

State of knowledge of the Tenebrionidae (Insecta: Coleoptera) in Colombia based on bibliographic revision

Estado del conocimiento de Tenebrionidae (Insecta: Coleoptera) en Colombia basado en revisión bibliográfica

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- Received: 28/Sep/2022
- Accepted: 10/Apr/2023
- Online Publishing: 27/Jun/2023

Citation: Ascuntar-Osnas O, López-Bedoya PA, Smith AD, Johnston MA, Girón JC. 2023. State of knowledge of the Tenebrionidae (Insecta: Coleoptera) in Colombia based on bibliographic revision. *Caldasia* 45(3):334-359. doi: <https://doi.org/10.15446/caldasia.v45n3.104445>

ABSTRACT

Tenebrionidae is one of the most diverse families in Coleoptera. However, research on the family in Colombia is limited. Based on a comprehensive literature review, a list of tenebrionid species known from the country was compiled and the state of knowledge is analyzed. Based on this information, the Tenebrionidae in Colombia are represented by 326 species, organized into 95 genera (seven subgenera), 30 tribes, and nine subfamilies. Cundinamarca, including Bogotá, presents the highest number of recorded species with 52, followed by Valle del Cauca with sixteen, and Bolívar with thirteen; eight departments have records for only a single species, and ten do not have records of any tenebrionid species. Potential reasons for the historically limited research on Colombian tenebrionids are discussed and actions to reduce these knowledge gaps are proposed.

Keywords: Darkling beetles, biodiversity, Neotropical region, checklist, distribution.

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RESUMEN

Tenebrionidae es una de las familias más diversas en Coleoptera. Sin embargo, su investigación en Colombia es limitada. A partir de una revisión extensa de literatura, se compiló el listado de especies de Tenebrionidae y se analizó el estado del conocimiento de la familia en el país. Basados en esta información, los Tenebrionidae en Colombia están representados por 326 especies, organizadas en 95 géneros (siete subgéneros), 30 tribus, y nueve subfamilias. Cundinamarca, incluyendo Bogotá, presenta el mayor número de especies registradas con 52, seguido de Valle del Cauca con dieciseis y Bolívar con trece; ocho departamentos registran una sola especie y diez no presentan registros de especies de Tenebrionidae. Se discuten razones potenciales que históricamente han limitado el conocimiento de los tenebriónidos en Colombia y se proponen acciones para reducir estos vacíos de conocimiento.

Palabras clave: Tenebriónidos, biodiversidad, región Neotropical, listado de especies, distribución.

INTRODUCTION

Darkling beetles (Coleoptera: Tenebrionidae) constitute one of the most diverse families of Coleoptera, both in number of species and diversity of habits (Aalbu *et al.* 2002, Matthews *et al.* 2010, Kanda 2017, Bouchard *et al.* 2021). Most species are closely associated with either soil or vegetation and play important roles in nutrient cycling, especially litter decomposition (Schowalter 2008, Almeida and Mise 2009, Cheli *et al.* 2022). Many darkling beetle groups, particularly the subfamilies Pimeliinae and Blaptinae, are highly represented in arid and semi-arid environments worldwide; in tropical forests, their fauna is also well-represented but under-explored. On the other hand, the taxonomic knowledge of darkling beetles in humid environments such as tropical forests (mainly subfamilies Diaperinae, Stenochiinae, and Tenebrioninae) is even more scarce. In general, tenebrionids are sensitive to variations in environmental conditions and have been proposed as bioindicators of ecological degradation in natural and anthropized areas, and in places undergoing restoration processes (Cartagena 2002, Michaels and Michaels 2007, Cárdenas *et al.* 2011, Cheli *et al.* 2021).

Tenebrionids are typically recognized based on their 5-5-4 tarsal formula (present in most species), five visible abdominal ventrites with the first three being fused, and antennal insertions concealed under expansions of the frons (Aalbu *et al.* 2002, Matthews *et al.* 2010, Giraldo and Flores 2016). Currently, there are eleven subfamilies recognized within Tenebrionidae, with 2307 genera

and approximately 30 000 species (Matthews *et al.* 2010, Bouchard *et al.* 2021). In the Neotropical region, at least 478 genera and 4624 species of darkling beetles are estimated (Blackwelder 1944, Costa 2000, Almeida and Mise 2009). Updated tenebrionid species lists are available for countries in North and Central America, including the Caribbean Islands (Maes and Merkl 1991, Cifuentes-R and Zaragoza-C 2014, Bousquet *et al.* 2018); in South America, Argentina (Flores 1998, Cabrera *et al.* 2010), Brazil (Almeida and Mise 2009, Spiessberger *et al.* 2022), Chile (Vidal-GH and Guerrero-G 2007), French Guiana (MNHN and OFB 2022), and Peru (Smith *et al.* 2015, Giraldo and Flores 2016) have updated species lists for Tenebrionidae.

Nevertheless, knowledge about the Neotropical fauna of darkling beetles remains incomplete (Johnston *et al.* 2022), and several neotropical countries, including Colombia, do not have an updated checklist for this beetle family. In particular, the first catalog of Neotropical Coleoptera (Blackwelder 1944) included 286 species of darkling beetles recorded from Colombia, with no information about the distribution of the species within the country. Several phylogenetic studies (*e.g.*, Doyen and Lawrence 1979, Kergoat *et al.* 2014, Kanda 2017, Cheng *et al.* 2022) have resulted in different nomenclatural arrangements, proposals, and revisions during the last decade (Bouchard *et al.* 2005, 2021, Bremer and Martin 2014, Bousquet and Bouchard 2017, Bousquet *et al.* 2018). In addition, scattered information on new species and new records has been published, reporting on material deposited in international collections (Marcuzzi 1954, Doyen 1989, Steiner Jr. 2004, Ferrer *et al.* 2005, Aloquio and Lopes-A 2015;

Smith and Sanchez 2015; Kanda 2016, Grey and Smith 2020), rendering Blackwelder's checklist out of date.

In this context, we present a synopsis of the state of knowledge about the tenebrionids of Colombia by (1) compiling and updating the list of species of Tenebrionidae recorded from Colombia, based on the literature, (2) summarizing the known geographic distributions of each species in the country and determining endemism, (3) analyzing tenebrionid diversity in Colombia in the context of the Neotropical region, and (4) discussing priorities and guidelines to reduce the knowledge gap about this group in the country. This contribution serves as a baseline to initiate the study of darkling beetles in Colombia.

MATERIALS AND METHODS

Checklist construction

The list of species of Tenebrionidae recorded from Colombia was initially extracted from Blackwelder (1944). For each taxon included we recorded: (1) author and year of description; (2) relevant bibliographic resources, including original description; (3) Colombian localities where each species has been documented; (4) information on type material when it was readily available from publications; (5) origin and habits of each species; (6) endemic status of each species; we considered Colombian endemics when no records from other countries were found in the published literature. Furthermore, recent taxonomic revisions were consulted to capture any additional taxonomic changes and records. Most publications of original descriptions are publicly available online via the Biodiversity Heritage Library (<https://www.biodiversitylibrary.org/>) and similar repositories. Those not available online were requested as interlibrary loans at the library of Texas Tech University, or by personal request from specialists. Finally, the classification of subfamilies and tribes was updated according to Bouchard *et al.* (2021).

Literature search for additional records

We performed a literature search following the PRISMA methodology (Moher *et al.* 2009), using the Jstor, Sage, Science Direct, Scielo, Scopus, Springer, and Web of Science databases from the following directed search equation to the title, abstract, and keywords section of each document: (tenebrionid* OR "darkling beetle*") AND (tropic* OR Neotropic* OR Colombia* OR Andes* OR Andean*), between January 1946 and February 2022. We

found 345 articles, reduced to 119 after removing duplicates and articles that evaluated other beetle families. We accessed the full text of 119 articles and those meeting the following criteria were selected: (i) the article presents a list of darkling beetle species, and (ii) at least one darkling beetle species was recorded from Colombia. After considering these selection criteria, we found 25 articles.

Beyond original descriptions and new records, genus- and species-level records were obtained from the Coleoptera catalog of the Colección Taxonómica Nacional de Insectos Luis María Murillo (Vergara-N *et al.* 2021). These records correspond to species of agricultural importance, with a large proportion of the specimens collected between 1950 and 1980, and identified by international experts (Vergara-N, pers. comm.).

RESULTS

Taxonomic distribution overview

We found 326 darkling beetle species recorded from Colombia: 286 species from Blackwelder's checklist and 40 from additional publications (Table 1). The darkling beetle checklist from Colombia is available as a Darwin Core-formatted checklist dataset via the Global Biodiversity Information Facility (GBIF) and the Sistema de Información sobre Biodiversidad de Colombia (SiB Colombia) (Ascuntar-O *et al.* 2023). This core checklist dataset includes the extensions Reference, Distribution, Types and Specimen, and Species Profile to accommodate the information compiled here.

The Colombian darkling beetles are organized into 95 genera (seven subgenera), 30 tribes, and nine subfamilies. The best-represented subfamily is Lagriinae (28.5%, 93 spp.), followed by Stenochiinae (22.7%, 74 spp.), Tenebrioninae (13.2%, 43 spp.), Diaperinae (10.1%, 33 spp.), Alleculinae (8.3%, 27 spp.), Pimeliinae (6.4%, 21 spp.), Blaptinae (4.9%, 16 spp.), Phrenapatinae (3.4%, 11 spp.), and finally Nilioninae (2.5%, 8 spp.). Also, *Statira* Lapeletier & Audinet-Serville, 1828 (59 spp.), *Strongylium* Kirby, 1819 (19 spp.), and *Platydemus* Laporte & Brullé, 1831 (15 spp.), are the best-represented genera, while 39 genera are represented by a single species each.

Most darkling beetle species recorded from Colombia were described by six authors: Friedrich Wilhelm Mäklin (47 spp.), Maurice Pic (45 spp.), George Champion (39

spp.), Fritz Borchmann (29 spp.), Theodor Kirsch (24 spp.), and Hans Gebien (22 spp.) (Fig. 1a). Their type materials are deposited at the Finnish Museum of Natural History (Helsinki, Finland), Muséum National d’Histoire Naturelle (Paris, France), The Natural History Museum (London, United Kingdom), the Zoological Museum Hamburg (Hamburg, Germany), Staatliches Museum für Tierkunde (Dresden, Germany), and Naturhistorisches Museum (Basel, Switzerland), respectively. Most species were described between 1859 and 1886, or between 1918 and 1931 (Fig. 1b). Most genera present in Colombia have never been revised in the Neotropical region, and only relatively few species have been described since 1937.

Geographic distribution

We found that the department of Cundinamarca (including Bogotá) has the highest number of recorded species with 52, followed by Valle del Cauca with sixteen, and Bolívar with thirteen, resulting in greater representation of tenebrionids in the Andean, Caribbean, and Pacific regions of Colombia (Fig. 2). Eight departments only have records for

a single species and ten do not have records of any tenebrionid species (Fig. 2). Records for four species in the country are considered doubtful and in need of confirmation (*Platydemus capitosum* Chevrolat, 1877, *Sycophantes substriatus* Pic, 1921, *Penichrus nannus* Marcuzzi, 1998, and *Acropteryx crenatum* (Pic, 1914)). *Tribolium castaneum* (Herbst, 1797), *Alegoria dilatata* Laporte de Castelnau, 1840, *Alphitobius laevigatus* (Fabricius, 1781) and *Alphitobius diaperinus* (Panzer, 1797) are the most widespread species in Colombia, recorded from eight, seven, six, and four departments respectively; these species except *Alegoria dilatata* are considered introduced in the country.

Furthermore, ten species are recorded from only two departments and 99 species from only one department, whereas 190 (58.8%) species are recorded for Colombia without any specific locality within the country. For 136 (41.7%) species there is some locality information available, at least at the department level or with ambiguous localities. There are 16 species with localities that we were unable to unambiguously assign to a specific department (e.g., “Alto de las Cruces”,

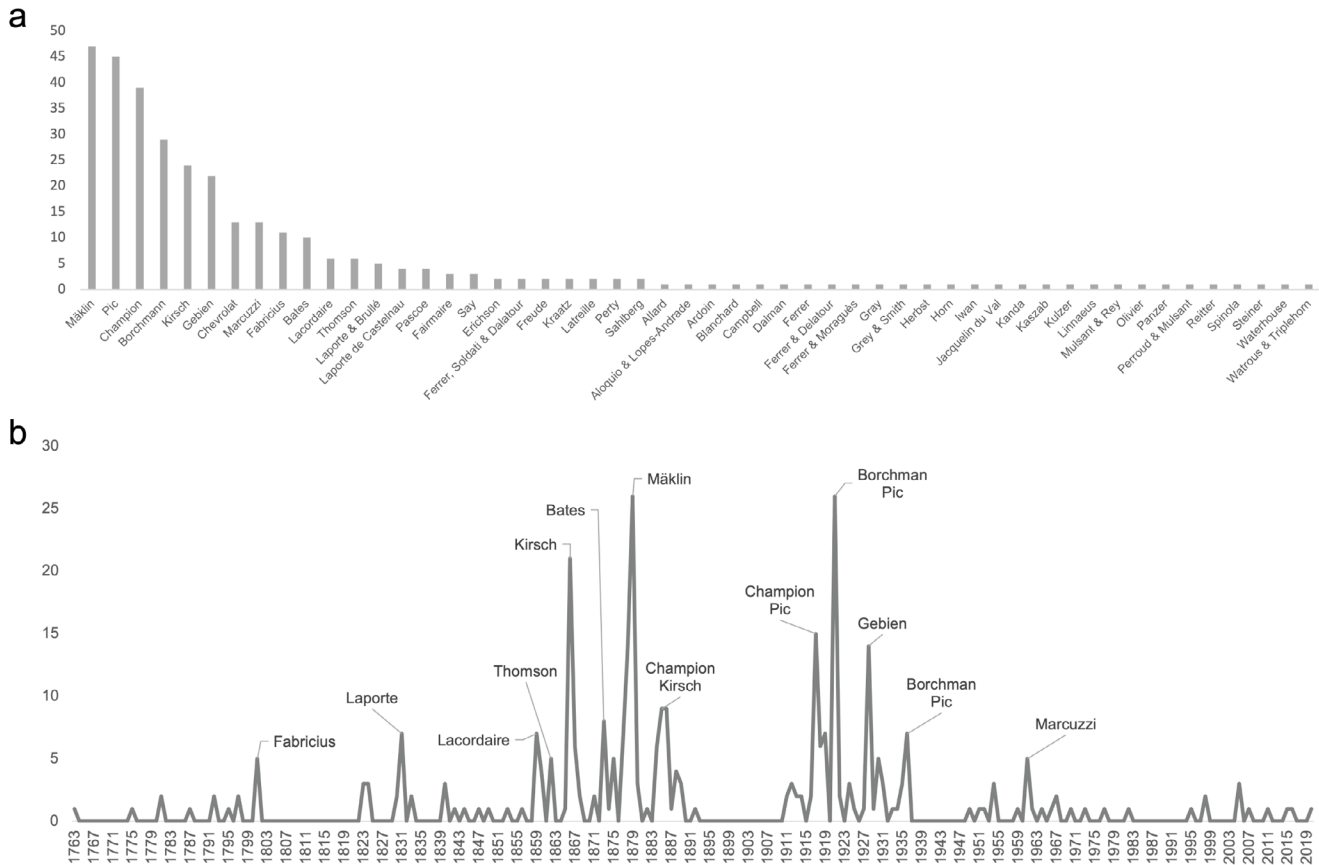


Figure 1. Number of species of Tenebrionidae recorded from Colombia: a. By author; b. By date, where names on main peaks refer to authors.

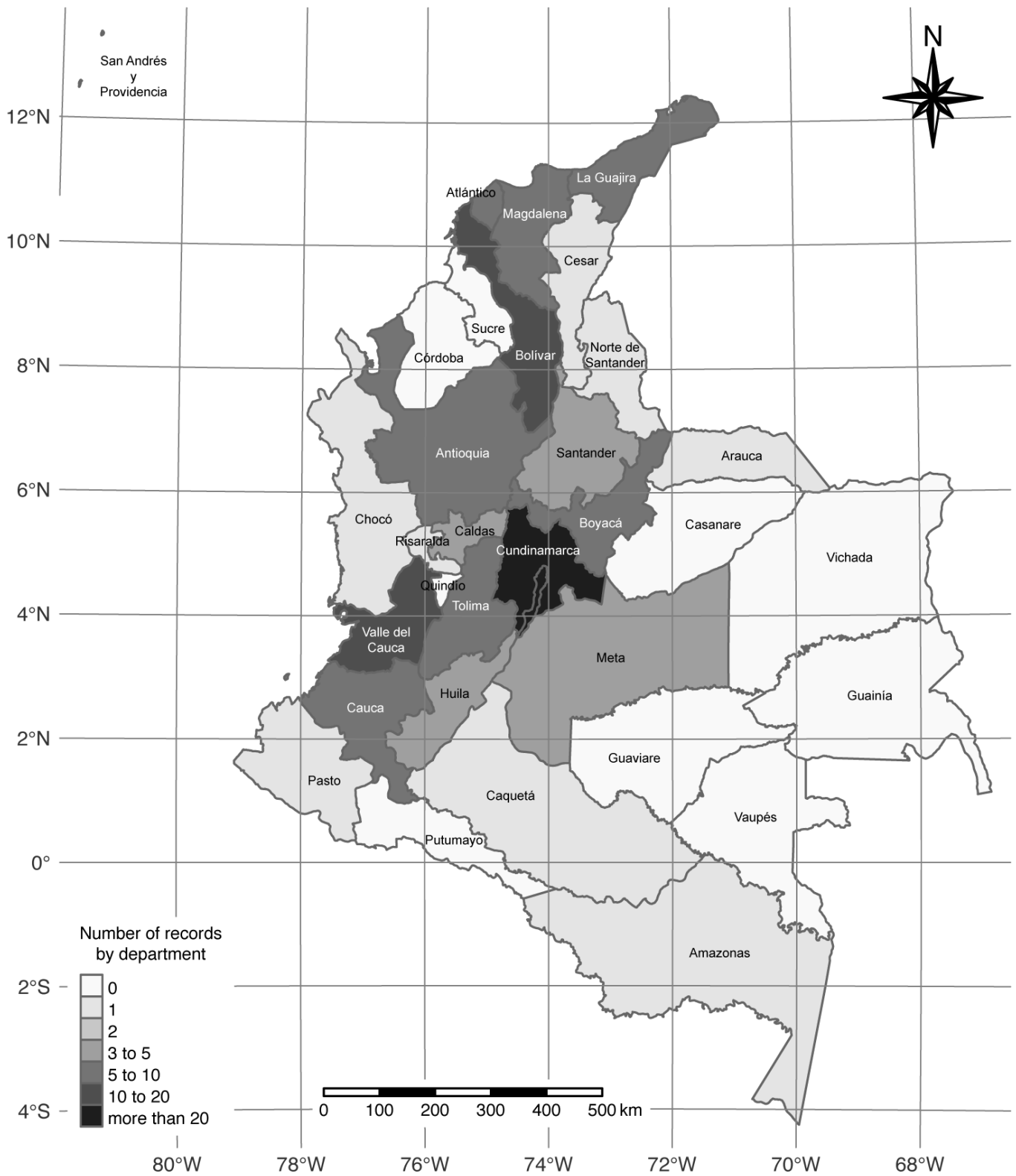


Figure 2. Record density map of Tenebrionidae in Colombia by department, based on the literature.

“Las Pavas”, “Río Magdalena”, “San Antonio”). 185 species have been recorded only from Colombia, therefore, are considered endemic to the country.

DISCUSSION

The lack of species-level geographic information is one of the main obstacles to conservation plans worldwide (Meyer *et al.* 2015). Despite advances in documenting biodiversity, only a few taxonomic groups have complete and updated regional or national checklists that include distributional information (*e.g.*, Weigelt *et al.* 2020, Frost *et al.* 2022, Remsen *et al.* 2022). This lack of information is even more evident in megadiverse, developing countries like Colombia, where the number of national inventories has increased in recent years, especially in vertebrates including birds and amphibians (*e.g.*, Avendaño *et al.* 2017, Acevedo-C *et al.* 2022). However, highly diverse groups like insects have been scarcely investigated (*e.g.*, Noriega *et al.* 2015, Girón *et al.* 2021), and their knowledge in many cases is outdated (*e.g.*, Medina *et al.* 2001), highlighting the need to provide updated information that allows for a better understanding of national biodiversity.

Colombian tenebrionid biodiversity in the regional context

With 326 species, the recorded tenebrionid diversity in Colombia can be considered relatively low compared with other better-studied Neotropical countries (*i.e.*, Brazil [1327 spp.; Almeida and Mise 2009, Spiessberger *et al.* 2022]), Mexico [1227 spp.; Cifuentes-R and Zaragoza-C 2014], Argentina [488 spp.; Flores 1998, Cabrera *et al.* 2010], or Chile [465 spp.; Vidal-GH and Guerrero-G 2007]. The number of tenebrionid species recorded from Colombia is most similar to that of Peru [359 spp.; Giraldo and Flores 2016], which has a similar land area (1 285 220 km² vs. 1 141 748 Km² for Colombia), and larger than the number of tenebrionid species found in Nicaragua (227 spp.; Maes and Merkl 1991) or French Guiana (202 spp.; MNHN and OFB 2022), countries with much smaller land areas (130 373 and 83 534 Km², respectively).

Higher species numbers in some Neotropical countries can be attributed to the presence of specialized researchers in those countries. For instance, Gustavo E. Flores and Germán Cheli in Argentina, Sergio Aloquio in Brazil, Pedro Vidal, Marcelo Guerrero, Álvaro Zúñiga-Reinoso (among others) in Chile, and Alfredo E. Giraldo in Peru, have con-

tributed to the knowledge of the darkling beetles of those countries in recent years (Flores 2000, Carrara *et al.* 2011, Aballay *et al.* 2016, Giraldo and Flores 2016, Aloquio and Lopes-A 2017, Aloquio *et al.* 2019, Giraldo-M and Flores 2019, Flores and Giraldo 2020, Guerrero *et al.* 2022).

In Colombia, no local researchers have started studying tenebrionids from a taxonomic standpoint. The main contributions, in terms of species descriptions and new records, have been made by foreign researchers studying specimens housed in international collections (Fig. 1). The low number of tenebrionid species recorded from Colombia reflects the lack of specialized researchers (taxonomists) (Fernández 2011, Murcia *et al.* 2013, Hutchings and Hutchings 2017, Girón *et al.* 2021, Poulin and Presswell 2022), which ultimately results in knowledge gaps in the biological richness of many countries (Kassas 2002), with Colombia as an example of this situation (Amat and Escobar 2000).

On the other hand, the lack of a baseline limits our ability to approach the study of these megadiverse taxa, regarding their ecology and distribution (Davies and Cadotte 2011). One reason for the lack of a baseline is that the relevant literature is broadly scattered and sometimes difficult to access (Girón *et al.* 2021). With the checklist provided here, which compiles essential information for every single taxon recorded from Colombia, this baseline for Tenebrionidae is finally available. Ascuntar-O *et al.* (2023) contains a list of 265 documents published between 1873 and 2023 and provides links to digital versions of those publications available online, considerably reducing future efforts to track and compile information on Colombian tenebrionids.

Distribution of local diversity of darkling beetles in Colombia

As for many other insect taxa, most records of tenebrionids in Colombia are concentrated in the Andean region, with moderate numbers of records in the Caribbean and Pacific regions (Fig. 2). Some of these records respond to specific and localized research efforts (*e.g.*, Marcuzzi 1951, 1954). Following the trend, the Orinoco and Amazon regions remain with very scarce specific records for the group, a situation that has been evidenced in other groups of arthropods as well (Girón *et al.* 2021, Palacino-R *et al.* 2022). This situation reflects known geographic biases in biodiversity research in Colombia (Arbeláez-C 2013), rather than an actual absence of darkling beetles in the south and eastern regions of the country.

Table 1. List of species of Tenebrionidae recorded from Colombia and their known distribution. Species marked with an asterisk (*) are considered Colombian-endemic.

TAXA	DISTRIBUTION
SUBFAMILY ALLECULINAE Laporte, 1840	
Tribe Alleculini Laporte, 1840	
Subtribe Alleculina Laporte, 1840	
Genus <i>Allecula</i> Fabricius, 1801	
<i>Allecula castaneipennis</i> Champion, 1888	Bogotá
<i>Allecula decorata</i> Kirsch, 1886	Cauca *
<i>Allecula lineata</i> Kirsch, 1886	Cauca *
Genus <i>Lobopoda</i> Solier, 1835	
<i>Lobopoda anthracina</i> Kirsch, 1866	Bogotá *
<i>Lobopoda boliviensis</i> var. <i>columbiana</i> Pic, 1933	Colombia *
<i>Lobopoda coerulescens</i> Kirsch, 1866	Bogotá *
<i>Lobopoda grandis</i> Champion, 1888	Cauca
<i>Lobopoda granulata</i> Campbell, 1966	Meta
<i>Lobopoda lateralis</i> Pic, 1929	Colombia *
<i>Lobopoda quadrifoveolata</i> Pic, 1927	Colombia *
<i>Lobopoda seileri</i> Pic, 1936	Colombia *
Subtribe Xystropodina Solier, 1835	
Genus <i>Cteisa</i> Solier, 1835	
<i>Cteisa pedinoides</i> Mäklin, 1875	Colombia
Genus <i>Lystronychus</i> Latreille, 1829	
<i>Lystronychus apollinairei</i> Pic, 1931	Colombia *
<i>Lystronychus bigibbosus</i> Borchmann, 1930	Bogotá *
<i>Lystronychus denticollis</i> Mäklin, 1875	Colombia *
<i>Lystronychus laticollis</i> Borchmann, 1930	Colombia *
<i>Lystronychus pallitibialis</i> Borchmann, 1930	Boyacá
<i>Lystronychus piliferus</i> Champion, 1888	Bogotá
<i>Lystronychus scalaris</i> Mäklin, 1875	Colombia
<i>Lystronychus vittatus</i> Borchmann, 1930	Colombia *
Genus <i>Xystropus</i> Solier, 1835	
<i>Xystropus californicus</i> (Horn, 1868)	Colombia

(Continues)

TAXA	DISTRIBUTION
<i>Xystropus fallax</i> Mäklin, 1875	Colombia
<i>Xystropus geniculatus</i> Pic, 1931	Colombia *
<i>Xystropus lebasii</i> Mäklin, 1875	Bolívar
<i>Xystropus leseleuci</i> Pic, 1912	Colombia *
<i>Xystropus multiguttatus</i> Pic, 1912	Bogotá *
<i>Xystropus nigropictus</i> Kirsch, 1886	Huila *
<i>Xystropus rufithorax</i> Pic, 1930	Colombia *
SUBFAMILY BLAPTINAE Leach, 1815	
Tribe Amphidorini LeConte, 1862	
Genus <i>Eleodes</i> Eschscholtz, 1829	
<i>Eleodes (Xysta) longicollis punctigerus</i> Blaisdell, 1935	Cundinamarca
Tribe Opatrini Brullé, 1832	
Subtribe Blapstinina Mulsant & Rey, 1853	
Genus <i>Ammodonus</i> Mulsant & Rey, 1859	
<i>Ammodonus hintoni</i> Kaszab, 1949	La Guajira
<i>Ammodonus tropicus</i> (Kirsch, 1866)	Bogotá
Genus <i>Blapstinus</i> Dejean, 1821	
<i>Blapstinus brunnipes</i> Marcuzzi, 1951	Bolívar
<i>Blapstinus buqueti</i> Champion, 1885	Colombia
<i>Blapstinus egenus</i> Champion, 1885	Bolívar
<i>Blapstinus humboldti</i> Marcuzzi, 1954	La Guajira
<i>Blapstinus orchilensis occidentalis</i> Marcuzzi, 1954	La Guajira
Genus <i>Goajiria</i> Ivie & Hart, 2016	
<i>Goajiria chevrolati</i> (Macuzzi, 1959)	Bolívar *
<i>Goajiria curta goajira</i> (Macuzzi, 1954)	La Guajira
Genus <i>Lodinus</i> Mulsant & Rey, 1859	
<i>Lodinus venezuelensis</i> (Macuzzi, 1954)	La Guajira
Genus <i>Trichoton</i> Hope, 1841	
<i>Trichoton curvipes</i> Champion, 1886	Colombia
<i>Trichoton villosum</i> (Pascoe, 1868)	Magdalena
Genus <i>Ulus</i> Horn, 1870	
<i>Ulus hirsutus</i> Champion, 1885	Bolívar

(Continues)

TAXA	DISTRIBUTION
Tribe Platynotini Mulsant & Rey, 1853	
Genus <i>Asiopus</i> Sharp, 1891	
<i>Asiopus girardi</i> (Iwan, 1995)	Santander *
<i>Asiopus pullus</i> (Sahlberg, 1823)	Colombia
Genus <i>Opatrinus</i> Dejean, 1821	
<i>Opatrinus clathratus</i> (Fabricius, 1792)	Colombia
<i>Opatrinus gibbicollis</i> Mulsant & Rey, 1853	Colombia
<i>Opatrinus laticolis</i> (Latreille, 1833)	Colombia *
SUBFAMILY DIAPERINAE Latreille, 1802	
Tribe Diaperini Latreille, 1802	
Subtribe Adelinina LeConte, 1862	
Genus <i>Adelina</i> Dejean, 1835	
<i>Adelina kulzeri</i> (Ardoin, 1977)	Cundinamarca *
<i>Adelina pallida</i> (Say, 1824)	Caldas
<i>Adelina plana</i> (Fabricius, 1801)	Colombia
Genus <i>Gnatocerus</i> Thunberg, 1814	
<i>Gnatocerus maxillosus</i> (Fabricius, 1801)	Colombia
Subtribe Diaperina Latreille, 1802	
Genus <i>Liodema</i> Horn, 1870	
<i>Liodema connexa</i> Bates, 1873	Valle del Cauca
<i>Liodema maculata</i> (Fabricius, 1801)	Bogotá
<i>Liodema serricornis</i> Bates, 1873	Bogotá
Genus <i>Neomida</i> Latreille, 1829	
<i>Neomida castanea</i> (Bates, 1873)	Colombia
<i>Neomida diminuta</i> Aloquio & Lopes-Andrade, 2015	Colombia
<i>Neomida ephippiata</i> (Chevrolat, 1878)	Colombia
<i>Neomida lateralis</i> (Bates, 1873)	Colombia
<i>Neomida lecontei</i> (Bates, 1873)	Colombia
<i>Neomida picea</i> (Laporte & Brullé, 1831)	Bolívar
Genus <i>Phayllus</i> Champion, 1886	
<i>Phayllus minutus</i> Champion, 1886	Bolívar
Genus <i>Platydema</i> Laporte & Brullé, 1831	

(Continues)

TAXA	DISTRIBUTION
<i>Platydema bisignatum</i> Chevrolat, 1877	Bolívar
<i>Platydema capitosa</i> Chevrolat, 1877	Colombia?
<i>Platydema erythroptera</i> Chevrolat, 1877	Colombia *
<i>Platydema excavata</i> (Say, 1824)	Colombia
<i>Platydema fasciata</i> (Fabricius, 1801)	Colombia
<i>Platydema fuscipes</i> Laporte & Brullé, 1831	Colombia
<i>Platydema infuscata</i> Laporte & Brullé, 1831	Colombia *
<i>Platydema opaca</i> Chevrolat, 1877	Bogotá *
<i>Platydema piciventris</i> Chevrolat, 1878	Colombia *
<i>Platydema serripes</i> Chevrolat, 1877	Colombia *
<i>Platydema sexpunctata</i> Chevrolat, 1877	Bogotá *
<i>Platydema silphoides</i> Laporte & Brullé, 1831	Colombia
<i>Platydema transversa</i> Laporte & Brullé, 1831	Colombia
<i>Platydema undata</i> Chevrolat, 1878	Colombia
<i>Platydema variegata</i> Laporte, 1831	Colombia *
Tribe Gnathidiini Gebien, 1921	
Genus Tyrtaeus Champion, 1913	
<i>Tyrtaeus rufus</i> Champion, 1913	Bogotá; Valle del Cauca
Tribe Hypophlaeini Billberg, 1820	
Genus Corticeus Piller & Mitterpacher, 1783	
<i>Corticeus mexicanus</i> Reitter, 1878	Colombia
Tribe Phaleriini Blanchard, 1845	
Genus Phaleria Latreille, 1802	
<i>Phaleria testacea</i> Say, 1824	Colombia
<i>Phaleria thinophila</i> Watrous & Triplehorn, 1982	Magdalena
SUBFAMILY LAGRIINAE Latreille, 1825 (1820)	
Tribe Belopini Reitter, 1917	
Genus Adelsonia Laporte, 1840	
<i>Adelsonia quadricollis</i> (Champion, 1885)	Colombia
<i>Adelsonia sulcatula</i> (Champion, 1885)	Bolívar
Tribe Goniaderini Lacordaire, 1859	
Genus Anaedus Blanchard, 1842	

(Continues)

TAXA	DISTRIBUTION
<i>Anaedes geniculatus</i> Pic, 1917	Colombia *
<i>Anaedes punctatissimus</i> Blanchard, 1842	Colombia
<i>Anaedes rufescens</i> Pic, 1917	Colombia *
<i>Anaedes setulosus</i> Champion, 1886	Bogotá
Genus <i>Ancylopoma</i> Pascoe, 1871	
<i>Ancylopoma punctigera</i> Pascoe, 1871	Amazonas
Genus <i>Goniadera</i> Perty, 1832	
<i>Goniadera (Aemymone) cariosa</i> Fairmaire, 1873	Colombia
<i>Goniadera (Aemymone) semirufa</i> (Pic, 1917)	Colombia *
<i>Goniadera (Goniadera) alternata</i> Champion, 1886	Tolima; Valle del Cauca
<i>Goniadera (Goniadera) claveri</i> Pic, 1913	Tolima *
<i>Goniadera (Goniadera) dissipata</i> Kirsch, 1866	Bogotá
<i>Goniadera (Goniadera) oculata columbina</i> Ferrer & Delatour, 2007	Colombia
<i>Goniadera (Goniadera) pseudorepanda</i> Ferrer & Delatour, 2007	Valle del Cauca
<i>Goniadera (Goniadera) repanda</i> (Fabricius, 1801)	Colombia *
<i>Goniadera (Opatresthes) binodosa</i> (Gebien, 1928)	Colombia *
Genus <i>Paratenetus</i> Spinola, 1845	
<i>Paratenetus lebasii</i> Spinola, 1844	Colombia *
Genus <i>Phobelius</i> Blanchard, 1842	
<i>Phobelius nodipennis</i> Fairmaire, 1889	Colombia
Genus <i>Phymatestes</i> Pascoe, 1866	
<i>Phymatestes denticollis</i> (Fairmaire, 1892)	Colombia
<i>Phymatestes onorei</i> Ferrer & Moraguès, 1998	Valle del Cauca
Tribe Laenini Seidlitz, 1895	
Genus <i>Chaetyllus</i> Pascoe, 1860	
<i>Chaetyllus laenoides</i> (Kirsch, 1866)	Bogotá *
<i>Chaetyllus tuberculatus</i> (Kirsch, 1866)	Bogotá *
Genus <i>Grabulax</i> Kanda, 2016	
<i>Grabulax darlingtoni</i> Kanda, 2016	Magdalena *
Tribe Lagriini Latreille, 1825 (1820)	
Genus <i>Barsenis</i> Pascoe, 1887	
<i>Barsenis anthacina</i> Borchmann, 1921	Colombia *

(Continues)

TAXA	DISTRIBUTION
Genus Colparthrum Kirsch, 1866	
<i>Colparthrum gerstackeri</i> Kirsch, 1866	Bogotá *
<i>Colparthrum limbatum</i> Borchmann, 1921	Caldas
<i>Colparthrum livens</i> Borchmann, 1921	Colombia *
<i>Colparthrum lividipes</i> Borchmann, 1921	Colombia
<i>Colparthrum palliditarse</i> Borchmann, 1936	Colombia
<i>Colparthrum pulchrum</i> Borchmann, 1916	Colombia *
<i>Colparthrum rufum</i> Borchmann, 1916	Colombia *
<i>Colparthrum trifoveatum</i> Champion, 1917	Colombia *
Genus Meropria Borchmann, 1921	
<i>Meropria denticulata</i> (Champion, 1889)	Colombia
Genus Othryades Champion, 1889	
<i>Othryades columbiana</i> Borchmann, 1936	Colombia *
Genus Pseudolagria Champion, 1917	
<i>Pseudolagria colombiana</i> Borchmann, 1936	Boyacá *
<i>Pseudolagria impressifrons</i> Borchmann, 1936	Colombia
Genus Statira Lepeletier & Audinet-Serville, 1828	
<i>Statira acanthomera</i> Champion, 1917	Colombia
<i>Statira bogotensis</i> Pic, 1917	Bogotá *
<i>Statira brevicollis</i> Mäklin, 1879	Colombia *
<i>Statira caeruleotincta</i> Champion, 1917	Colombia *
<i>Statira caliensis</i> Champion, 1917	Valle del Cauca
<i>Statira cavernosa</i> Champion, 1917	Colombia *
<i>Statira chalconota</i> Champion, 1917	Colombia *
<i>Statira corrossa</i> Champion, 1889	Colombia
<i>Statira cribripennis</i> Mäklin, 1879	Colombia *
<i>Statira cupripennis</i> Mäklin, 1879	Colombia *
<i>Statira cyanella</i> Borchmann, 1921	Colombia *
<i>Statira cyanipennis</i> Mäklin, 1878	Colombia *
<i>Statira cylindricollis</i> Mäklin, 1878	Colombia *
<i>Statira dejeani</i> Champion, 1917	Bolívar
<i>Statira eumera</i> Borchmann, 1921	Boyacá

(Continues)

TAXA	DISTRIBUTION
<i>Statira exigua</i> Mäklin, 1879	Colombia *
<i>Statira femoralis</i> (Borchmann, 1921)	Colombia *
<i>Statira ferruginea</i> Mäklin, 1879	Colombia *
<i>Statira foveolata</i> Borchmann, 1921	Colombia
<i>Statira fulvescens</i> Borchmann, 1936	Colombia
<i>Statira fusca</i> Mäklin, 1879	Colombia *
<i>Statira gratiosa</i> Mäklin, 1879	Colombia *
<i>Statira hilaris</i> Mäklin, 1879	Colombia *
<i>Statira hirta</i> Borchmann, 1921	Boyacá *
<i>Statira impressa</i> Borchmann, 1921	Boyacá *
<i>Statira impressipennis</i> Mäklin, 1879	Colombia *
<i>Statira laeta</i> Borchmann, 1921	Colombia *
<i>Statira laevigata</i> Mäklin, 1879	Colombia *
<i>Statira lateralis</i> Mäklin, 1879	Colombia *
<i>Statira literata</i> Mäklin, 1879	Colombia *
<i>Statira maklini</i> Kirsch, 1866	Bogotá *
<i>Statira medialis</i> Mäklin, 1879	Colombia *
<i>Statira nigella</i> Mäklin, 1879	Colombia *
<i>Statira nubeculosa</i> Mäklin, 1879	Colombia *
<i>Statira paucula</i> Borchmann, 1921	Colombia *
<i>Statira picipennis</i> Mäklin, 1879	Colombia
<i>Statira polypunctata</i> var. <i>ferrugata</i> Borchmann, 1921	Colombia *
<i>Statira quadrimaculata</i> Mäklin, 1879	Colombia
<i>Statira rotundicollis</i> Champion, 1917	Bogotá *
<i>Statira scalpta</i> Borchmann, 1921	Colombia *
<i>Statira scapularis</i> Borchmann, 1921	Colombia *
<i>Statira sculpturata</i> Borchmann, 1936	Colombia *
<i>Statira scutellaris</i> Pic, 1912	Colombia
<i>Statira seriepunctata</i> Borchmann, 1921	Colombia *
<i>Statira sexmaculata</i> Mäklin, 1879	Colombia *
<i>Statira sordida</i> Mäklin, 1879	Colombia *
<i>Statira steinheili</i> Mäklin, 1879	Colombia *

(Continues)

TAXA	DISTRIBUTION
<i>Statira submetallica</i> Borchmann, 1921	Colombia *
<i>Statira sumtuosa</i> Mäklin, 1879	Colombia *
<i>Statira superba</i> Pic, 1918	Colombia *
<i>Statira terminalis</i> Mäklin, 1879	Colombia *
<i>Statira trifasciata</i> Mäklin, 1879	Colombia *
<i>Statira trilineata</i> Mäklin, 1879	Colombia *
<i>Statira trisellata</i> Champion, 1917	Tolima *
<i>Statira trisellata</i> var. <i>championi</i> Borchmann, 1936	Colombia *
<i>Statira validicornis</i> Mäklin, 1879	Colombia *
<i>Statira virescens</i> Mäklin, 1879	Colombia *
<i>Statira viridinitens</i> Champion, 1917	Colombia *
<i>Statira zonata</i> Borchmann, 1921	Colombia *
Genus <i>Uroplatopsis</i> Champion, 1889	
<i>Uroplatopsis inimpressa</i> Pic, 1911	Bogotá *
SUBFAMILY NILIONINAE Oken, 1843	
Genus <i>Nilio</i> Latreille, 1802	
<i>Nilio collaris</i> Thomson, 1860	Colombia *
<i>Nilio lafertei</i> Thomson, 1860	Colombia *
<i>Nilio lebasei</i> Thomson, 1860	Colombia *
<i>Nilio marginellus</i> Erichson, 1847	Colombia
<i>Nilio minutus</i> Pic, 1918	Bogotá *
<i>Nilio peruvianus</i> Thomson, 1860	Colombia
<i>Nilio peruvianus</i> var. <i>baubeliki</i> Mader, 1936	Colombia *
<i>Nilio pilosus</i> Laporte de Castelnau, 1840	Colombia
<i>Nilio villosus</i> Fabricius, 1787	Colombia *
SUBFAMILY PHRENAPATINAE Solier, 1834	
Tribe Penetini Lacordaire, 1859	
Genus <i>Molion</i> Champion, 1886	
<i>Molion goudotii</i> (Lacordaire, 1859)	Colombia *
<i>Molion taurus</i> (Lacordaire, 1859)	Colombia *
Genus <i>Peneta</i> Lacordaire, 1859	
<i>Peneta diversicornis</i> Pic, 1921	Colombia *

(Continues)

TAXA	DISTRIBUTION
<i>Peneta glabrifrons</i> Gebien, 1928	Atlántico; Cauca *
<i>Peneta lebasii</i> Lacordaire, 1859	Colombia *
<i>Peneta mulleri</i> Kirsch, 1866	Huila *
<i>Peneta obtusicornis</i> Kirsch, 1866	Bogotá
Tribe Phrenapatini Solier, 1834	
Genus <i>Delognatha</i> Lacordaire, 1859	
<i>Delognatha ceruchoides</i> Gebien, 1928	Colombia *
<i>Delognatha mandibularis</i> Gebien, 1928	Colombia *
Genus <i>Phrenapates</i> Gray, 1831	
<i>Phrenapates bennetti</i> Gray, 1831	Chocó
<i>Phrenapates latreillei</i> Gebien, 1911	Colombia *
SUBFAMILY PIMELIINAE Latreille, 1802	
Tribe Edrotini Lacordaire, 1859	
Genus <i>Armalia</i> Casey, 1907	
<i>Armalia chiriquensis</i> (Champion, 1884)	Bogotá; La Guajira
Genus <i>Paraguania</i> Marcuzzi, 1953	
<i>Paraguania relicta</i> Marcuzzi, 1952	La Guajira
Tribe Epitragini Blanchard, 1845	
Genus <i>Epitragopsis</i> Casey, 1907	
<i>Epitragopsis godmani</i> (Champion, 1884)	Valle del Cauca
Genus <i>Epitragus</i> Latreille, 1802	
<i>Epitragus antillensis</i> Marcuzzi, 1961	Colombia
<i>Epitragus aurulentus</i> Kirsch, 1866	Bogotá
<i>Epitragus cephalotes</i> Freude, 1967	Bolívar; Magdalena
<i>Epitragus emarginatus</i> Champion, 1884	Colombia
<i>Epitragus hummelincki</i> Marcuzzi, 1964	Colombia
<i>Epitragus nigricans</i> Champion, 1884	Bolívar; Huila
<i>Epitragus paraguana</i> Marcuzzi, 1961	Colombia
<i>Epitragus roscidus</i> Erichson, 1848	Colombia
<i>Epitragus sallaei</i> Champion, 1884	Colombia
Genus <i>Hemasodes</i> Casey, 1907	
<i>Hemasodes hiekei</i> Freude, 1967	Boyacá

(Continues)

TAXA	DISTRIBUTION
<i>Hemasodes lebasii</i> (Marcuzzi, 1961)	Colombia
Genus Ortheolus Casey, 1907	
<i>Ortheolus caraibicus</i> Marcuzzi, 1961	Atlántico; La Guajira
<i>Ortheolus caraibicus occidentalis</i> Marcuzzi, 1961	Colombia
<i>Ortheolus llanensis</i> Marcuzzi, 1961	Colombia
<i>Ortheolus oculatus columbianus</i> Fruede, 1968	Atlántico *
<i>Ortheolus panamensis</i> (Champion, 1884)	Colombia
Genus Parepitrachus Casey, 1907	
<i>Parepitrachus fuscipes</i> (Latreille, 1833)	Colombia *
Genus Tapinocomus Gebien, 1928	
<i>Tapinocomus relictus</i> Marcuzzi, 1954	La Guajira *
Tribe Falsomycterini Gebien, 1910	
Genus Falsomycterus Pic, 1907	
<i>Falsomycterus hirsutus</i> Pic, 1925	Colombia *
Genus Pteroctenus Kirsch, 1866	
<i>Pteroctenus pexus</i> Kirsch, 1866	Bogotá *
SUBFAMILY STENOCHIINAE Kirby, 1837	
Tribe Cnodalonini Oken, 1843	
Genus Apsida Lacordaire, 1859	
<i>Apsida chrysomelina</i> Lacordaire, 1859	Colombia
<i>Apsida purpureomicans</i> Bates, 1873	Colombia
Genus Astatmetus Bates, 1874	
<i>Astatmetus alienus</i> Bates, 1874	Colombia *
Genus Blapida Perty, 1830	
<i>Blapida bicolor</i> Gebien, 1919	Colombia
<i>Blapida satanas</i> Gebien, 1919	Colombia *
Genus Camaria Lepeletier & Audinet-Serville, 1828	
<i>Camaria alternans</i> Kirsch, 1866	Bogotá *
<i>Camaria bogotensis</i> Pic, 1922	Bogotá *
<i>Camaria clandestina</i> Pascoe, 1882	Colombia
<i>Camaria foveata</i> Gebien, 1919	Colombia *
<i>Camaria laevis</i> Gebien, 1919	Colombia *

(Continues)

TAXA	DISTRIBUTION
<i>Camaria marginicollis</i> Gebien, 1919	Colombia
<i>Camaria plicifrons</i> Gebien, 1919	Colombia
<i>Camaria salessei</i> Pic, 1933	Colombia *
<i>Camaria subangulicollis</i> Pic, 1922	Colombia
<i>Camaria subconvexa</i> Pic, 1934	Colombia *
<i>Camaria subcostata</i> Gebien, 1919	Cundinamarca
<i>Camaria superba</i> Pic, 1917	Colombia *
Genus Choastes Champion, 1893	
<i>Choastes rufitarsis</i> Pic, 1935	Cauca *
<i>Choastes seileri</i> Pic, 1935	Colombia *
Genus Cyrtosoma Perty, 1830	
<i>Cyrtosoma bogotana</i> Chevrolat, 1878	Colombia *
<i>Cyrtosoma convexa</i> Pic, 1935	Boyacá *
<i>Cyrtosoma cupripennis</i> Chevrolat, 1878	Colombia *
<i>Cyrtosoma denticolle</i> Chevrolat, 1878	Colombia
<i>Cyrtosoma macreta</i> Gebien, 1928	Colombia *
<i>Cyrtosoma melanaria</i> Chevrolat, 1878	Colombia
<i>Cyrtosoma pastica</i> Gebien, 1928	Cauca; Valle del Cauca *
Genus Epicalla Lacordaire, 1859	
<i>Epicalla purpureipes</i> Pic, 1931	Boyacá *
<i>Epicalla virgo</i> Gebien, 1928	Colombia *
Genus Hegemona Laporte, 1840	
<i>Hegemona allardi</i> Allard, 1877	Colombia *
Genus Isicrdes Champion, 1885	
<i>Isicrdes attenuatus</i> Champion, 1885	Colombia *
Genus Maracia Gebien, 1919	
<i>Maracia femoralis</i> Kirsch, 1866	Bogotá *
Genus Mylaris Pallas, 1781	
<i>Mylaris gigas</i> (Linnaeus, 1763)	Colombia *
<i>Mylaris procera</i> (Champion, 1885)	Bolívar
Genus Nuptis Motschulsky, 1872	
<i>Nuptis cornutus</i> Champion, 1885	Colombia

(Continues)

TAXA	DISTRIBUTION
Genus Othryoneus Champion, 1886	
<i>Othryoneus maculipennis</i> Champion, 1886	Bogotá *
Genus Oxidates Champion, 1886	
<i>Oxidates ruficornis</i> Gebien, 1928	Valle del Cauca *
Genus Pseudoblapida Pic, 1917	
<i>Pseudoblapida atritarsis</i> Pic, 1924	Colombia *
Genus Sycophantes Kirsch, 1866	
<i>Sycophantes dentipes</i> Kirsch, 1866	Bogotá *
<i>Sycophantes instriatus</i> Pic, 1921	Antioquia *
<i>Sycophantes ruficoxis</i> Kirsch, 1866	Bogotá *
<i>Sycophantes substriatus</i> Pic, 1921	Colombia? *
Genus Taphrosoma Kirsch, 1866	
<i>Taphrosoma dohrni</i> Kirsch, 1866	Bogotá *
Genus Xenius Champion, 1886	
<i>Xenius perlifer</i> Gebien, 1928	Colombia *
Tribe Stenochiini Kirby, 1837	
Genus Cuphotes Champion, 1887	
<i>Cuphotes cinctus</i> (Olivier, 1795)	Bogotá *
<i>Cuphotes corallifer</i> (Thomson, 1859)	Colombia
<i>Cuphotes maculosus</i> (Thomson, 1859)	Colombia *
<i>Cuphotes thomsoni</i> Kirsch, 1866	Bogotá *
Genus Poecilesthus Dejean, 1834	
<i>Poecilesthus laticornis</i> Mäklin, 1878	Colombia *
<i>Poecilesthus nigropunctatus</i> Champion, 1887	Colombia
<i>Poecilesthus seileri</i> Pic, 1924	Colombia *
<i>Poecilesthus testaceus</i> Kirsch, 1866	Bogotá *
Genus Strongylium Kirby, 1819	
<i>Strongylium angustum</i> Mäklin, 1867	Colombia
<i>Strongylium apollinairei</i> Pic, 1921	Colombia *
<i>Strongylium auratum</i> (Laporte de Castelnau, 1840)	Colombia
<i>Strongylium bogotense</i> Pic, 1918	Bogotá *
<i>Strongylium claveri</i> Pic, 1918	Tolima *

(Continues)

TAXA	DISTRIBUTION
<i>Strongylium colombianum</i> Champion, 1888	Bogotá
<i>Strongylium diverseplicatum</i> Pic, 1921	Colombia *
<i>Strongylium exile</i> Mäklin, 1867	Colombia
<i>Strongylium fossifrons</i> Mäklin, 1867	Colombia
<i>Strongylium fulvitarse</i> Pic, 1921	Colombia
<i>Strongylium infemorale</i> Pic, 1918	Bogotá *
<i>Strongylium infossifrons</i> Pic, 1921	Colombia
<i>Strongylium lacunosum</i> Mäklin, 1867	Colombia *
<i>Strongylium permodicum</i> Mäklin, 1867	Colombia
<i>Strongylium pilosipes</i> Pic, 1921	Colombia *
<i>Strongylium plebejum</i> Mäklin, 1867	Colombia *
<i>Strongylium posticejunctum</i> Pic, 1921	Colombia *
<i>Strongylium purpureipes</i> Pic, 1924	Colombia *
<i>Strongylium viridifasciatum</i> Pic, 1918	Bogotá *
Tribe Talanini Champion, 1887 (1883)	
Genus <i>Talanus</i> Jacquelin du Val, 1857	
<i>Talanus columbianus</i> Mäklin, 1878	Colombia
<i>Talanus humilis</i> Mäklin, 1878	Colombia *
<i>Talanus obscuriceps</i> Pic, 1914	Colombia *
<i>Talanus subexaratus</i> Maklin, 1878	Colombia
SUBFAMILY TENEBRIONINAE Latreille, 1802	
Genus <i>Penichrus</i> Champion, 1885	
<i>Penichrus nannus</i> Marcuzzi, 1998	Colombia?
Tribe Acropteronini Doyen, 1989	
Genus <i>Acropteryx</i> Gistel, 1831	
<i>Acropteryx abbreviatum</i> Mäklin, 1862	Colombia *
<i>Acropteryx crenatum</i> Pic, 1914	Colombia?
<i>Acropteryx fastigatum</i> Mäklin, 1862	Colombia *
<i>Acropteryx picipes</i> Mäklin, 1862	Colombia *
<i>Acropteryx transversicollis</i> Mäklin, 1862	Bogotá *
Tribe Alphitobiini Reitter, 1917	
Genus <i>Alphitobius</i> Stephens, 1829	

(Continues)

TAXA	DISTRIBUTION
<i>Alphitobius diaperinus</i> (Panzer, 1797)	Antioquia; Bogotá; Magdalena; Valle del Cauca
<i>Alphitobius laevigatus</i> (Fabricius, 1781)	Atlántico; Cundinamarca; Magdalena; Meta; Nariño; Valle del Cauca
Tribe Amarygmini Gistel, 1848	
Genus <i>Cymatothes</i> Dejean, 1834	
<i>Cymatothes hieroglyphicus</i> (Perty, 1830)	Colombia
<i>Cymatothes nebulosus</i> (Fabricius, 1781)	Colombia
<i>Cymatothes undatus</i> (Fabricius, 1792)	Colombia
Tribe Bolitophagini Kirby, 1837	
Genus <i>Rhipidandrus</i> LeConte, 1862	
<i>Rhipidandrus micrographus</i> (Lacordaire, 1865)	Colombia
Tribe Centronopini Doyen, 1989	
Genus <i>Centronopus</i> Solier, 1848	
<i>Centronopus (Menechides) batesi</i> (Champion, 1885)	Bogotá
Genus <i>Tauroceras</i> Hope, 1841	
<i>Tauroceras lucifer</i> Ferrer, Soldati & Dalatour, 2005	Valle del Cauca
<i>Tauroceras noelmali</i> Ferrer, Soldati & Dalatour, 2005	Valle del Cauca
Tribe Helopini Latreille, 1802	
Genus <i>Nautes</i> Pascoe, 1866	
<i>Nautes ovatus</i> Bates, 1970	Colombia *
Tribe Tenebrionini Latreille, 1802	
Genus <i>Zophobas</i> Dejean, 1834	
<i>Zophobas (Macrozophobas) haagi</i> Kraatz, 1880	Colombia
<i>Zophobas (Macrozophobas) maculicollis</i> Kirsch, 1866	Cundinamarca; Boyacá; Valle del Cauca
<i>Zophobas (Zophobas) atratus</i> (Fabricius, 1775)	Bogotá; Magdalena; Valle del Cauca
<i>Zophobas (Zophobas) bertiae</i> Ferrer, 2011	Risaralda *
<i>Zophobas (Zophobas) opacus</i> (Sahlberg, 1823)	Meta
<i>Zophobas (Zophobas) tridentatus</i> Kraatz, 1880	Colombia
Tribe Toxicini Oken, 1843	
Genus <i>Wattius</i> Kaszab, 1982	
<i>Wattius asperulus</i> (Pascoe, 1871)	Antioquia *

(Continues)

TAXA	DISTRIBUTION
Tribe Triboliini Gistel, 1848	
Genus Hypogena Dejean, 1834	
<i>Hypogena brasilica</i> (Perty, 1830)	Colombia
<i>Hypogena brasiliensis</i> (Kulzer, 1962)	Colombia
<i>Hypogena cat</i> Steiner, 2005	Colombia
<i>Hypogena dejeani</i> (Champion, 1886)	Colombia
<i>Hypogena reburra</i> Grey & Smith, 2020	Colombia *
<i>Hypogena tricornis</i> (Dalman, 1823)	Colombia
Genus Latheticus Waterhouse, 1880	
<i>Latheticus oryzae</i> Waterhouse, 1880	Atlántico
Genus Tribolium MacLeay, 1825	
<i>Tribolium castaneum</i> (Herbst, 1797)	Antioquia; Cesar; Cundinamarca; Magdalena; Risaralda; Santander; Tolima; Valle del Cauca;
<i>Tribolium confusum</i> Jacquelin du Val, 1862	Atlántico
Tribe Ulomini Blanchard, 1845	
Genus Alegoria Laporte de Castelnau, 1840	
<i>Alegoria dilatata</i> Laporte de Castelnau, 1840	Antioquia; Arauca; Caldas; Caquetá; Magdalena; Meta; Norte de Santander
Genus Antimachus Gistel, 1829	
<i>Antimachus coriaceus</i> Lacordaire, 1859	Colombia
<i>Antimachus semicarinatus</i> Gebien, 1928	Colombia *
<i>Antimachus triangulifer</i> Kirsch, 1866	Bogotá *
Genus Metabolocerus Bates, 1873	
<i>Metabolocerus fryi</i> Bates, 1873	Colombia *
<i>Metabolocerus pilosus</i> Bates, 1973	Colombia *
Genus Pheres Champion, 1886	
Genus Uleda Laporte de Castelnau, 1840	
<i>Uleda tarsalis</i> (Perroud & Mulsant, 1856)	Colombia
Genus Uloma Dejean, 1821	
<i>Uloma columbiana</i> Gebien, 1928	Colombia *
<i>Uloma epistomatica</i> Gebien, 1928	Colombia *
<i>Uloma gonocephala</i> Gebien, 1928	Colombia *
<i>Uloma retusa ephippigera</i> (Guérin-Méneville, 1831)	Colombia *
<i>Uloma sabanillae</i> Gebien, 1928	Atlántico *

However, records from Cundinamarca, especially those from 'Bogotá', need to be examined carefully as they might refer to the commercial/trade origin of the material rather than to actual collecting localities (see Paynter 1997). Based on specimens in national collections, other Colombian insect species (e.g., assassin bugs in the family Reduviidae, see Forero 2006) recorded in the literature from 'Bogotá' have been collected from localities in the departments of Antioquia, Chocó, Huila, Meta, Tolima, Santander, and Valle del Cauca, at lower elevations, making those records from Bogotá very doubtful and likely erroneous.

The vast majority of species have been described or recorded from specimens housed in international collections, whereas most tenebrionids housed in national collections are only identified to family, with at most only a few specimens identified to genus and species (O.A.O. pers. obs. at Museo de Entomología de la Universidad del Valle; Jhon Cesar Neita about the Entomology Collection at the Instituto Alexander von Humboldt, pers. comm.; Dimitri Forero, Entomological Collection at Universidad Javeriana, pers. comm.; Francisco Serna, Museo Entomológico Universidad Nacional, Agronomía, pers. comm.; Juliana Cardona about collections visited during the Gira de Especialistas in 2017 [<https://biodiversidad.co/comunidad/proyectos/nacionales/colombiabio/gira-especialistas/>]). At this time, the best resource for reference specimens that can be used for genus- and species-level identifications is the Colección Taxonómica Nacional de Insectos Luis María Murillo at the Centro de Investigación Tibaitatá, AGROSAVIA (Vergara-N *et al.* 2021).

The nonexistence of specimens correctly identified at the species level in national collections can be attributed to both, the absence of national specialists and the lack of access to material from national collections to international specialists, either in the form of visits or the exchange of specimens. There are several issues surrounding these situations, but in general, it boils down to (1) the lack of funding opportunities to address biodiversity studies for national researchers, (2) the lack of communication and connectedness with the international community of specialists, and (3) national policies that limit our possibilities to collaborate with and learn from foreign experts.

For tenebrionids specifically, there is an entire community of international researchers willing to collaborate with local researchers with access to the local fauna. There is

also interest from national budding taxonomists to contribute to the knowledge of Colombian biodiversity. However, the lack of employment and funding opportunities deviates the attention of potential national specialists to better-funded topics or other career options. The Coleoptera de Colombia group (<https://sites.google.com/view/coleopcol/>) aims to establish a collaborative environment between national researchers, with the support of foreign specialists. This work is an example of what can be accomplished when we work together.

Conclusions and Perspectives on the Study of Tenebrionids in Colombia

The work we present here is only the first step towards understanding the biodiversity of darkling beetles in Colombia. Now we know that (1) the diversity of Colombian tenebrionids is understudied in comparison with other countries in the region, (2) we need to narrow down the distributions of the 190 species currently recorded for the country without specific localities, especially for those 185 species that are only known to occur in Colombia, 110 of which have no known localities within the country, and (3) we need to identify and report on specimens deposited in national collections.

Given our current state of knowledge and the need to further understand Colombian biodiversity, we recommend a clear, long-recognized goal (Escobar and Krieger 1999, Amat and Escobar 2000, Girón *et al.* 2021), to help bridge our knowledge gaps: *make visible the identification status of different taxonomic groups in national collections*. This information will allow us to establish work priorities and recognize where to focus research efforts. The best way to document and make visible information from national collections is through digitization efforts. Nowadays, there are several accessible options for managing data from biological collections (e.g., Gries *et al.* 2014) that can interact easily with the existing national infrastructure through SiB Colombia (<https://biodiversidad.co/>). The best existing example of what a national community can accomplish in terms of mobilizing data from biological collections is the Portal de Biodiversidad de Guatemala (<https://biodiversidad.gt/portal/>), where biological collections across the country have come together to digitize and make visible their national collections. These efforts must be supported and facilitated by national institutions. The absence of institutional support will only contribute to taking much longer to fill these knowledge gaps (Hutchings and Hutch-

ings 2017) at a time when climate change and change in land use threaten biodiversity in Colombia and worldwide.

AUTHORS' CONTRIBUTIONS

OAO: investigation, data curation, writing - original draft; PLB: investigation, data curation, writing - review and editing. ADS: writing. MAJ: investigation, data curation; JCG: conceptualization, investigation, data curation, writing - review, and editing.

ACKNOWLEDGMENTS

We dedicate this work to the memory of professor and colleague Germán Amat García, who encouraged curiosity and excitement about Colombian beetles and who promoted the idea to start building and updating species lists at the national level. We are grateful to the Coleoptera de Colombia group for their initiative and support to document and improve our knowledge about the diversity of beetles of Colombia. SiB Colombia guided and facilitated the publication of the checklist of tenebrionids from Colombia as a dataset through GBIF. The libraries of Texas Tech University and Universidad de Caldas, as well as the Biodiversity Heritage Library, facilitated access to databases and published literature.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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