalia circumvagans (Burmeister, 1838)				Princis 1967
Phoetalia pallida (Brunner von Wattenwyl, 1865)	and car	ant bl by cl cun ns snt suc to (G8 F8 H6 C7 I7 J8 I8 I9 F11 H9 H10 D7 J8 I8)		Princis 1967
Epilamprinae				
Antioquita punctigera Hebard, 1933	and car	ant at (B8)		Princis 1963
Capucinella delicatula Hebad, 1920	car	ma snt (C9 H11 H10)		Princis 1963
Colapteroblatta adenophora (Hebard, 1919)	car	ma (C9)	1219-1524	Princis 1963
Colapteroblatta apatela (Hebard, 1919)	and	snt	2286	Princis 1963
Colapteroblatta bicolor (Gurney, 1937)			323-1650	Princis 1963
Colapteroblatta caudelli (Gurney, 1937)				Princis 1963

Taxon / *Taxón*	**Biogeographic region / *Región bogeográfica***	**Departmental Distribution Colombia / *Departamentos en Colombia***	**Altitude (masl) / *Altitud (msnm)***	**References / *Referencias***
Colapteroblatta compsa Hebard, 1919	car	ma (C9)	2133-2529	Princis 1963
Colapteroblatta cylindrica (Hebard, 1919)	car	ma (C9)	1219-1524	Princis 1963
Epilampra anderi Princis, 1946				Princis 1967
Epilampra azteca Saussure, 1868	and car ori	ant bl gor met pu snt vc (F8 D8 O7 L10 G9 L4)	70-1200	Princis 1967
Epilampra columbiana Saussure, 1895				Princis 1967
Epilampra conferta Walter, 1868	and ori	met vc (J10 L4)	730	Princis 1967
Epilampra gatunae (Hebard, 1920)	and	ant gor (F8)	70-100	Princis 1967
Epilampra shelfordi Hebard, 1919	and	by cau snt (H11 L6 G10)	305-2150	Princis 1967
Epilampra substrigata Walker, 1868	amz and	cun met pu (J10 O7)		Princis 1967
Homalopteryx capucina Brunner, 1865				Princis 1967
Homalopteryx laminata Brunner, 189*2*	car	at (B8)		Princis 1967
Litopeltis sp.	and	ant gor snt vc (G11 L4)		Vèlez et al 2006
Oxyhaloinae				
Rhyparobia maderae (Fabricius, 1781)	and car	ant cl cun ma met ns qu snt vc (H7 I8 J8 C9 J10 F11 J7 H10 K6)	320-2015	Princis 1965
Panchlorinae				
Achroblatta luteola (Blanchard, 1843)	and car	ant met snt (F5 H8 F8 J10 G9)	445-540	Princis 1963
Panchlora colombiae Hebard, 1919	and	cau	2011	Princis 1964
Panchlora exoleta Burmeister, 1838	and	ant met (J10)		Princis 1964
Panchlora nivea (Linnaeus, 1758)	and car ori	ant by cl ma met (G6 F8 H7 F5 I9 B9 J10)	780	Princis 1964
Panchlora sagax Rehn & Hebard, 1927				Princis 1964
Panchlora translucida Kirby, 1903				Princis 1964
Pycnoscelinae				
Pycnoscelus surinamensis (Linnaeus, 1758)	and ori	ant by cs cau cun hu met ns to snt vc (F5 F8 G8 H6 H7 I7 I10 I8 I9 J8 L7 J10 F11 I8)	70-1250	Princis 1964
Zetoborinae				
Capucina patula (Walker, 1871)	amz and pac	ama ant by cho pu snt (S15 H8 I9 I4 O7 G9)	150-330	Princis 1963
Lanxoblatta emarginata Burmeister, 183*8*	and	ant		Princis 1964
Lanxoblatta frater Hebard, 1933	and	ant		Princis 1964
Lanxoblatta lata (Shelford, 1907)	and	by cun (I9 J9)	1710-2667	Princis 1964
Phortioeca apolinari Hebard, 1921	ori	met (J10)	427	Princis 1964
Phortioeca phoraspoides (Walker, 1871)	and ori	ant by cun met (H8 H9 I9 J10)	1323	Princis 1964
Tribonium colombicum Hebard, 1933	and	ant (G8 H8)	900	Princis 1964
BLATTELLIDAE				
Anaplectinae				
Anaplecta fallax Saussure, 1862				Princis 1965

Taxon / *Taxón*	**Biogeographic region / *Región bogeográfica***	**Departmental Distribution Colombia / *Departamentos en Colombia***	**Altitude (masl) / *Altitud (msnm)***	**References / *Referencias***
Anaplecta lateralis Burmeister, 1838				Princis 1965
Anaplecta unicolor Burmeister, 1838				Princis 1965
Blattellinae				
Blattella germanica (Linnaeus, 1767)	and	ant cun (H7 J9)		Princis 1969
Chromatonotus andagoyae Hebard, 1921	and	ant		Princis 1969
Chromatonotus andagoyae chocoensis Salazar, 2004	pac	cho	800	Salazar 2004
Eudromiella calcarata Bey-Bienko, 1947				Princis 1969
Ischnoptera apolinari Hebard, 1919	and	cun (J9)	1798	Princis 1969
Ischnoptera colombiae Hebard, 1919	and	to		Princis 1969
Ischnoptera flagellifer Hebard, 1921	and	ant		Princis 1969
Ischnoptera implicata Hebard, 1921	ori	met (J10)	427	Princis 1969
Ischnoptera morio Burmeister, 1838	and ori	cun met vc (J9 J10 L4)	730-1798	Princis 1969
Ischnoptera panamae Hebard, 1920				Princis 1969
Ischnoptera rufa rufa (De Geer, 1773)	amz and	ama gor cq pu (S15 N11 O7)		Princis 1969
Pseudomops angustus Walker, 1868	amz and ori	ama by cun met pu snt to (S15 I9 I10 J8 J9 J10 K9 J10 N5 H10 K8)	467-2782	Princis 1969
Pseudomops boyacae Hebard, 1933	and	by (I9)		Princis 1969
Xestoblatta carrikeri Hebard, 1916	car	ma (C9)	1219-1524	Princis 1969
Xestoblatta festae (Griffini, 1896)	pac	cho		Princis 1969
Xestoblatta hamata (Giglio-Tos, 1898)	and	ant snt (H8 G9)		Princis 1969
Xestoblatta micra Hebard, 1921	and	cun (I9)	975	Princis 1969
Xestoblatta poecila Hebard, 1921	ori	met (J10)	427-690	Princis 1969
Nyctiborinae				
Eunyctibora nigrocincta (Shelford, 1907)	and	ant cun to (H6 G8 J8 J9 I8)	281-2667	Princis 1967
Megaloblatta blaberoides (Walker, 1871)	and	ant by (G8 I9)	900	Hebard 1921
Muzoa simplex Hebard, 1921	and	ant by (H7 I9)	823	Princis 1967
Nyctibora azteca (Saussure & Zehntner, 1893)				Princis 1967
Nyctibora intermedia Saussure, 1873				Princis 1967
Nyctibora mexicana Saussure, 1862				Princis 1967
Nyctibora noctivaga Rehn, 1902	and ori pac	ant cun hu met qu snt to vc (G8 H7 H8 E5 J8 J9 I8 I9 L7 J7 G9 H9 K7 I8 J8 M2)	110-1050	Princis 1967
Nyctibora obscura Saussure, 1864	car	ma (C9)	1219-1524	Princis 1967
Nyctibora truncata (Saussure & Zehntner, 1893)	and	to vc (J8 J6)		
Paratropes biolleyi (Saussure & Zehntner, 1893)		cau		Princis 1967
Paratropes metae Hebard, 1921	amz ori	ama gv met (S15 H19 J10)	110-427	Princis 1967
Paratropes otunensis Salazar, 2004	and	ri (J6)	1900	Salazar 2004
Paratropes phalerata (Erichson, 1848)	and ori	by met (I9 J10)	380-900	Princis 1967
Pseudophyllodromiinae				
Asemoblattana nana (Hebard, 1921)	and	cun (J9)	2667	Princis 1969
Asemoblattana pilosa (Salazar, 2004)	and	cl	2150	Salazar 2004
Attaphila aptera Bolivar, 1905				Princis 1963
Cahita sp.		gor		Vèlez et al 2006

Taxon / *Taxón*	**Biogeographic region / *Región bogeográfica***	**Departmental Distribution Colombia / *Departamentos en Colombia***	**Altitude (masl) / *Altitud (msnm)***	**References / *Referencias***
Cariblatta sp.	amz and ori	ama ant cq gor met ns snt vch (S15 F8 H8 N11 L10 F11 G10 G11 I19)		Vèlez et al 2006
Ceratinoptera picta Brunner von Wattenwyl, 1865	and	cau		Princis 1969
Chorisoneura apolinari Hebard, 1933	and	cun (J9)		Princis 1965
Chorisoneura colorata Hebard, 1929				Princis 1965
Chorisoneura diaphana Princis, 1965				Princis 1965
Chorisoneura nigrostriga Hebard, 1929				Princis 1965
Chorisoneura parishi Rehn, 1918	and ori	ant met (H7 J10)	1538	Princis 1965
Chorisoneura translucida (Saussure, 1864)	and	cau	2011	Princis 1965
Dendroblatta sobrina Rehn, 1916	and	cun to (J9 I8)	100-320	Princis 1969
Euphyllodromia angustata (Latreille, 1811)	amz and pac	ama ant cho cun qu snt to vc (S15 F8 G7 G8 H7 H8 F4 J9 J7 G9 G10 H9 H10J8 I8 K6 M2)	70-1900	Princis 1969
Euphyllodromia elegans (Shelford, 1907)	and	cau		Hebard 1921
Euphyllodromia erythromelas Rehn, 1932				Princis 1969
Euphyllodromia histrix (Saussure, 1869*)*				Princis 1969
Euphyllodromia liturifera (Walker, 1871)				Princis 1969
Euphyllodromia stigmatosoma Hebard, 1921	and pac	ant gor snt vc (G9 M2)	70-1200	Princis 1969
Euphyllodromia tupi Rehn, 1928	and	cau		Princis 1969
Eurylestes colombiae (Hebard, 1919)	and	snt	2286	Princis 1969
Euthlastoblatta sp.	and	ant gor ri snt (G8 J6 G9)		Vélez et al 2006
Imblattella acanthastylata (Hebard, 1920)				Princis 1969
Imblattella albida (Saussure, 1869)	and	cun (J9)		Princis 1969
Imblattella antioquiae (Hebard, 1921)				Princis 1969
Imblattella fratercula (Hebard, 1916)				Princis 1969
Macrophyllodromia sp.	and	cl gor snt (I8 G10)	500-2200	Vélez et al 2006
Nahublattella sp.				Vélez et al 2006
Neoblattella carrikeri Hebard, 1919	car	ma (C9)	2133-2529	Princis 1969
Plectoptera althenae Princis, 1946				Princis 1965
Riatia flabellate (Saussure & Zehntner, 1893)	and	ant (H7)	732	Princis 1965
Riatia hebardi Princis, 1946				Princis 1965
Sciablatta mamatoco Hebard, 1921	car	ma	15	Princis 1969
Supella longipalpa (Fabricius, 1798)				Princis 1969
BLATTIDAE				
Blattinae				
Blatta orientalis Linnaeus, 1758				Princis 1966
Neostylopyga rhombifolia (Stoll, 1813)				Princis 1966
Periplaneta americana (Linnaeus, 1758)				Princis 1966
Periplaneta australasiae (Fabricius, 1775)	and car ori	ant cl cor cun met (I8 J9 J10 J9 I9)	507	Princis 1966
Periplaneta brunnea Burmeister, 1838	and ori	cl cun met to (I8 J9 J10 J8)	275	Princis 1966
Lamproblattinae				

Taxon / *Taxón*	Biogeographic region / *Región bogeográfica*	Departmental Distribution Colombia / *Departamentos en Colombia*	Altitude (masl) / *Altitud (msnm)*	References / *Referencias*
Lamproblatta albipalpus Hebard, 1919	and car ori	ant bl by ma met qu snt to vc (F8 G8 H8 D8 J10 J11 J7 G9 J8 J6	70-1900	Princis 1966
Lamproblatta ancistroides Rehn, 1930	ori	met (J10)		Princis 1966
Lamproblatta flavomaculata Princis, 1946				Princis 1966
Lamproblatta gorgonis Rehn, 1930	and pac	gor snt (G9)	70-1200	Princis 1966
Polyzosteriinae				
Eurycotis bananae Bey-Bienko, 1947				Princis 1966
Eurycotis occidentalis (Burmeister, 1838)				Princis 1966
Pelmatosilpha erythrocephala Salazar, 2004	and	cl	2150	Salazar 2004
Pelmatosilpha micra Hebard, 1919	and	snt	2286	Princis 1966
Pelmatosilpha subalata Saussure & Zehntner, 1893	and	cun (J9)	2640	Princis 1966
POLYPHAGIDAE	br (sp)			Jantsch 1999
Euthyrrhaphinae				
Euthyrrhapha pacifica (Coquebert, 1804)				Princis 1963
Latindinae				
Buboblatta sp.	pac	gor vc (L4)	70-730	Vèlez et al 2006
Polyphaginae				
Hypercompsa anolaima Hebard, 1921	and	cun (J8)	1818	Princis 1963
Hypercompsa xanthosticta Hebard, 1933	and car	ant bl to (H7 D8 G7)	320-1538	Princis 1963

Discusion and conclusions

Although the distribution data are only obtained from specimens from entomological collections and literature and are not complemented with information from systematic field collecting, the following can initially be concluded:

Andes Biogeographical Region: 75 species are reported, of which 41 have a restricted distribution only for this region and, of these, only 20 have been reported for Colombia. (*A. nana, A. pilosa, C. andagoyae, C. apatela, C. apolinari, E. colombiae, E. sbelfordi, H. anolaima, I. apolinari, I. colombiae, I. flagellifer, L. frater, L. lata, M. simplex, P. boyacae, P. erythrocephala, P. mínima, P. otunensis, P. subalata, T. colombicum*). It can be said that Andes is the region with the greatest number of species, the greatest number of restricted distribution species, and the greatest number of species registered Colombia alone. (Fig. 1)

Orinoco Biogeographical Region: 26 species are reported, of which 5 species are of restricted distribution for this region alone and, of these, only four have been reported for Colombia (*H. metae, I. implicata, P. apolinari, X. poecila*).

Caribbean Biogeographical Region: 22 species reported, of which 8 species are of restricted distribution for this region alone and, of these, only six have been reported for Colombia (*C. adenophora, C. compsa, C. cylindrica, N. carrikeri, S. mamatoco, X. carrikeri*).

Pacific Biogeographical Region: 10 species are reported, of which three species are of restricted distribution for this region.

Amazon Biogeographical Region: 10 species are reported but none of these are of restricted distribution for this region alone. (Fig. 1)

It may be assumed that the great wealth of cockroach species in the Andean Region is due to the great diversity of flora and fauna concentrated on the mountain ranges' piedmont (Halffter & Ezcurra 1992) and to the diversity of thermal floors. But we must keep in mind that most of the material studied comes from the Andean region; therefore, this is the region with more samples as compared to the other biogeographical regions. This is a limiting factor for being able to know the true distribution of species in Colombia.

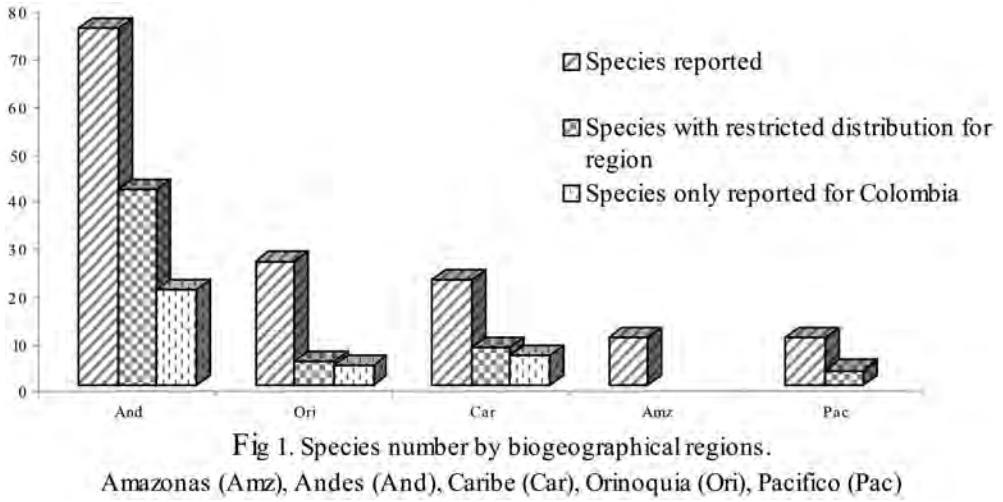

Figure 1. Number of species by Colombian biogeographical regions. Amazonas (Amz), Andes (And), Caribe (Car), Orniquia (ori), Pacífico (Pac).

It is evident that there are many species in the collections represented with at least five specimens. This is probably due to lack of interest in the group or to lack of knowledge of the biology and behaviors of the animals in their habitat. The few individuals of the *Capucina, Lanxoblatta, Phortioeca* and *Tribonium* genera may be cited as examples. These have a cryptic coloration, leveled-out bodies, and they live only under barks, thus making their collection difficult; the same occurs with the species of the genus *Attaphila*, which are small in size and have myrmecophilus habits. The opposite occurs with the species of the *Anaplecta, Blaberus, Epilampra, Euphyllodromia, Hyporhicnoda, Ischnoptera, Lamproblatta, Nyctibora, Panchlora* and *Xestoblatta* genera; the great amount of specimens collected is related to their habitat, behavior, and capturing method used. Thus, species of the *Anaplecta, Epilampra, Euphyllodromia, Ischnoptera, Panchlora* and *Xestoblatta* genera are usually captured manually on vegetation in night collections, with the exception of those of the *Euphyllodromia* species who have diurnal habits, or they are also captured with Malaise traps because of their flying behavior.

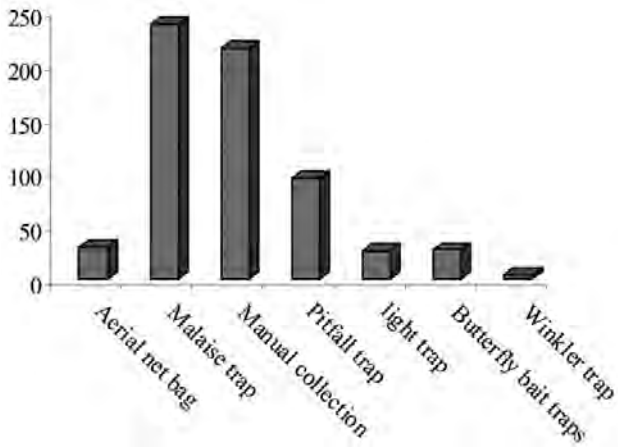

Figure 2. Number of Blattaria specimens present in Colombian entomological collections clasified by sampling method.

The *Nyctibora* genus specimens are easily collected in Butterfly Bait Traps since they are attracted by the rotten fish used as bait; likewise, other species of the Nyctiborinae subfamily belonging to the *Eunyctibora* and *Paratropes* genera are attracted to this type of trap; however, the collected specimens are not that numerous. The cockroaches of *Hyporhicnoda* and *Lamproblatta* genera that live in the wood's litter are commonly collected with pitfall traps. The *B. giganteus* species of cave-dwellers, a very large cockroach, is usually captured manually. Based on the collection data, it may be concluded that a large amount of the specimens in the collection has been captured by using the Malaise trap and the pitfall trap, as well as by manual capture (Fig. 2). In order to obtain more precise data on the diversity of these insects in any sampling site, I suggest that the above-mentioned traps be used and that light traps with mercury vapor light bulbs be implemented.

Cockroaches should be intensively collected systematically in the various habitats of the Amazon, Caribbean, Orinoco, and Pacific regions, in order to increase the number of museum specimens and, thus, obtain a more precise vision of the group's diversity and its distribution in the country. It is important to emphasize that of the 133 species catalogued in Colombia, 30 species have been reported for the country alone. This fact makes us a potentially rich country in endemic cockroach species. Therefore, work should be carried out on cockroach taxonomy, biology, ecology, and biogeography, allowing us to gain a greater understanding of the endemic species in Colombia and the Neotropics.

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Literature cited / *Literatura citada*

Bekker-Migdisova E. E. (1962). Order Blattodea pp.88-111 En: B. B. Rohdendorf (eds.) Fundamental of Paleontology Volume 9: Arthropoda: Tracheata and Chelicerata, Akademii Nauk [Àcademy of sciences], Moscow

Cornwell P. B. (1968). The Cockroach Vol. 1. Laboratory Insect and an Industrial Pest. Hutchinson & CO LTD; London, 391pp.

Cleveland L. R., S. K. Hall, E. P. Sanders, J. Collier. (1934). The wood-feeding roach *Cryptocercus*, its protozoa, and the symbiosis between protozoa and roach. *Memoirs of the American academy of arts and sciences* 17:185-342

Deitz L. L., C. Nalepa, K. Klaus-Dieter. (2003). Phylogeny of the Dictyoptera Re-examined (Insecta). *Entomologische Abhandlungen* 61:69-91

Grandcolas, P. (1992). *Paradicta* n. gen. et *Neorhicnoda* n. gen., deux nouveaux genres de Blaberinae (Dict., Blattaria, Blaberidae). *Bulletin de la Société Entomologique de France* 97(1):7-15

Grandcolas P. (1993). Monophylie et structure phylonenetique des [Blaberinae+Zetoborinae+Gyni nae+Diplopterinae] (Dictyoptera: Blaberidae). *Annales de la Société entomologique de France* (N.S.) 29:195-222

Grandcolas P. (1994). Phylogemetic systematics of the subfamily Polyphaginae, with the assignament of *Cryptocercus* Scudder, 1862 to this taxon (Blattaria, Blaberoidea, Polyphagidae). *Systematis Entomology* 19:145-58

Grandcolas P. (1996). The phylogeny of cockroach families, a cladistic appraisal of morpho- anatomical data. *Canadian Journal of Zoology* 74:508-27

Grandcolas P. (1997). The monophyly of the subfamily Perisphaeriinae (Dictyoptera: Blattaria: Blaberidae). *Systematic Entomology* 22:123-130.

Grandcolas P. (1998). Domestic and non-domestic cockroaches: facts versus received ideas. *Revue Francaise D'Allergologie* 38(10):836-837

Grandcolas P. (1999). Recontructing the past of *Cryptocercus* (Blattaria: Polyphagidae): Phylogenetic histories and stories. *Annals of the Entomological Society of America* 92:303-7

Grandcolas P., P. Deleporte. (1992). La position systématique de *Cryptocercus* Scudder, 1862 et ses implications évolutives. *Comptes-Rendus de l'Académie des Sciences de Paris* 315:317- 322

Grandcolas P., P. Deleporte. (1996). The origin of Protistan symbionts in termites and cockroaches: a phylogenetic analysis. *Cladistics* 12:93-98

Grimaldi D. (1997). A fossil mantis (insecta: Mantodea) in Cretaceous amber of New Jersey, with comments on the early history of the Dictyoptera. *American Museum Novitates* 3204:1-11

Grimaldi D. (2003). A revision of Cretaceous mantises and their relationships, including new taxa (Insecta: Dictyoptera: Mantodea). *American Museum Novitates* 3412:1-42

Grimaldi D., M. S. Engel. (2005). Polyneoptera pp.188-260 In: D. Grimaldi, M. S. Engel (eds.) Evolution of the insects, Cambridge University press, New York.

Gurney A. B. (1937). Studies in certain genera of American Blattidae (Orthoptera). *Proceedings of the Entomological Society of Washington* 39(5):107-11

Halffter G., E. Ezcurra. (1992). ¿Qué es la biodiversidad? pp.3–24 In: G. Halffter (comp.) La diversidad biológica de Iberoamérica. Coedición Instituto de Ecología, SEDESOL, and CYTED-D. Xalapa, Veracruz.

Hebard M. (1919). Studies in Dermaptera and Orthoptera of Colombia First paper. *Transactions of American Entomological Society* 45:89-178

Hebard M. (1921). Studies in Dermaptera and Orthoptera of Colombia Second paper. *Transactions of American Entomological Society* 47:107-161

Hebard M. (1933). Studies in Dermaptera and Orthoptera of Colombia Suplement to papers one to five. *Transactions of American Entomological Society* 59:13-67

Kambhampati R. (1995). A phylogeny of cocokroaches and related insects based on DNA sequence of mitochondrial ribosomal RNA genes. *Proceedings of the National Academy of Sciences* 92:2017-20

Kambhampati R. (1996). Phylogemetic relationship among cockroach families inferred from mitochondrial 12s rRNA gene secuence. *Systematis Entomology* 21:89-98

Klass K.-D. (1997). The external male genitalia and the phylogeny of Blattaria and Mantodea. *Bonner Zoologische Monographien* 42:1-134

Klass K.-D. (1998). The proventriculus of the Dicondylia, with comments on evolution and phylogeny in Dictyoptera and Odonata (Insecta). *Zoologischer Anzeiger* 236:69-101

Klass K.-D. (2001). Morphological evidence on Blattaria phylogeny: "Phylogenetic histories and stories" (Insecta, Dictyoptera). *Deutsche Entomologische Zeitschrift* 48:223-65

Lo N., G. Tukuda, H. Watanabe, H. Rose, M. Staytor *et al.* (2000). Evidence from multiple gene sequences indicates that termites evolved from woodfeeding cockroaches. *Current Biology* 10:801-4

McKittrick F. A. (1964). Evolutionary studies of cockroaches. Cornell University Agricultural Experiments Station Memoir 389:1-197

Martinez-Delclòs X. (1993). Blatidos (Insecta: Blattodea) del cretacico inferior de España. Familias Mesoblattinidae, Blattulidae y Poliphagidae. *Boletin geológico y minero*104-5:516-38

Nalepa C. A. (1984). Colony composition, protozoan transfer and some life history characteristics of the woodroch *Cryptocercus punctulatus* Scudder (Dictyoptera: Cryptocercidae). *Behavioural Ecology and Sociobiology* 14:273-9

Princis K. (1960). Zur Systematik der Blattarien. *Eos* 36:427-49

Princis K. (1963). Blattariae: Subordo Polyphagoidea: Fam.: Homeogamiidae, Euthyrrhaphidae, Latiindiidae, Anacompsidae, Atticolidae, Attaphilidae. Subordso Blaberoidea: Fam.: Blaberidae Pars 4 pp.75-172 En: M. Beier (eds.). Orthopterorum catalogus Dr. W. Junk, 's-Gravenhage.

Princis K. (1964). Blattariae: Subordo Blaberoidae: Fam.: Panchloridae, Gynopeltididae, Derocalymmidae, Perisphaeriidae, Pycnoscelididae Pars 6 pp.173-282 En: M. Beier (eds.) Orthopterorum catalogus. Dr. W. Junk, 's-Gravenhage.

Princis K. (1965). Blattariae: Subordo Blaberoidea: Fam.: Oxyhaloidae, Panesthiiidae, Cryptocercidae Chorisoneuridae, Oulopterygidae, Diplopteridae, Anaplectidae, Archiblattidae, Nothoblattidae Pars 7 pp.283-400 En: M. Beier (eds.) Orthopterorum catalogus. Dr. W. Junk, 's-Gravenhage.

Princis K. (1966). Blattariae: Subordo Blattoidea: Fam.: Blattidae, Nocticolidae Pars 8 pp.401-614 En: M. Beier (eds.) Orthopterorum catalogus. Dr. W. Junk, 's-Gravenhage.

Princis K. (1967). Blattariae: Subordo Epilamproidea: Fam.: Nyctiboridae, Epilampridae Pars 11 pp.615-710 En: M. Beier (eds.) Orthopterorum catalogus. Dr. W. Junk, 's-Gravenhage.

Princis K. (1969). Blattariae: Subordo Epilamproidea: Fam.: Blattellidae Pars 13 pp.711-1038 En: M. Beier (eds.) Orthopterorum catalogus. Dr. W. Junk, 's-Gravenhage.

Ross A. J. (2001). The cockroaches (Blattodea) of the Purbeck Limestone group and Wealden supergroup (Lower Cretaceous) of souther England pp.59-60 En: E. Krzemińska y W. Krzemiński (eds.) *Second International Congress on Palaeoentomology: Abstracts* volume, Polish academy of sciences, Kreków, Poland

Roth L. M. (1968). Ootheca of the Blattaria. *Annals of the Entomological Socirty of America* 61(1):83-111

Roth L. M. (1970a). Evolution and taxonomic significance of reproduction in Blattaria. *Annual Review of Entomology* 15:75-96

Roth L. M. (1970b). The male genitalia of Blattaria. III. Blaberidae: Zetoborinae. *Psyche* 77:217- 36

Roth L. M. (1970c). The male genitalia of Blattaria. IV. Blaberidae: Blaberinae. *Psyche* 77:308-42

Roth L. M. (1972 a). The male genitalia of Blattaria. IX. Blaberidae. *Gyna* spp. (Perisphaeriinae) Phoraspis, Thorax and Phlebonotus (Epilamprinae). *Transactions of American Entomological Society* 98:185-217

Roth L. M. (1972 b). The male genitalia of Blattaria. X. Blaberidae. *Pycnoscelus*, *Stilpnoblatta, Proscratea* (Pycnoscelinae) and *Diploptera* (Diplopterinae). *Psyche* 80:249-64

Roth L. M. (1991). Blattodea, Blattaria (cockroaches) pp.320-320 En: I. D. Naumann (eds.) The insects of Australia: A textbook for students and research workers, Volumen 1, Cornell University Press, Ithaca, New York

Roth L. M. (2003). Systematics and phylogeny of cockroaches (Dictyoptera: Blattaria). *Oriental Insects* 37:1-186

Salazar J. (2001). Blattodea de Colombia. Nuevas adiciones y rectificaciones a los mántidos de la primera parte (Insecta: Mantodea). *Boletín científico Centro de Museos Museo de Historia Natural* 5:38-63

Salazar J. (2004). Nuevas especies de Blatidos y Mantidos para Colombia (Insecta: Dictyoptera) y una nota sobre la hembra de *Vates festae* Giglio-Tos, 1914. *Boletín científico Centro de Museos Museo de Historia Natural* 8:267-86

Schneider J. (1983). Die Blattodea (Insecta) des Paleozoicums, Teil I. Systematik, Ökologie und Biostratigraphie. *Freiberger Forschungshefte, Rehie* C 382:104-46

Schneider J. (1984). Die Blattodea (Insecta) des Paleozoicums, Teil II. Morphogenese der Flugelstrukturen und Phylogenie. *Freiberger Forschungshefte, Rehie* C 391:5-34

Shelford R. (1907). One some new species of Blattidae in the Oxford and Paris Museums. *The Annals and Magazine of Natural History* 19(4):37-46

Shelford R. (1910). On a collection of Blattidae preserved in amber from Prussia. *Journal of Linnean Society, Zoology* 30:336-54

Vélez A., M. Wolf, E. Gutiérrez. (2006). Blattaria of Colombia: List and distribution of genera. *Zootaxa* 1210:39-52

Vršanskỳ P., V. N. Vishniakova, P. A. Rasnitsyn. (2002). Order Blattida Latreille, 1810. The cockroaches pp.263-269 En: A. P. Rasnitsyn y D. L. J. Quicke (eds.) History of insects, Kluwer Academy publishers, Dordrecht, the Netherlands

Zompro O., I. Fritsche. (1999). Lucihormetica fenestrata n. gen., n.sp., the first record of luminescence in an orthopteroid insect (Dictyoptera: Blaberidae: Blaberinae: Brachycolini). *Amazoniana* Xv(3/4):211-219

Appendix 1. List of synonyms / *Anexo 1. Lista de sinónimos*

Achroblatta luteola (Blanchard, 1843) =
Blatta luteola Blanchard, 1843
Panchlora tripartita (Walker, 1868)
Paratropes histrio (Saussure, 1862)
*Pseudomops liturice*ps (Walker, 1868)
Zetobora sigillata (Walker, 1868)

Anaplecta fallax Saussure, 1862 =
Anaplecta albomarginata (Saussure & Zehntner, 1893)
Anaplecta decipiens (Saussure & Zehntner, 1893)
Anaplecta parvipennis (Saussure & Zehntner, 1893)

Asemoblattana nana (Hebard, 1921) =
Asemoblatta nana Hebard, 1921

Blaberus discoidalis Serville, 1839 =
Blabera cubensis (Saussure, 1864)
Blabera discoidalis Serville, 1839
Blabera rufescens (Saussure & Zehntner, 1894)
Blabera subspurcata (Walker, 1868)
Blabera varians (Serville, 1839)

Blaberus giganteus (Linnaeus, 1758) =
Blatta colossea (Illiger, 1801)
Blatta giganteus Linnaeus, 1758
Blatta livida (Gronovius, 1764)
Blabera mexicana (Saussure, 1862)
Blatta scutata (Seba, 1765)
Blabera stolli (Brunner von Wattenwyl, 1865)
Sisapona marginalis (Walker, 1868)

Blaberus parabolicus (Walker, 1868) =
Blabera aequatoriana (Bolívar, 1881)
Blabera armigera (Scudder, 1869)
Blabera parabolicus Walker, 1868

Blatta orientalis Linnaeus, 1758 =
Blatta badia (Saussure, 1863)
Blatta castanea (Blanchard, 1851)
Blatta culinaris (De Geer, 1773)
Blatta europea (Bartsch, 1846)
Blatta ferruginea (Thunberg, 1810)
Blatta hemialata (Gistel, 1856)
Blatta imperator (Westwood, 1858)
Blatta secunda (Schaeffer, 1769)
Blatta tertia (Schaeffer, 1769)
Kakerlac pallipes (Philippi, 1863)
Kakerlac platystetho (Philippi, 1863)
Stylopyga spontanea (Semenov-Tian-Shansky, 1909)

Blattella germanica (Linnaeus, 1767) =
Blatta asiatica (Pallas, 1773)
Blatta bivittata (Serville, 1839)
Blatta daurica (Laxmann, 1769)
Blatta germanica Linnaeus, 1767
Blatta obliquata (Daldorf, 1794)
Blatta transfuga (Brünnich, 1763)
Blattella shuguroffi (Karny, 1908)
Ischnoptera paralella (Tepper, 1893)
Phyllodromia cuneivittata (Hanitsch, 1925)
Phyllodromia magna (Tepper, 1895)
Phyllodromia nutakana (Shiraki, 1931)

Capucina patula (Walker, 1971) =
Capucina cucullata (Saussure, 1893)
Zetobora patula Walker, 1971

Ceratinoptera picta Brunner von Wattenwyl, 1865 =
Phyllodromîa binotata (Bruner, 1906)

Chorisoneura translucida (Saussure, 1864) =
Blatta translucida Saussure, 1864

Colapteroblatta adenophora (Hebard, 1919) =
Acroporoblatta adenophora Hebard, 1919

Colapteroblatta apatela (Hebard, 1919) =
Poroblatta apatela Hebard, 1919

Colapteroblatta bicolor (Gurney, 1937) =
Poroblatta bicolor Gurney, 1937

Colapteroblatta caudelli (Gurney, 1937) =
Poroblatta caudelli Gurney, 1937

Colapteroblatta cylindrica (Hebard, 1919) =
Poroblatta cylindrica Hebard, 1919

Epilampra conferta Walker, 1868 =
Epilampra stigmosa (Giglio-Tos, 1898)

Epilampra gatunae (Hebard, 1920) =
Audreia gatunae Hebard, 1920

Epilampra substrigata *Walker, 1868* =
Epilampra opaca (Walker, 1868)

Eublaberus distanti (Kirby, 1903) =
Blaberus biolleyi (Rehn, 1905)
Blaberus distanti Kirby, 1903

Eublaberus posticus (Erichson, 1848) =
Blabera femorata (Scudder, 1869)
Blabera lindmani (Shelford, 1911)
Blabera posticus Erichson, 1848
Blabera thoracica (Saussure & Zehntner, 1894)
Blatta ferruginea Stoll, 1813

Eunyctibora nigrocincta (Shelford, 1907) =
Nyctibora nigrocincta Shelford, 1907

Euphyllodromia angustata (Latreille, 1811) =
Blatta angustata Latreille,1811
Blatta venosa (Saussure, 1864)

Euphyllodromia elegans (Shelford, 1907)=
Pseudophyllodromia elegans Shelford, 1907

Euphyllodromia hystrix (Saussure, 1869) =
Pseudophyllodromia histrio (Saussure, 1870)
Pseudophyllodromia hystrix Saussure, 1869

Euphyllodromia liturifera (Walker, 1871) =
Blatta liturifera Walker, 1871
Euphyllodromia decastigmata (Hebard, 1920)

Eurycotis occidentalis (Burmeister, 1838) =
Polyzosteria occidentalis Burmeister, 1838

Eurylestes colombiae (Hebard, 1919) =
Platylestes colombiae Hebard, 1919

Euthyrrhapha pacifica (Coquebert, 1804) =
Blatta bicincta (Walker, 1875)
Blatta ciliata Thunberg, 1810
Blatta pacifica Coquebert, 1804
Cordyia biguttata (Burmeister, 1838)
Euthyrrapha ipsoides Walker, 1868
Euthyrrapha sanctae-helenae (Walker, 1875)
Polyphagella bispinosa Chopard, 1929
Polyzosteria oniscoides Walker, 1875
Tivia macracantha Chopard, 1950
Sphecophila catherine Fernando, 1959
Sphecophila cornelie Fernando, 1959
Sphecophila ravana Fernando, 1957

Imblattella acanthastylata (Hebard, 1920) =
Neoblattella acanthastylata Hebard, 1920

Imblattella albida (Saussure, 1869) =
Blatta albida Saussure, 1869

Imblattella antioquiae (Hebard, 1921) =
Neoblattella antioquiae Hebard, 1921

Imblattella fratercula (Hebard, 1916) =
Neoblattella fratercula Hebard, 1916

Ischnoptera rufa (De Geer, 1773) =
Blatta rufa De Geer, 1773
Blatta rufescens (Palisot de Beauvois, 1805)
Ischnoptera fumata (Burmeister, 1838)
Ischnoptera rubiginosa (Walker, 1868)
Ischnoptera terminalis (Walker, 1868)

Lanxoblatta emarginata (Burmeister, 1838) =
Zetobora cicatricosa (Burmeister, 1838)
Zetobora emarginata Burmeister, 1838
Zetobora perspicua (Walker, 1868)

Lanxoblatta frater (Hebard, 1933) =
Lauxoblatta frater Hebard, 1933

Lanxoblatta lata (Shelford, 1907) =
*Zetobora lata S*helford, 1907

Rhyparobia maderae (Fabricius, 1781) =
Blatta maderae Fabricius, 1781
Blatta maderensia (Jones, 1859)
Blatta major (Palisot de Beauvois, 1805)
Blatta tuberculata (Thunberg, 1810)
Nauphoeta kukenthals (Shelford, 1910)
Proscratea illepida (Walker, 1868)

Lucihormetica subcincta (Walker, 1868) =
Brachycola subcincta Walker, 1868

Lucihormetica verrucosa (Brunner von Wattenwyl, 1865)
=
Hormetica verrucosa Brunner von Wattenwyl, 1865

Megaloblatta blaberoides (Walker, 1871) =
Epilampra blaberoides Walker, 1871
Megaloblatta rufipes (Dohrn, 1887)

Neostylopyga rhombifolia (Stoll, 1813) =
Blatta rhombifolia Stoll, 1813
Blatta signata (Eschscholtz, 1822)
Periplaneta decorata (Brunner von Wattenwyl, 1865)
Periplaneta histrio (Saussure, 1864)
Polyzosteria heterospila (Walker, 1871)

Nyctibora azteca (Saussure & Zehntner, 1893) =
Nyctobora azteca Saussure & Zehntner, 1893

Nyctibora intermedia (Saussure, 1873) =
Nyctobora intermedia Saussure, 1873

Nyctibora mexicana (Saussure, 1862) =

Nyctobora mexicana Saussure, 1862

Nyctibora obscura (Saussure, 1864) =
Nyctobora obscura Saussure, 1864

Nyctibora truncata (Saussure & Zehntner, 1893) =
Heminyctobora truncata Saussure & Zehntner, 1893
Nyctobora truncata Saussure & Zehntner, 1893

Panchlora exoleta Burmeister, 1838 =
Panchlora punctum (Saussure & Zehntner, 1893)

Panchlora nivea (Linnaeus, 1758) =
Blatta alba (Strøm, 1783)
Blatta chlorotica (Pallas, 1772)
Blatta hyalina (Stoll, 1813)
Blatta nivea Linnaeus, 1758
Blatta virescens (Thunberg, 1826)
Ischnoptera lucida (Walker, 1868)
Panchlora cubensis (Saussure, 1862)
Panchlora luteola (Saussure, 1864)
Panchlora poeyi (Saussure, 1862)
Pycnosceloides aporus (Hebard, 1919)

Paratropes biolleyi (Saussure & Zehntner, 1893) =
Paratropa biolleyi Saussure & Zehntner, 1893

Paratropes phalerata (Erichson, 1848) =
Blatta phalerata Erichson, 1848
Paratropes lycus (Saussure, 1862)
Paratropes pinoganae (Hebard, 1920)

Periplaneta americana (Linnaeus, 1758) =
Blatta americana Linnaeus, 1758

Periplaneta australasiae (Fabricius, 1775) =
Blatta aurantiaca (Stoll, 1813)
Blatta australasiae Fabricius, 1775
Blatta domingensis (Palisot de Beauvois, 1805)
Periplaneta emittens (Walker, 1871)
Periplaneta onata (Haan, 1842)
Periplaneta repanda (Walker, 1868)
Periplaneta subcincta (Walker, 1868)
Polyzosteria subornata (Walker, 1871)

Periplaneta brunnea Burmeister, 1838 =
Blatta cubensis (Saussure, 1862)
Blatta extenuata (Walker, 1868)
Blatta incisa (Walker, 1868)
Blatta phalerata (Saussure, 1863)
Blatta subfasciata (Walker, 1871)
Blatta supellectilium (Serville, 1839)
Blatta transversalis (Walker, 1871)
Ischnoptera quadriplaga (Walker, 1868)
Ischnoptera vacillons (Walker, 1868)
Periplaneta concolor (Walker, 1868)
Periplaneta ignota (Shaw, 1925)
Periplaneta patens (Walker, 1868)
Periplaneta trunrata (Krauss, 1892)

Phoetalia circumvagans (Burmeister, 1838) =
Blatta marginicollis (Stål, 1858)
Nauphoeta circumvagans Burmeister, 1838

Phoetalia pallida (Brunner von Wattenwyl, 1865) =
Blatta laevigata (Serville, 1839)
Nauphoeta pallida Brunner von Wattenwyl, 1865

Phortioeca phoraspoides (Walker, 1871) =
Zetobora phoraspoides Walker, 1871
Zetobora sublobata (Saussure & Zehntner, 1893)

Pycnoscelus surinamensis (Linnaeus, 1758) =
Blatta corticum (Serville, 1839)
Blatta indica (Fabricius, 1774)
Blatta melanocephala (Stoll, 1813)
Blatta surinamensis Linnaeus, 1758
Panchlora celebesa (Walker, 1868)
Panchlora occipitalis (Walker, 1871)
Perispherus laevis (Le Guillou, 1841)
Polyzosteria crassipes (Walker, 1868)
Polyzosteria latipes (Walker, 1868)
Epilampna dimorpha (Shiraki, 1906)
Epilampna tatei (Tepper, 1894)
Epilampria tatei (Tepper, 1894)
Pycnoscelus major (Roeser, 1940)
Pycnoscelus minor (Roeser, 1940)

Riatia flabellata (Saussure & Zehntner, 1893) =
Anaplecta flabellata Saussure & Zehntner, 1893

Supella longipalpa (Fabricius, 1798)=
Blatta longipalpa Fabricius, 1798

Xestoblatta festae (Griffini, 1896) =
Epilampra festae Griffini, 1896

Xestoblatta hamata (Giglio-Tos, 1898) =
Ischnoptera hamata Giglio-Tos, 1898

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