

# Chapter 12

## The Beetles (Coleoptera) of Príncipe, São Tomé and Annobón



Gabriel Nève, Patrick Bonneau, Alain Coache, Artur Serrano, and Gérard Filippi

**Abstract** The known beetle fauna of Príncipe, São Tomé, and Annobón amounts to 403 species and subspecies, of which 190 (47%) are endemic. The most diverse families of beetles are the Cerambycidae (61 species), the Tenebrionidae (57 species), the Carabidae (45 species), the Scarabaeidae (34 species), and the Coccinellidae (31 species). Most records come from São Tomé, with 297 species. In comparison, Príncipe, with 151 recorded species, and especially Annobón, with 16 recorded species, still require extensive faunistic investigations. The families Staphylinidae and Curculionidae probably hold numerous undescribed species and should be the focus of future research. Most of the endemic species live in forests. Therefore, the continued conservation of large forest areas on the islands is key to the long-term survival of their unique beetle fauna. As elsewhere, the beetle fauna will likely suffer from the effects of climatic change, and high-altitude species are likely to be the most severely affected.

**Keywords** Biodiversity · Checklist · Coleoptera · Conservation · Endemism · Gulf of Guinea

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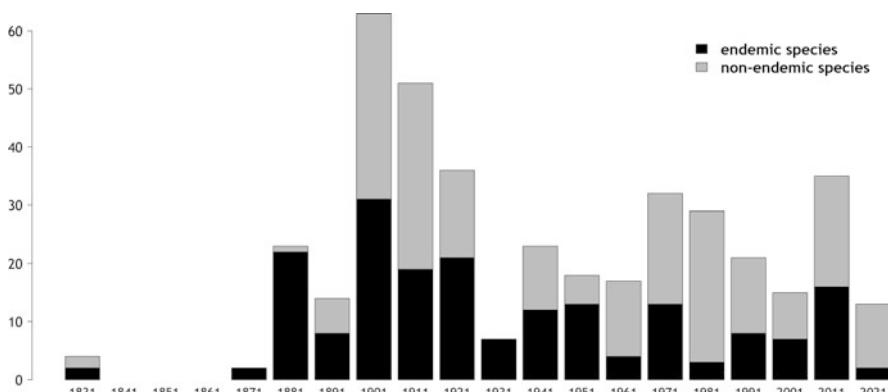
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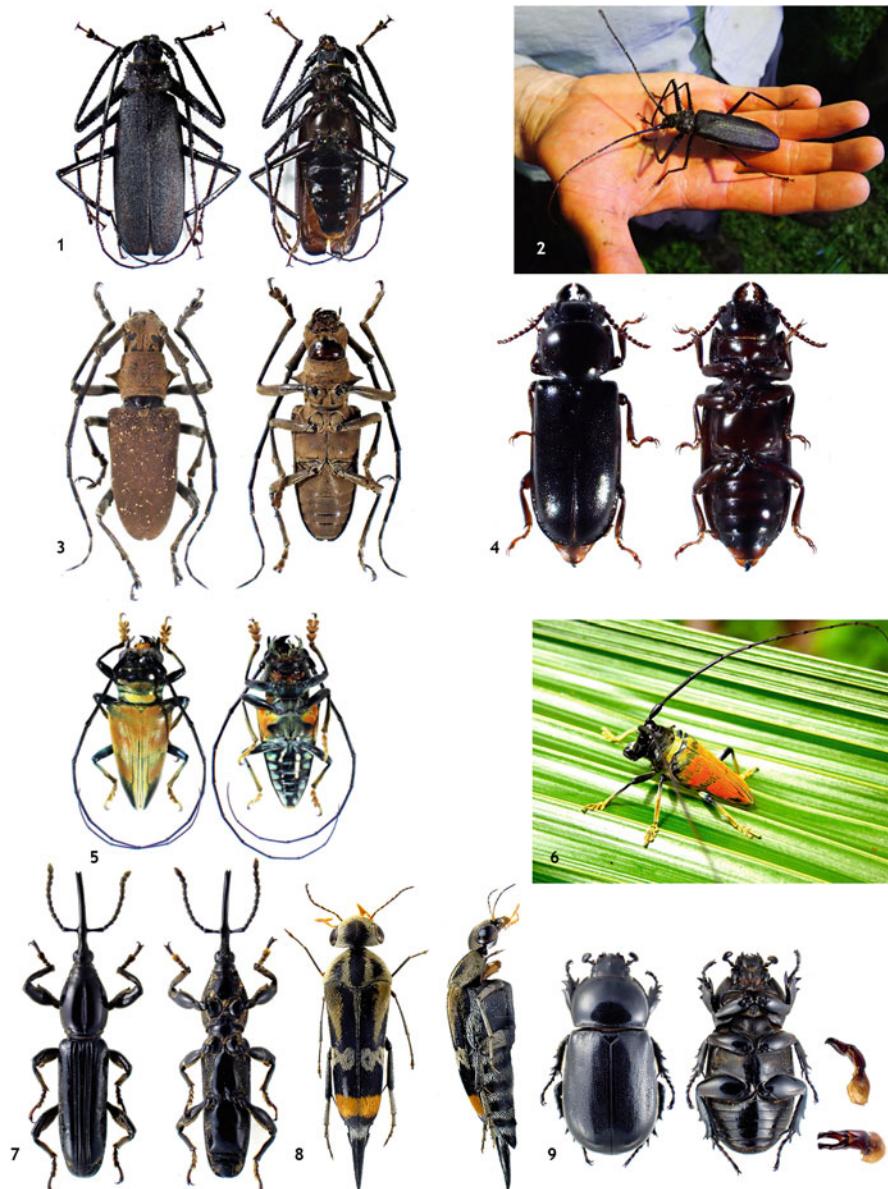
## Introduction

The islands of Príncipe, São Tomé, and Annobón, in the equatorial Atlantic ocean, have a volcanic origin and have never been connected to the African continent (Fitton and Dunlop 1985). Their isolation led to the evolution of numerous endemic species, but also to a fauna that is less diverse than that of continental Africa, lacking many continental species that were unable to cross the stretch of Atlantic ocean isolating the islands. Before human colonization, which started in the late fifteenth century, the islands were almost entirely covered by forests (Jones et al. 1991).

Entomological research in the islands started in the beginning of the nineteenth century, with the first descriptions of endemic species by Hope (1833) and Klug (1835). The fauna was subsequently investigated by entomologists from various European countries who later published their findings in journals from their respective countries, making it difficult to produce a synthesis. The main additions to the knowledge of the local beetle fauna came in waves (Fig. 12.1). Karsch (1881) mentioned 53 species, including 21 he described as new to science. The Italian explorer and zoologist Leonardo Fea (1852–1903) collected extensively on São Tomé and Príncipe in 1900–1901, and 12 beetle species from the archipelago still bear his name, such as *Pseudammus feae* (Fig. 12.2.3). The French entomologist Léon Fairmaire (1820–1906) published revisions of the fauna of São Tomé (1891, 1892, 1902). The Portuguese botanist Júlio Augusto Henriques (1838–1928) published an important geographical description of São Tomé (1917) that included a list of all species then known to the island, unfortunately mentioning several species based on dubious identification or with erroneous names. Later publications were usually focused on a single family, such as Tenebrionidae (Gebien 1921, 1942) and Coccinellidae (Fürsch 1974). Castel-Branco (1963) studied the insects feeding



**Fig. 12.1** Number of named beetle species added per decade to the fauna of Príncipe, São Tomé, and Annobón



**Fig. 12.2** Photos of charismatic beetle fauna from the oceanic islands of the Gulf of Guinea. Cerambycidae: (1–2) *Macrotoma hayesii*; (3) *Pseudammus feae*; (4) *Acutandra delahayi*; (5) *Sternotomis ducalis*; (6) *Sternotomis rufozonata*. Brentidae: (7) *Cerobates sennae*. Mordellidae: (8) *Ophthalmoglipa horaki*. Dynastinae: (9) *Rhizoplatys cedrici* (insert: genitalia). Photo credits: (1, 3–5, 7–9) Patrick Bonneau, (2) Gabriel Nève, (6) Artur Serrano

on *Theobroma cacao*, and listed a series of predators, including several labybirds (Coccinellidae).

Several expeditions to the islands were completed in the 1900s. Sousa da Camara visited São Tomé in 1920 (Seabra 1922); Fernando Frade (*Missão Científica a São Tomé*) visited São Tomé in November and December 1954 (Gomes Alves 1956); Pierre Viette, from the *Muséum National d'Histoire Naturelle* (Paris) visited the three islands in June and July 1956 (Viette 1956); and Guy Schmitz from the Royal Museum of Central Africa (Tervuren, Belgium) visited São Tomé in October and November 1973 (Basilewsky 1975). A zoological mission by entomologists and ornithologists from the *Faculdade de Ciências* and *Museu Nacional de História Natural* (Lisboa) took place in São Tomé and Príncipe in June and July 1984 (Mendes et al. 1988; Rocha Pité 1993; Serrano 1995; Zuzarte and Serrano 1996a). Charles E. Griswold and Joel M. Ledford from the California Academy of Sciences visited São Tomé and Príncipe in 2001 (Kavanaugh 2005), Clive R. Turner and Tōnis Tasane from the African Natural History Research Trust (Herefordshire, England) and the Natural History Museum (London) visited São Tomé in 2016 (Darby 2020). Several other entomologists visited the islands since 1980, and published descriptions of their findings, notably Jean-Guy Canu from Príncipe between 1989 and 1991 (Allard 1990; Antoine 1992) and Norbert Delahaye between 2013 and 2016 (Delahaye and Camiade 2016). The French NGO Microland also visited São Tomé in February and October 2019, the latter expedition including a week on Príncipe, and whose results on Coleoptera are published here for the first time.

The local *Brigada de Fomento Agro-Pecuário*, and later the *Centro de Investigação Agronómica e Tecnológica de São Tomé e Príncipe* (CIAT-STP) commissioned numerous entomological studies, mostly related to agriculture (Fürsch 1974). CIAT-STP holds a collection of insects mainly obtained between the 1950s and 1975, when the former Portuguese colony gained independence. Otherwise, specimens from São Tomé and Príncipe are now deposited in several European and American institutions, as well as in numerous private collections.

The aim of this chapter is to compile a list of all Coleoptera species known from the islands of Príncipe, São Tomé, and Annobón. For this, we relied on indexes of entomological publications, and, for Cerambycidae, on the TITAN database (Tavakilian and Chevillotte 2020). Drawing from published material and our experience on the islands, we analyze this list highlighting the distinctiveness of the beetle fauna, possible threats, and main gaps in knowledge. Coleoptera families followed recent publications (Bouchard et al. 2011; López-López and Vogler 2017), and species nomenclature followed recent revisions (Appendix). Nomenclature for Carabidae follows Lorenz (2005).

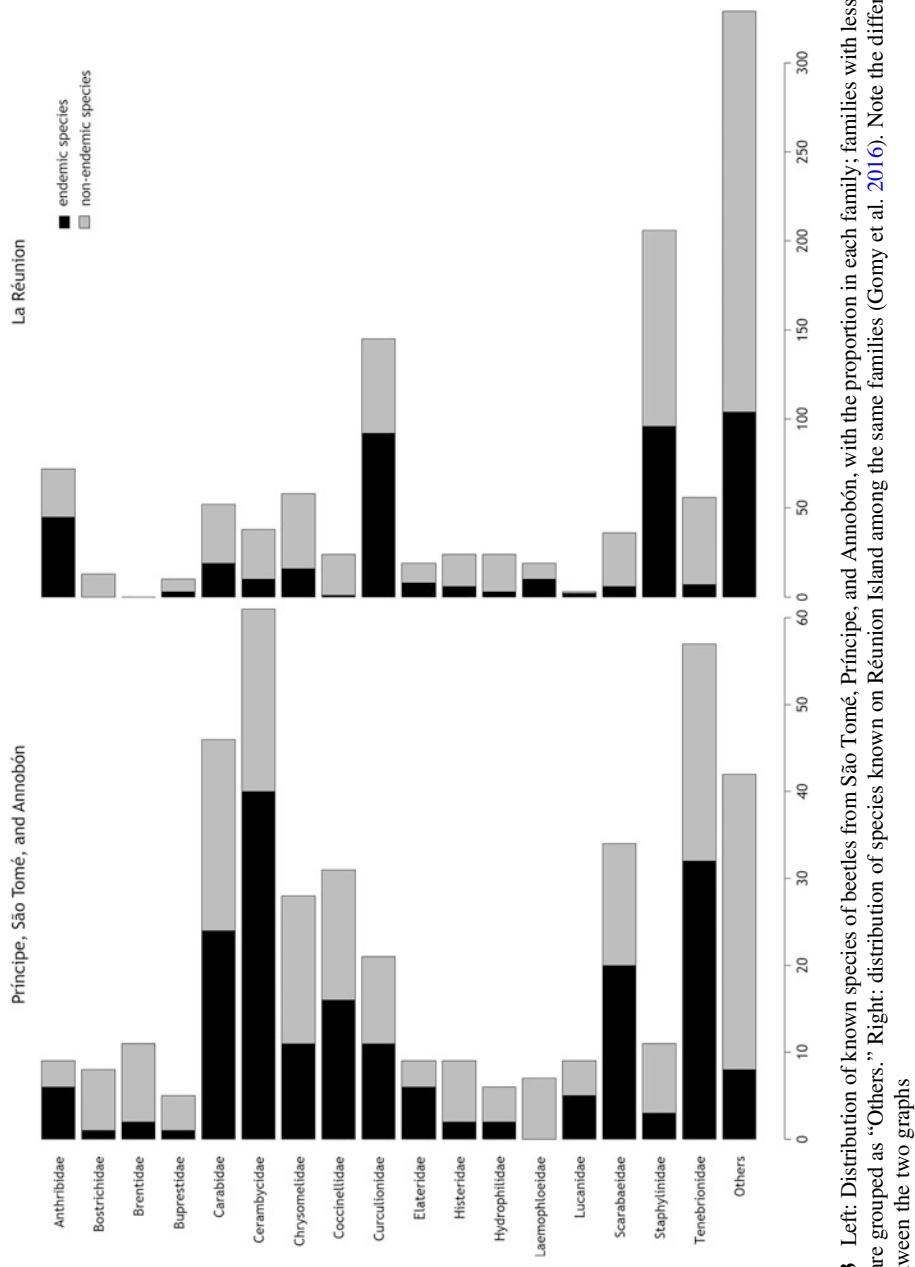
## Diversity of the Beetle Fauna

The fauna that we find today in the archipelago is the result of successive colonization and extinction events throughout geological time. Colonization can be active, in which flight has a dominant role, or passive, such as on floating rafts, or carried by other animals or by air currents. Extinction can be derived from natural physical mechanisms, such as catastrophic volcanism, or by ecological processes, such as predation and competition between species, and in more recent history by anthropogenic actions, such as the destruction of habitats. In the last 500 years, since the Portuguese first arrived on these islands, we cannot neglect the accidental introduction of exotic species through human activity, namely on the ballast of boats, through the introduction of plant species of agricultural interest, or on imported goods.

The beetle fauna of Príncipe, São Tomé, and Annobón currently includes 403 species and subspecies (Appendix), which is certainly an underestimate of the richness of the local fauna. A total of 297 species are known from São Tomé, while only half of this number (151) has been listed for Príncipe, which most likely remains understudied. For example, 20 species of Curculionidae are known from São Tomé, but only 1 from Príncipe and 1 from Annobón. Only 16 Coleoptera species have been reported for the latter island, which is clearly in need of further investigations.

The most diverse families of beetles on Príncipe, São Tomé, and Annobón are the Cerambycidae (61 species), the Tenebrionidae (57 species), the Carabidae (45 species), the Scarabaeidae (34 species), and the Coccinellidae (31 species) (Fig. 12.3). The Cerambycidae, Carabidae, and Scarabaeidae have been actively studied by numerous collectors over several decades and there are recent syntheses by Serrano (1995, 2008, 2010), and Zuzarte and Serrano (1996b), while the Tenebrionidae have been the subject of an in-depth study by Gebien (1921, 1942), and the Coccinellidae by Fürsch (1974). The high number of Coccinellidae, 31 species, 8% of the known beetles on the islands, is probably the result of two factors: (1) the family has been the subject of a systematic study on the archipelago, and (2) their flight ability facilitates colonization from continental Africa, compared to other beetle families (half of the species known on the islands also occur on the African mainland).

The Staphylinidae has only 11 species recorded on the islands, accounting to less than 3% of their known beetle fauna, but are likely more diverse than the current estimates. For instance, Réunion, a partly forested equatorial island in the Indian ocean, has 206 species listed, which amounts to one-fifth of the local beetle fauna, about half of which are endemic (Gomy et al. 2016; Fig. 12.3). Two species of Dytiscidae are known from São Tomé, which is most certainly an underestimate since this family has not been the subject of a specialized study. Again, for comparison, this group is represented by 19 species on Réunion Island. Since Gebien (1921, 1942) listed 46 species of Tenebrionidae, only seven were added by Ardoim (1958, 1962) and Robiche (2000), plus two linked with imported goods (Luna de Carvalho 1984) and one newly found on São Tomé in 2019 (Laurent Soldati, pers. comm.).



**Fig. 12.3** Left: Distribution of known species of beetles from São Tomé, Príncipe, and Annobón, with the proportion in each family; families with less than six species are grouped as “Others.” Right: distribution of species known on Réunion Island among the same families (Gomy et al. 2016). Note the differences in scale between the two graphs

## Distinctiveness of the Beetle Fauna

Out of 403 species recorded, 190 (47%) are known only from these islands and are therefore considered endemic (Table 12.1). The Cerambycidae has 40 endemic species, the highest number of all beetle families, followed by the Tenebrionidae (32) and the Carabidae (24).

Lycidae (2 species) is the only family that is fully composed of endemic species on the islands. The families that have the highest numbers of endemic species, Tenebrionidae and Cerambycidae, occur mainly in forests (Barclay 2006; Rejzek 2006), which remain abundant on the islands.

The endemicity of several species has been recognized in their names; 16 species bear the adjective *thomensis*, *saotomense* or one of their derivatives, 7 bear the adjective *principis*, *principensis* or *principiensis*, and 3 bear the adjective *annobonae*. The genus *Saotomia* was given to an endemic species of weevil (Curculionidae), and the adjective *amadori* was recently given to a ground beetle (Carabidae) to honor Rei Amador, a hero in São Tomé history.

## Knowledge Gaps

The assignment of species to a particular island is sometimes problematic. For example, Karsch (1882) described *Apogonia insulana* based on a specimen collected by Erdmann in Príncipe. Kolbe (1899) doubted the locality and suggested it came from the coast of Guinea. This uncertainty could only be solved when the species was rediscovered on Príncipe in 2019 (Patrick Bonneau and Marc Lacroix, unpublished; Fig. 12.4.1). In addition, some species mentioned in old references were likely based on misidentifications (Table 12.2). The compilation of all Coleoptera species listed for the islands by various authors over two centuries also led to numerous synonymies, some of which remain unresolved, as no systematic revision has been done. This is the case of *Grammopyga marginicollis*, described as endemic for São Tomé, but which may be a synonym of *G. cincticollis*, mentioned for Príncipe and widely distributed in Africa. Biphilidae, Limnichidae, and Ptilodactylidae are known to occur on the islands but the material has not yet been identified at the species level (Appendix). Other poorly known families are also likely present, such as Scydmaenidae.

In total, 37 families of beetles are known from Príncipe, São Tomé, and Annobón whereas 70 are known from Réunion Island, which is larger ( $2511 \text{ km}^2$ ) but also far more distant from continents (Gomy et al. 2016). The known beetle fauna of Réunion Island holds 1128 species, of which 428 (38%) are endemic (Gomy et al. 2016). Thus, there seems to be a gap in the knowledge of the Gulf of Guinea beetle families that are studied by few entomologists. Focused research by specialist entomologists, training local scientists, and conducting comprehensive surveys with multiple trapping methods will be necessary to close this gap. For instance,

**Table 12.1** Number of known named Coleoptera species in each family for the islands of Príncipe, São Tomé, and Annobón (All: All species; END: Endemics)

| Family          | Príncipe   |           | São Tomé   |            | Annobón   |          | Total      |            |
|-----------------|------------|-----------|------------|------------|-----------|----------|------------|------------|
|                 | All        | END       | ALL        | END        | All       | END      | All        | END        |
| Anthribidae     | 7          | 5         | 7          | 5          | 0         | 0        | 9          | 6          |
| Biphyllidae     | 0          | 0         | ?          | ?          | 0         | 0        | ?          | ?          |
| Bostrichidae    | 4          | 1         | 5          | 0          | 2         | 0        | 8          | 1          |
| Brentidae       | 10         | 1         | 7          | 2          | 0         | 0        | 11         | 2          |
| Buprestidae     | 2          | 1         | 4          | 0          | 0         | 0        | 5          | 1          |
| Carabidae       | 19         | 10        | 32         | 14         | 0         | 0        | 45         | 24         |
| Cerambycidae    | 18         | 9         | 45         | 27         | 7         | 5        | 61         | 40         |
| Chrysomelidae   | 19         | 8         | 16         | 7          | 0         | 0        | 28         | 11         |
| Cicindelidae    | 2          | 0         | 2          | 0          | 0         | 0        | 3          | 0          |
| Ciidae          | 0          | 0         | 1          | 0          | 0         | 0        | 1          | 0          |
| Cleridae        | 0          | 0         | 1          | 0          | 0         | 0        | 1          | 0          |
| Coccinellidae   | 6          | 2         | 27         | 14         | 0         | 0        | 31         | 16         |
| Curculionidae   | 1          | 0         | 20         | 10         | 1         | 1        | 21         | 11         |
| Dryophthoridae  | 0          | 0         | 4          | 0          | 0         | 0        | 4          | 0          |
| Dytiscidae      | 2          | 0         | 1          | 0          | 0         | 0        | 2          | 0          |
| Elateridae      | 2          | 1         | 8          | 6          | 0         | 0        | 9          | 6          |
| Endomychidae    | 0          | 0         | 1          | 0          | 0         | 0        | 1          | 0          |
| Gyrinidae       | 0          | 0         | 1          | 0          | 0         | 0        | 1          | 0          |
| Histeridae      | 6          | 2         | 8          | 1          | 0         | 0        | 9          | 2          |
| Hybosoridae     | 0          | 0         | 1          | 0          | 0         | 0        | 1          | 0          |
| Hydrophilidae   | 3          | 1         | 3          | 1          | 1         | 0        | 6          | 2          |
| Laemophloeidae  | 0          | 0         | 7          | 0          | 0         | 0        | 7          | 0          |
| Limnichidae     | 0          | 0         | ?          | ?          | 0         | 0        | ?          | ?          |
| Lucanidae       | 5          | 2         | 4          | 2          | 1         | 1        | 9          | 5          |
| Lycidae         | 1          | 1         | 1          | 1          | 0         | 0        | 2          | 2          |
| Lymexylidae     | 0          | 0         | 1          | 0          | 0         | 0        | 1          | 0          |
| Mordellidae     | 1          | 1         | 2          | 1          | 0         | 0        | 3          | 2          |
| Mycteridae      | 0          | 0         | 1          | 0          | 0         | 0        | 1          | 0          |
| Nitidulidae     | 0          | 0         | 3          | 0          | 0         | 0        | 3          | 0          |
| Oedemeridae     | 0          | 0         | 3          | 2          | 0         | 0        | 3          | 2          |
| Passalidae      | 1          | 1         | 2          | 1          | 0         | 0        | 2          | 1          |
| Ptiliidae       | 0          | 0         | 2          | 0          | 0         | 0        | 2          | 0          |
| Ptilodactylidae | 0          | 0         | ?          | ?          | 0         | 0        | ?          | ?          |
| Ptinidae        | 0          | 0         | 2          | 0          | 0         | 0        | 2          | 0          |
| Scarabaeidae    | 16         | 8         | 20         | 12         | 0         | 0        | 34         | 20         |
| Silvanidae      | 0          | 0         | 3          | 0          | 0         | 0        | 3          | 0          |
| Staphylinidae   | 0          | 0         | 11         | 3          | 0         | 0        | 11         | 3          |
| Tenebrionidae   | 24         | 11        | 37         | 21         | 4         | 2        | 57         | 32         |
| Trogossitidae   | 0          | 0         | 3          | 1          | 0         | 0        | 3          | 1          |
| Zopheridae      | 2          | 0         | 1          | 0          | 0         | 0        | 3          | 0          |
| <b>TOTAL</b>    | <b>151</b> | <b>65</b> | <b>297</b> | <b>131</b> | <b>16</b> | <b>9</b> | <b>403</b> | <b>190</b> |

Doubtful species and genera with unnamed species (Chrysomelidae: *Longitarsus* sp. and *Manioba* sp. and Curculionidae: *Sternuchopsis* sp.) are not listed. Families with unnamed species are indicated by ‘?’

**Table 12.2** List of species mentioned in old references that were most likely mistakenly reported for the islands

| Family        | Subfamily       | Species   | Synonyms                                       | References                                      | Comment  | Revision reference    |
|---------------|-----------------|---|--|---|--|-----------------------|
| Carabidae     | Brachininae     | <i>Pheropsophus angolensis</i> (Erichson, 1843)   |  | Henriques, 1917                                 | Probable confusion with <i>Pheropsophus amadori</i>                    | Present revision      |
| Carabidae     | Harpalinae      | <i>Selenophorus atratus</i> Klug, 1862  | <i>Progonochaeetus caffer</i> (Bohemian, 1848) | Henriques 1917                                  | Unconfirmed record   | Present revision      |
| Carabidae     | Lebiinae        | <i>Pentagonica conradii</i> Kolbe, 1898   |  | Straneo, 1945                                   | Straneo's specimen could not be assigned unambiguously to this species | Serrano, 1995         |
| Cerambycidae  | Cerambycinae    | <i>Philematium festivum</i> (Fabricius, 1775)   |  | Henriques, 1917                                 | Probable confusion with <i>Philematium greffi</i>                      | Present revision      |
| Cerambycidae  | Lamiinae        | <i>Ceroplesis bicincta</i> (Fabricius, 1798)  |  | Henriques, 1917                                 | Unconfirmed record   | Present revision      |
| Cerambycidae  | Parandrinae     | <i>Acutandra gabonica</i> (Thompson, 1858)  | <i>Parandra gabonica</i> Thompson, 1857        | Hintz, 1919; Villiers, 1957                     | Probable confusion with other <i>Acutandra</i> species                 | Bouyer et al. (2012)  |
| Cicindelidae  | Cicindelinae    | <i>Habrodera nitula</i> (Dejean, 1825)  |  | Henriques, 1917                                 | Unconfirmed record   | Present revision      |
| Coccinellidae | Coccinellinae   | <i>Cheilomenes lunata</i> (Fabricius, 1775)   |  | Henriques 1917; Seabra 1922; Castel-Branco 1963 | Probable confusion with <i>C. sulphurea</i>                            | Fürsch, 1974          |
| Dytiscidae    | Dytiscinae      | <i>Hydaticus capricula</i> Anlar.   |  | Henriques, 1917                                 | No other reference to this name found. <i>Nomen nudum.</i>             | Nilsson & Hájek, 2018 |
| Lymexylidae   | Attractocerinae | <i>Attractocerus brasiliensis</i> Lepelletier de Saint Fargeau & Audinet-Serville, 1825 |  | Seabra, 1922                                    | Probable confusion with <i>Attractocerus brevicornis</i>               | Present revision      |
| Scarabaeidae  | Dynastinae      | <i>Oryctes obliquus</i> Karsch  |  | Henriques, 1917                                 | No other reference to this name found. <i>Nomen nudum.</i>             | Endrödi, 1985         |

(continued)

Table 12.2 (continued)

| Family        | Subfamily     | Species  | Synonyms                    | References      | Comment                                       | Revision reference |
|---------------|---------------|--|-----------------------------|-----------------|---|--------------------|
| Scarabaeidae  | Dynastinae    | Tennnochynchus coronatus diana (Palisot de Beauvois, 1805) | <i>Tennorrhynchus diana</i> | Henriques, 1917 | Probable confusion with <i>T. tridentatus</i> | Present revision   |
| Tenebrionidae | Tenebrioninae | Gonocephalum aequale (Erichson, 1843)                      | <i>Opatrum aequale</i>      | Henriques, 1917 | Dubious record                                | Iwan et al., 2010  |
| Tenebrionidae | Tenebrioninae | Gonocephalum granicolle Gebien, 1920                       |                             | Gebien, 1942    | Dubious record                                | Iwan et al., 2010  |

we are currently working on the description of new species of Curculionidae from São Tomé, and a revision of this family on the islands will probably yield several new species. The Hydrophilidae, quite common in forest pools probably include more than the six currently recognized species, and a revision of these would likely reveal local endemism, as has been shown recently in the Neotropics (Smith and Short 2020).

## Soil Coleoptera

The soil fauna includes both endogean and epigean Coleoptera. The former spend all or most of their life cycle within the soil, are not very conspicuous and in most cases are poorly or almost entirely unknown due to their small size (mainly <2 mm) and secretive way of life. Epigean beetles live on the ground, and are active mainly by night or at twilight, while during the day they rest or hide in the litter, under rocks and logs, sometimes burying themselves in the soil. The endogean beetles of Príncipe, São Tomé, and Annobón, are completely unknown to science, hence the absence of records of Scydmaenidae and Pselaphiinae. We do not know of any research directed to their collection and study on the islands.

Most epigean beetles are predators such as Cicindelidae (e.g., *Myriochila melancholica*), some ground Carabidae (e.g., *Notiobia sanctithomae* and *Scarites fatuus*) and Staphylinidae. Many epigean beetles are saprophagous, such as Tenebrionidae, or leaf litter dwellers (e.g., Curculionidae: *Titilayo* spp.). On the other hand, the dung beetle fauna of the islands includes only four Onthophagini species despite being extremely biodiverse in the continent. Other groups that have not yet been reported from the islands include carrion (Silphidae), hide (Dermestidae), and skin (Trogidae) beetles, as well as some families that have representatives that typically occur on the ground (e.g., Cucujidae, Cryptophagidae, Latridiidae, Mycetophagidae, etc.). Considering that this fauna is closely associated with substrate, vegetation cover, and abiotic factors, such as humidity and temperature, we foresee that this group contains an enormous component of undocumented diversity in these islands.

## Epiphytic Coleoptera

The aerial parts of plants constitute an enormous spatial matrix, varying through time in their different components (stems, leaves, inflorescences, and fruits). A high percentage of the known beetles, both larval and adult, are phytophagous in the broad sense of the term. Since São Tomé and Príncipe maintain almost 30% of the original forest cover (Jones et al. 1991), it is not surprising that they host a rich and diverse fauna of Coleoptera associated with the vegetation, including the

subterranean and the aerial parts of plants. Most Chrysomelidae and Curculionidae species are phytophagous, sometimes having numerous species within a genus, probably linked to different host species, as in the case of the six species of *Aspidomorpha* (Curculionidae) recently recorded on Príncipe (Coache and Rainon 2020). Nitidulidae (*Carpophilus* spp.) and Bruchinae species are found in abundance on flowers and mainly on fruits. Plant saps attract a multiplicity of species belonging to different families, such as adults of Lucanidae (e.g., *Prosopocoilus downesi*, Figs. 12.4.5–6), Cetoniinae (e.g., *Chlorocala viridicyanea*, *Pachnoda* spp.) and Cerambycidae (e.g., *Macrotoma hayesii*, *Sternotomis* spp.). Finally, some species are predators of other insects dwelling on vegetation, of which the Coccinellidae are the best known and richest family in São Tomé and Príncipe.

## Coleoptera Associated with Decaying Wood

Woodborer Coleoptera larvae and adults that live within the wood (xylophages) or under bark (subcortical) can be predators, saprophagous or even phytophagous species that seek refuge there. These are surely one of the most diverse and abundant ecological Coleoptera groups in São Tomé and Príncipe, as almost all Coleoptera families present species in these biotopes. Woodborer larvae include numerous species of Anthribidae, Bostrichidae, Brentidae, Buprestidae, Cerambycidae, Curculionidae, Elateridae, Lucanidae, Scarabaeidae, Tenebrionidae, among others. Adult beetles found in this habitat encompass most of the endemic Carabidae (e.g., *Metagonum insulanum*, *Pseudobatenus straneoi*, *Abacetus* spp., *Camptogenys trisetosa*), as well as Histeridae, Laemophloeidae (e.g., *Cryptolestes* spp., *Placonotus* spp.) and Staphylinidae (e.g., *Afrosorius* spp.). It is sometimes possible to find numerous species of most families mentioned above side-by-side in the same tree trunk.

## Freshwater Coleoptera

São Tomé and Príncipe exhibit a wide range of freshwater biotopes, including streams, rivulets, lagoons, pools, and phytotelmata, which are habitat to several families of beetles (e.g., Gyrinidae, Haliplidae, Hygrotidae, Dytiscidae, Hydrophilidae and Hydraenidae). So far, only a few species of Gyrinidae, Dytiscidae, and Hydrophilidae have been recorded from Príncipe, São Tomé, and Annobón, but considering the abundance of freshwater biotopes on the islands, many more likely remain to be discovered.

## Coleoptera of Agricultural Importance

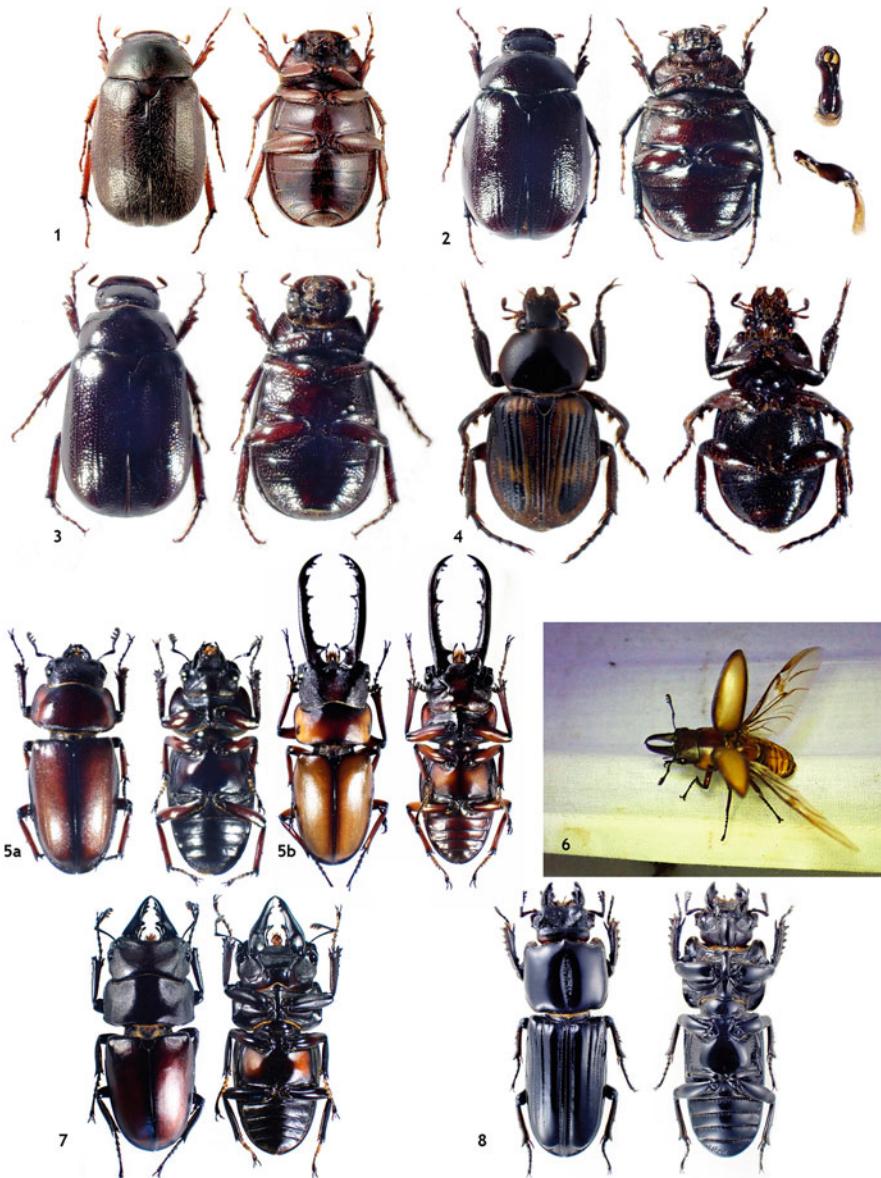
A few beetle species are known to be of agricultural importance, either as pests of cultivated species, or as predators of pests. *Lamprocopa occidentalis* (Chrysomelidae), which we documented in 2019 on both São Tomé and Príncipe, is known as a serious pest on several cultivated Cucurbitaceae (Adja et al. 2014). Some species were deliberately introduced for the control of aphids and other insects that are detrimental to agriculture. Among these, the Coccinellidae *Rodolia cardinalis* was introduced by Castel-Branco (1963) specifically to control the aphid *Toxoptera aurantii* (Boyer de Fonscolombe, 1841), which feeds on *Theobroma cacao*, and seems now to have been extirpated. Other introduced pest predators became established, such as *Cryptognatha nodiceps*, which feeds on the Cottony Cushion Scale *Icerya purchasi* Makell, 1878 (Hemiptera) (Fürsch 1974).

Remarkably, the endemic ladybird species *Chilocorus pilosus*, *Nephus derroni*, and *N. theobromae* were also found on cultivated plants, notably *Coffea arabica*, *Theobroma cacao* and *Cocos nucifera* (Fürsch 1974). This must be the result of local adaptations of either the ladybird species or of their prey, since the host plants are introduced to cultivated plants. The natural habitat and feeding habits of these species are not known.

## Some Charismatic Species

The Príncipe endemic *Macrotoma hayesii* (Figs. 12.2.1–2) is the largest Cerambycidae species in Africa (up to 12 cm), occurring in forests, where *Pentaclethra macrophylla* has been described as its host plant (Tordo 1956). *Macrotoma hayesi* is always rare, and the size of its imago, the adult life stage of beetles, suggests a life cycle lasting several years. Its conservation requires maintaining old growth forests with decaying trees in the Príncipe Natural Park, including Azeitona. Another Cerambycidae, *Ceratocentrus oremani*, reported in 1998 (Delahaye and Camiade 2016), is much smaller (3.2 to 5.5 cm) and has been found in several forest areas on São Tomé Island.

The Lucanidae fauna of São Tomé and Príncipe is well known and includes nine species and subspecies. *Prosopocoilus antilopus* has a distinct endemic subspecies on each oceanic island: *P. antilopus insulanus* on São Tomé, *P. antilopus beisa* on Príncipe and *P. antilopus amicorum* on Annobón. Eight additional subspecies have been described from Senegal to the Democratic Republic of Congo (Bartolozzi and Werner 2004). *Prosopocoilus downesii* is known from São Tomé, Príncipe and Bioko. Specimens of *Prosopocoilus*, especially males, are known to vary in size (Fig. 12.4), depending on larval growth conditions (Bartolozzi and Werner 2004), with large males sometimes having proportionally long mandibles, as in the case of “mesodonte” *P. antilopus* males (Gomes Alves 1956).



**Fig. 12.4** Photos of charismatic beetle fauna from the oceanic islands of the Gulf of Guinea (cont.). Scarabaeidae: (1) *Apogonia insulana*; (2) *Apogonia tomeensis* (insert: genitalia); (3) *Apogonia decellei*; (4) *Clastocnemis quadrimaculatus oremansi*. Lucanidae: (5) *Prosopocoilus downesi* (left: female, right: male, mesodonte form); (6) *Prosopocoilus downesi* (male, prosodonte form); (7) *Prosopocoilus antilopus insulanus*; (8) *Figulus decipiens*. Photo credits: (1–5, 7–8) Patrick Bonneau, (6) Gabriel Nève

The Cetoniinae *Uloptera canui* (Scarabaeidae) is a typical example of a remarkable species that has a restricted distribution. It was described in 1992 based on a few specimens from two areas in Príncipe at ca. 500 m altitude: Pico Mesa and Pico Dois Irmãos. Given the peculiar ecological conditions of these locations, it is unlikely that the species occurs at lower altitudes. Of the other 12 Cetoniinae species known from São Tomé and Príncipe, 8 are endemic, either at the species or sub-specific level (Table 12.1). Their poor ability to fly long distances likely explains why there are so few species on the islands. One of these, the São Tomé endemic *Stenosternus costatus*, is thought to be the result of an ancient colonization from the Neotropics, since it is the only African species of the tribe Orphnini (Orphninae, Scarabaeidae – Frolov 2013).

Carabidae are generally predators of smaller insects and other arthropods, and sometimes of mollusks. Forty-five species are known from São Tomé and Príncipe. The genus *Pseudobatenus* illustrates an interesting biogeography, since it is only represented by the São Tomé endemic *Pseudobatenus straneoi* and two other species, *P. camerunicus* (Burgeon, 1942) and *P. longicollis* Basilewsky, 1951, which are restricted to Mt. Cameroon (Basilewsky 1975). These three species are most likely altitudinal relicts of a widespread ancestral species. The Cerambycidae *Bangalaia thomensis* has a similar distribution, being found only on São Tomé and in Cameroon, although it occurs at low altitudes (Lepesme and Breuning 1956).

## Concluding Remarks

Príncipe, São Tomé, and Annobón host 403 named species and subspecies of beetles, plus an unknown number of undescribed species. Many of these species are endemic and very little is known about them. For instance, several endemics, such as *Nesopatrum josephii* (Tenebrionidae) and *Panoptes convexus* (Curculionidae), were described from Ilhéu das Rolas by Karsch (1881), and there are no records from São Tomé Island itself. Given the development of touristic infrastructure and overall environmental degradation on Ilhéu das Rolas, it is not known if these species persist. An improved knowledge of the fauna of the archipelago would require a variety of sampling techniques deployed in a wide range of habitats, including some low-cost canopy trapping (Bar-Ness et al. 2011). The main task, however, would be identification, which would require engaging specialists of the various families. The establishment of a local reference collection would be an important asset to train and raise awareness of the beetle fauna.

The long-term conservation of the beetle fauna, as for most of the endemic terrestrial fauna of Príncipe, São Tomé, and Annobón relies on effective conservation of native forests. These still cover about 30% of the islands, an unusually high percentage that is linked to the rugged topography (Norder et al. 2020). The capture

and export of beetles should also be controlled, namely of endemic species that might be particularly vulnerable, such as the endemic as *Macrotoma hayesii* (Fig. 12.2.1–2), which occurs at low densities. This and several other endemic beetle species, such *Rhizoplatys canui* and *Figulus decipiens* (Figs. 12.4.4 and 12.4.8) are emblematic and could serve as flagship species for the conservation of their habitats, especially old growth forests, where standing dead old trees are key habitat for the larvae. Visits to the forests and producing conservation educational material using beetle fauna may play an important role in educating the public about the uniqueness and exceptional biodiversity of the islands.

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### Supplementary Material

A full text format of Appendix and Table 12.2, with references to the occurrence of all species in Príncipe, São Tomé, and Annobón, together with the main synonyms is available on <https://doi.org/10.5281/zenodo.5151308>.

## Appendix

Appendix List of Coleoptera taxa known from the islands of Príncipe, São Tomé, and Annobón. “Microland” refers to species added to the known São Tomé and Príncipe fauna during our two expeditions in February and October 2019. E: endemic species, I: introduced species, R: resident on the islands, \*: species recorded during the 2019 Microland expeditions (ML)

| Higher taxonomy                            | Species                                      | P | ST | A | Reference    | ML | Synonyms                    |
|--|--|---|----|---|--------------|----|-----------------------------|
| <b>Family Anthribidae Billberg, 1820</b>   |  |   |    |   |              |    |                             |
| Subfamily Anthribinae Billberg, 1820       |  |   |    |   |              |    |                             |
| <i>Acrymus</i> Schönherr 1833              | <i>Acrymus benitensis</i> Jordan, 1903       | R |    |   | Jordan, 1920 |    |                             |
| <i>Apatenia</i> Pascoe 1859                | <i>Apateni benina</i> Jordan, 1920           | E | E  |   | Jordan, 1920 |    |                             |
| <i>Cenchromorphus</i> Fairmaire, 1893      | <i>Cenchromorphus fulvum</i> Jordan, 1903    | R |    |   | Jordan, 1920 |    | <i>Deroigraphium fulvum</i> |
| <i>Gynandrocerus</i> Lacordaire, 1866      | <i>Gynandrocerus thomensis</i> Jordan, 1911  | E | E  |   | Jordan, 1911 |    |                             |
| <i>Litocerus</i> Schönherr, 1833           | <i>Litocerus beninus</i> Jordan, 1920        | E | E  |   | Jordan, 1920 |    |                             |
| <i>Phloeobius</i> Schönherr, 1823          | <i>Phloeobius hypoxanthus</i> Jordan, 1911   | E | E  |   | Jordan, 1911 |    |                             |
| <i>Xylinada</i> Berthold, 1827             | <i>Xylinada princeps</i> Jordan, 1920        | E |    |   | Jordan, 1920 |    | <i>Xylinades princeps</i>   |
|  | <i>Xylinada thomasius</i> Jordan, 1911       | E |    |   | Jordan, 1911 |    | <i>Xylinades thomasius</i>  |
| Subfamily Choraginae Kirby, 1819           |  |   |    |   |              |    |                             |
| <i>Araecerus</i> Schönherr, 1823           | <i>Araecerus fasciculatus</i> (Degeer, 1775) | R | R  |   | Jordan, 1920 |    |                             |
| Family Biphyllidae Le Conte, 1861          | Unidentified species                         |   | R? |   | Microland    | *  |                             |
| <b>Family Bostrichidae Latreille, 1802</b> |  |   |    |   |              |    |                             |
| Subfamily Apatinae Jacquelín du Val, 1861  |  |   |    |   |              |    |                             |
| <i>Apate</i> Fabricius, 1775               | <i>Apate cephalotes</i> (Olivier, 1790)      | R | R  |   | Microland    | *  | <i>Phonapate frontalis</i>  |
|  | <i>Apate degener</i> Murray, 1867            | R |    |   | Lesne, 1906  |    |                             |
|  | <i>Apate monachus</i> Fabricius, 1775        | R | R  |   | Lesne, 1906  | *  |                             |
|  | <i>Apate terebrans</i> (Pallas, 1772)        | R |    |   | Lesne, 1906  |    |                             |
| <i>Phonapate</i> Lesne, 1895               | <i>Phonapate discreta</i> Lesne, 1906        | E |    |   | Lesne, 1906  |    |                             |

(continued)

| Higher taxonomy                                 | Species  | P | ST | A | Reference              | ML | Synonyms  |
|---|--|---|----|---|------------------------|----|---|
| <b>Subfamily Bostrichinae Latreille, 1802</b>   |  |   |    |   |                        |    |   |
| <i>Bostrychoplites</i> Lesne, 1899              | <i>Bostrychoplites cornutus</i> (Olivier, 1790)      | R |    |   | Lesne, 1906            |    |   |
| <i>Xylionulus</i> Lesne, 1901                   | <i>Xylionulus transvena</i> (Lesne, 1900)            |   | R  |   | Lesne, 1906            |    |   |
| <b>Subfamily Dinoderinae C.G. Thomson, 1863</b> |  |   |    |   |                        |    |   |
| <i>Rhyzopertha</i> Stephens, 1830               | <i>Rhyzopertha dominica</i> (Fabricius, 1792)        | R | R  |   | Luna de Carvalho, 1984 |    |   |
| <b>Family Brentidae Billberg, 1820</b>          |  |   |    |   |                        |    |   |
| <i>Adiductus</i> Senna, 1894                    | <i>Adiductus striolatus</i> (Fairmaire, 1897)        | R |    |   | Calabresi, 1920        | *  |   |
| <i>Cerobates</i> Schönherr, 1840                | <i>Cerobates semae</i> Calabresi, 1920               | R | R  |   | Calabresi, 1920        | *  |   |
|   | <i>Cerobates sulcatus sulcirostris</i> Thomson, 1858 | R | R  |   | Calabresi, 1920        |    |   |
| <i>Eumecopodus</i> Calabresi, 1920              | <i>Eumecopodus fuliginosus</i> Calabresi, 1920       | E |    |   | Calabresi, 1920        |    |   |
| <i>Gynandromyynchus</i> Lacordaire, 1866        | <i>Gynandromyynchus vittipennis</i> (Fähraeus, 1871) | R | R  |   | Calabresi, 1920        | *  | <i>Mygaleicus vittipennis</i> ,<br><i>Mygaleicus vittipennis nitida</i> |
| <i>Microtrachelizus</i> Senna, 1893             | <i>Microtrachelizus aethiopicus</i> Calabresi, 1920  | R |    |   | Calabresi, 1920        | *  |   |
| <i>Orphano'brentus</i> Damoiseau, 1962          | <i>Orphano'brentus picipes</i> (Olivier, 1791)       | R |    |   | Damoiseau, 1963        |    |   |
| <i>Pseudomygaleicus</i> de Muzon, 1960          | <i>Pseudomygaleicus georgei</i> (Karsch, 1881)       | E | E  |   | Karsch, 1881           |    | <i>Ceocephalus georgei</i>  |
| <i>Rhinopteryx</i> Lacordaire, 1865             | <i>Rhinopteryx foveipennis</i> (J.Thomson, 1858)     | R | R  |   | Calabresi 1920         | *  |   |
| <i>Spatherhinus</i> Power, 1879                 | <i>Spatherhinus longiceps</i> Kolbe, 1888            | R |    |   | Calabresi, 1920        |    |   |

|   |   |   |   |                          |                          |
|---|---|---|---|--------------------------|--------------------------|
| <i>Usambius</i> Kolbe, 1892                   | <i>Usambius advena</i> (Pascoe, 1866)                           | R | R | Calabresi, 1920          | <i>Usambius conradii</i> |
| <hr/>   |   |   |   |                          |                          |
| Family <b>Buprestidae</b> Leach, 1815         |   |   |   |                          |                          |
| Subfamily <b>Agrilinae</b> Laporte, 1835      |   |   |   |                          |                          |
| <i>Agrilus</i> Curtis, 1825                   | <i>Agrilus feae</i> Kerremans, 1906                             | E |   | Kerremans,<br>1906       |                          |
| <hr/>   |   |   |   |                          |                          |
| Subfamily <b>Buprestinae</b> Leach, 1815      |   |   |   |                          |                          |
| <i>Chrysobothris</i> Eschscholtz, 1829        | <i>Chrysobothris dorsata</i> (Fabricius, 1787)                  | R |   | Kerremans,<br>1906       |                          |
| <i>Megactenodes</i> Kerremans, 1893           | <i>Megactenodes westermanni</i> (Gory et Laporte, 1838)         | R |   | Kerremans,<br>1906       |                          |
| <hr/>   |   |   |   |                          |                          |
| Subfamily <b>Chrysochroinae</b> Laporte, 1835 |   |   |   |                          |                          |
| <i>Lampetis</i> Dejean, 1833                  | <i>Lampetis zona</i> (Thomson, 1858)                            | R |   | Kerremans,<br>1914       |                          |
| <i>Parataenia</i> Kerremans, 1892             | <i>Parataenia chrysocchlora</i> (Palistot de Beauvois, 1805)    | R |   | Kerremans,<br>1906       |                          |
| <hr/>   |   |   |   |                          |                          |
| Family <b>Carabidae</b> Latreille, 1802       |   |   |   |                          |                          |
| Subfamily <b>Brachininae</b> Bonelli, 1810    |   |   |   |                          |                          |
| <i>Brachinulus</i> Basilewsky, 1958           | <i>Brachinulus viettii</i> Basilewsky, 1958                     | E |   | Basilewsky,<br>1958      |                          |
| <i>Pheropsophus</i> Solier, 1833              | <i>Pheropsophus (Stenaptinus) amadori</i> Lassalle & Roux, 2021 | E |   | Lassalle &<br>Roux, 2021 |                          |
|   | <i>Pheropsophus (Stenaptinus) fastigianus</i> (Linnaeus, 1764)  | R |   | Basilewsky,<br>1975      |                          |
| <hr/>   |   |   |   |                          |                          |
| Subfamily <b>Harpalinae</b> Bonelli, 1810     |   |   |   |                          |                          |
| <i>Idiomela</i> Tschitscherine, 1900          | <i>Idiomela (Egaploa) crenulatus</i> (Dejean, 1829)             | R |   | Basilewsky,<br>1975      |                          |
| <i>Notiobia</i> Perty, 1830                   | <i>Notiobia (Diatyptus) sanctithomae</i> (Serrano, 1995)        | E |   | Serrano, 1995            |                          |

(continued)

| Higher taxonomy                            | Species  | P | ST | A                                   | Reference                           | ML | Synonyms                          |
|--|--|---|----|-------------------------------------|-------------------------------------|----|-----------------------------------|
| <i>Progonochaetus</i> G. Müller, 1938      | <i>Progonochaetus (Progonochaetus) planicollis</i> (Putteys, 1882)       | R |    | Basilewsky,<br><a href="#">1975</a> |                                     |    | <i>Dichaetochilus planicollis</i> |
| <i>Siopelus</i> Murray, 1859               | <i>Siopelus (Pseudosiopelus) pulchellus</i> (Dejean, 1829)               | R |    | Basilewsky,<br><a href="#">1975</a> |                                     |    | <i>Aulacoryssus pulchellus</i>    |
| <i>Stenolophus</i> Dejean, 1821            | <i>Stenolophus (Egadroma) scapularis</i> (Dejean, 1831)                  | R |    | Basilewsky,<br><a href="#">1975</a> |                                     |    | <i>Stenolophus scapulare</i>      |
| Subfamily Lebiinae Bonelli, 1810           |  |   |    |                                     |                                     |    |                                   |
| <i>Anaulacus</i> W.S. MacLeay, 1825        | <i>Anaulacus (Micron) mocqueryzi</i> (Chaudoir, 1878)                    | R | R  |                                     | Serrano, <a href="#">1995</a>       |    | <i>Micron mocqueryzi</i>          |
| <i>Calleida</i> Latreille, 1824            | <i>Calleida (Stenocallida) ruficollis</i> (Fabricius, 1801)              | R |    |                                     | Serrano, <a href="#">1995</a>       |    |                                   |
| <i>Dromius</i> Bonelli, 1810               | <i>Dromius (Klepterus) basilewskyi</i> (Serrano, <a href="#">1995</a> )  | E |    |                                     | Serrano, <a href="#">1995</a>       |    |                                   |
| <i>Pentagonica</i> Schmidt-Göbel, 1846     | <i>Pentagonica boanensis</i> Serrano, <a href="#">1995</a>               | E |    |                                     | Serrano, <a href="#">1995</a>       |    |                                   |
|  | <i>Pentagonica nigritula</i> Strangeo, <a href="#">1943</a>              | E |    |                                     | Strangeo, <a href="#">1943</a>      |    |                                   |
| <i>Perigona</i> Laporte de Castelnau, 1835 | <i>Perigona (Europogena) congoana</i> Burgeon, 1935                      | R |    |                                     | Basilewsky,<br><a href="#">1989</a> |    |                                   |
|  | <i>Perigona (Perigona) pallida</i> Laporte, 1835                         | R |    |                                     | Basilewsky,<br><a href="#">1975</a> |    |                                   |
|  | <i>Perigona (Perigona) parallela</i> Chaudoir, 1878                      | R | R  |                                     | Basilewsky,<br><a href="#">1989</a> |    |                                   |
|  | <i>Perigona (Perigona) principensis</i> Serrano, <a href="#">2008</a>    | E |    |                                     | Serrano, <a href="#">2008</a>       |    |                                   |
|  | <i>Perigona (Treichius) nigriceps</i> (Dejean, 1831)                     | R |    |                                     | Basilewsky,<br><a href="#">1975</a> |    | <i>Treichius nigriceps</i>        |
|  | <i>Perigona (Treichius) schmitzi</i> (Basilewsky, <a href="#">1989</a> ) | R |    |                                     | Basilewsky,<br><a href="#">1989</a> |    | <i>Treichius schmitzi</i>         |

|  |  |   |   |                            |  |  |
|--|--|---|---|----------------------------|--|--|
| Subfamily <b>Licininae</b> Bonelli, 1810   |  |   |   |                            |  |  |
| <i>Chlaenius</i> Bonelli, 1810             | <i>Chlaenius (Lissanchenius) assecula</i><br>Laterté-Senectere, 1851                     | R | R | Basilewsky,<br><b>1975</b> |  |  |
| <i>Melanchiton</i> Andrewes, 1940          | <i>Melanchiton laevifrons</i> Strangeo,<br>1950  | R |   | Basilewsky,<br><b>1975</b> |  | <i>Melanchiton laevifrons</i>  |
| Subfamily <b>Panagaeinae</b> Bonelli, 1810 |  |   |   |                            |  |  |
| <i>Euschizomerus</i> Chaudoir, 1850        | <i>Euschizomerus bugueii</i> Chaudoir,<br>1850   | R | R | Serrano, <b>1995</b>       |  |  |
| <i>Microcosmodes</i> Strand, 1936          | <i>Microcosmodes vicinus</i> (Murray,<br>1857)   | R |   | Basilewsky,<br><b>1975</b> |  | <i>Microcosmodes vicinus</i>   |
| Subfamily <b>Paussinae</b> Latreille, 1807 |  |   |   |                            |  |  |
| <i>Carabidomennus</i> Kolbe, 1924          | <i>Carabidomennus</i><br>( <i>Carabidomennus</i> ) <i>feae</i> (Gestro,<br><b>1902</b> ) | E |   | Gestro, <b>1902</b>        |  |  |
| <i>Sphaerostylus</i> Chaudoir, 1848        | <i>Sphaerostylus (Afrozaena) feei</i><br>(Basilewsky, <b>1949</b> )                      | E |   | Basilewsky,<br><b>1949</b> |  |  |
|  | <i>Sphaerostylus (Afrozaena)</i><br><i>insularis</i> (Basilewsky, <b>1949</b> )          | E |   | Basilewsky,<br><b>1949</b> |  | <i>Pseudozaena insularis</i>   |
| Subfamily <b>Platyninae</b> Bonelli, 1810  |  |   |   |                            |  |  |
| <i>Euplynes</i> Schmidt-Gobel, 1846        | <i>Euplynes brunneus</i> Strangeo, <b>1943</b>   | E |   | Strangeo, <b>1943</b>      |  | <i>Euplynes brunneus</i>   |
| <i>Metagonum</i> Jeannel, 1948             | <i>Metagonum insulanum</i><br>Basilewsky, 1948   | E |   | Basilewsky,<br>1948        |  |  |
| <i>Pseudobatenus</i> Basilewsky, 1951      | <i>Pseudobatenus straneoi</i><br>Basilewsky, 1957  | E |   | Basilewsky,<br>1957        |  |  |
| <i>Strangeoa</i> Basilewsky, 1953          | <i>Strangeoa collata</i> (Karsch, <b>1881</b> )  | E |   | Karsch, <b>1881</b>        |  | <i>Zangus collatus</i> ; <i>Strangeoa</i><br><i>opacipennis</i> ; <i>Strangeoa</i><br><i>opacipennis</i> |
|  | <i>Strangeoa seligmani</i> Kavanaugh,<br><b>2005</b>                                     | E |   | Kavanaugh,<br><b>2005</b>  |  |  |

(continued)

| Higher taxonomy                               | Species  | P | ST | A                   | Reference           | ML | Synonyms   |
|---|--|---|----|---------------------|---------------------|----|--|
| <b>Subfamily Pterostichinae Bonelli, 1810</b> |  |   |    |                     |                     |    |  |
| <i>Abacetus</i> Dejean, 1828                  | <i>Abacetus amplithorax</i> Strangeo, 1940                       | E |    |                     | Strangeo, 1940      |    |  |
|   | <i>Abacetus feai</i> Strangeo, 1940                              | E |    |                     | Strangeo, 1940      |    |  |
| <i>Caelostomus</i> MacLeay, 1825              | <i>Caelostomus (Caelostomus) striatocollis</i> (Dejean, 1831)    | R |    |                     | Strangeo, 1941–1942 | *  |  |
|   | <i>Caelostomus (Drimostomellus) punctifrons</i> (Chaudoir, 1850) | R | R  | Basilewsky, 1975    |                     |    | <i>Drimostomellus punctifrons</i>                      |
| <i>Campyogenys</i> Tschitscherine, 1899       | <i>Campyogenys trisetosa</i> (Strangeo, 1995)                    | E |    | Serrano, 1995       | *                   |    | <i>Caelostomus (Campyogenys) trisetosus</i>            |
|   | <i>Dromistomus complanatus</i> levistratus (Strangeo, 1941–1942) | E |    | Strangeo, 1941–1942 |                     |    | <i>Caelostomus complanatus</i> var. <i>levistratus</i> |
| <i>Monodryxus</i> Strangeo, 1941–1942         | <i>Monodryxus crassus</i> (Strangeo, 1941–1942)                  | E |    | Strangeo, 1941–1942 |                     |    |  |
| <i>Morion</i> Latreille, 1810                 | <i>Morion guineensis</i> Imhoff, 1843                            | R | R  | Henriques, 1917     |                     |    | <i>Morion guineense</i>                                |
|   | <i>Pachyroxochus subquadratus</i> Strangeo, 1941–1942            | E |    | Strangeo, 1941–1942 |                     |    |  |
|   | <i>Platyxythrius insularis</i> Strangeo, 1956                    | E |    | Strangeo, 1941–1942 |                     |    | <i>Platyxythrius laevicollis</i>                       |
| <b>Subfamily Scaritinae Bonelli, 1810</b>     |  |   |    |                     |                     |    |  |
| <i>Dyschirius</i> Bonelli, 1810               | <i>Dyschirius (Dyschiriodes) zanzibaricus</i> Kult, 1954         | R |    | Basilewsky, 1975    |                     |    | <i>Dyschirius palmieri</i>                             |
|   | <i>Scarites fatus</i> Karsch, 1881                               | E |    | Karsch, 1881        |                     |    |  |
| <i>Scarites feanus</i> Bäninger, 1937         | E  |   |    | Bäninger, 1937      |                     |    |  |
| <b>Subfamily Trechinae Bonelli, 1810</b>      |  |   |    |                     |                     |    |  |
| <i>Tachytta</i> Kirby, 1837                   | <i>Tachytta subvirens</i> Chaudoir, 1878                         | R |    | Serrano, 2008       |                     |    |  |

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|--|---|---|---|--------------------------|---|---|
| Family Cerambycidae Latreille, 1802        |   |   |   |                          |   |   |
| Subfamily Cerambycinae Latreille, 1802     |   |   |   |                          |   |   |
| Achryson Audinet-Serville, 1833            | <i>Achryson surinamum</i> (Linnaeus, 1767)                                      | I | I | Zuzarte & Ser-rano, 1996 | * |   |
| <i>Calanthenis</i> Thomson, 1864           | <i>Calanthenis thomensis</i> Aurivillius, 1910                                  | E |   | Aurivillius, 1910        |   |   |
| <i>Chlorida</i> Miers, 1880                | <i>Chlorida festiva</i> (Linnaeus, 1758)  | I | I | Henriques, 1917          | * | <i>Callichroma festivum</i>   |
| <i>Chromalizus</i> Schmidt, 1922           | <i>Chromalizus (Callichromalizus) fragrans</i> aldbaueri Delahaye & Juhel, 2018 | E |   | Delahaye & Juhel, 2018   |   |   |
| <i>Diaspila</i> Jordan, 1903               | <i>Chromalizus (Chromalizus) rhodoscelis</i> (Jordan, 1903)                     | E |   | Jordan, 1903             |   | <i>Cloniophorus rhodoscelis</i> ,<br><i>Callichroma rhodoscelis</i> |
| <i>Neoplocaederus</i> Sama, 1991           | <i>Diaspila periscelis</i> Jordan, 1903   | R |   | Jordan, 1903             |   |   |
| <i>Philematium</i> Thomson, 1864           | <i>Neoplocaederus fuscatus</i> (Thomson, 1858)                                  | R | R | Villiers, 1957           | * |   |
| <i>Philomeces</i> Kolbe, 1893              | <i>Philematium grecfi</i> Karsch, 1881  | E |   | Karsch, 1881             |   |   |
| <i>Phrosyne</i> Murray 1870                | <i>Philomeces thomensis</i> (Aurivillius, 1910)                                 | E |   | Aurivillius, 1910        |   |   |
| <i>Xylotrechus</i> Chevrolat, 1860         | <i>Phrosyne brevicornis</i> (Fabricius, 1775)                                   | R |   | Henriques, 1917          |   | <i>Euporus brevicornis</i>  |
| <i>Xystrocerina</i> Audinet-Serville, 1834 | <i>Xylotrechus aedon</i> Jordan, 1903   | E |   | Jordan, 1903             |   |   |
|  | <i>Xystrocera interrupia</i> Jordan, 1903                                       | R |   | Jordan, 1903             | * | <i>Hystrocera interrupia</i>  |
|  | <i>Xystrocera nigrita</i> Audinet-Serville, 1834                                | R |   | Zuzarte & Ser-rano, 1996 |   |   |
| Subfamily Lamiinae Latreille, 1825         |   |   |   |                          |   |   |
| <i>Acmonocera</i> Dejean, 1835             | <i>Acmonocera conjux</i> Thomson, 1858  | R |   | Henriques, 1917          |   | <i>Acmonocera anthriboides</i>                                      |
|  | <i>Acmonocera insularis</i> Breuning, 1940                                      | E |   | Breuning, 1940           |   |   |
|  | <i>Acmonocera lutosa</i> Jordan, 1903   | E |   | Jordan, 1903             |   |   |

(continued)

| Higher taxonomy                           | Species   | P | ST | A | Reference         | ML | Synonyms                          |
|---|---|---|----|---|-------------------|----|-----------------------------------|
| <i>Acridoschema</i> Thomson, 1858         | <i>Acridoschema thomense</i> Jordan, 1903                     | E |    |   | Jordan, 1903      |    | <i>Acridoschema thomensis</i>     |
| <i>Ancylonotus</i> Dejean, 1835           | <i>Ancylonotus tribulus</i> (Fabricius, 1775)                 | R |    |   | Jordan, 1903      |    |                                   |
| <i>Bangalaia</i> Duvivier, 1890           | <i>Bangalaia thomensis</i> Breuning, 1947                     | R |    |   | Breuning, 1947    |    |                                   |
| <i>Coptops</i> Serville, 1835             | <i>Coptops aedificator</i> (Fabricius, 1793)                  | R |    |   | Jordan, 1903      |    | <i>Coptops fusca; Lamia fusca</i> |
|   | <i>Coptops annobonae</i> Aurivillius, 1910                    | E |    |   | Aurivillius, 1910 |    | <i>Pterophilia annobonae</i>      |
|   | <i>Coptops hypocrita</i> Lameere, 1892                        | R | R  |   | Aurivillius, 1910 |    |                                   |
| <i>Eunidia</i> Erichson, 1843             | <i>Eunidia thomensis</i> Breuning, 1970                       | E |    |   | Breuning, 1970    |    |                                   |
| <i>Frea</i> Thomson, 1858                 | <i>Frea maculicornis</i> Thomson, 1858                        | R |    |   | Lepesme, 1948     |    |                                   |
|   | <i>Frea puncticollis</i> Jordan, 1903                         | E |    |   | Jordan, 1903      |    |                                   |
| <i>Glenea</i> Newman, 1842                | <i>Glenea thomensis</i> Breuning, 1958                        | E |    |   | Breuning, 1958    |    |                                   |
| <i>Insulochamus</i> Dillon & Dillon, 1961 | <i>Insulochamus annobonae</i> (Aurivillius, 1928)             | E |    |   | Aurivillius, 1928 |    |                                   |
|   | <i>Insulochamus thomensis</i> (Jordan, 1903)                  | E |    |   | Jordan, 1903      |    | <i>Monochamus thomensis</i>       |
|   | <i>Jordanoleiopus</i> (Polymytiloileopus) feai Breuning, 1955 | E |    |   | Breuning, 1955    |    |                                   |
| <i>Monochamus</i> Dejean, 1821            | <i>Monochamus (Ethiopiochamus) ruspator</i> (Fabricius, 1781) | R | R  |   | Jordan, 1903      |    |                                   |
|   | <i>Monochamus nubilosus</i> Hintz, 1919                       | E |    |   | Hintz, 1919       |    |                                   |
|   | <i>Monochamus principis</i> Breuning, 1956                    | E |    |   | Breuning, 1956    |    |                                   |
|   | <i>Monochamus rubiginosus</i> Teocchi, Sudre & Jiroux, 2014   | E |    |   | Fairmaire, 1892   |    | <i>Monochamus rubiginosus</i>     |

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|---|--|---|---|--------------------------|--|
| <i>Phrynetopsis Kolbe, 1894</i>                           | <i>Phrynetopsis verrucosa</i> (Drury, 1773)                                | E | I | Villiers, 1957           | <i>Phrynetella vietti</i>                  |
|   | <i>Phrynetopsis thomensis principis</i> Breuning, 1952                     | E |   | Villiers, 1957           |  |
|   | <i>Phrynetopsis thomensis thomensis</i> (Jordan, 1903)                     | E |   | Jordan, 1903             | <i>Pachystola trituberculata thomensis</i> |
| <i>Prosoptocera Dejean, 1835</i>                          | <i>Prosoptocera (Alphitopola) insularis</i> Breuning, 1936                 | E |   | Breuning, 1936           |  |
| <i>Protonarthron Thomson, 1858</i>                        | <i>Protonarthron micros</i> (Jordan, 1903)                                 | R |   | Jordan, 1903             | <i>Plectonarthron microps</i>              |
| <i>Pseudohammus Kolbe, 1894</i>                           | <i>Pseudohammus (Litigiosus) feae</i> Aurivillius, 1910                    | E |   | Aurivillius, 1910        | *  |
| <i>Pterolophia Newman, 1842</i>                           | <i>Pterolophia (Annobonaepatraonetha) annobona</i> Aurivillius, 1910       | E |   | Aurivillius, 1910        |  |
|   | <i>Pterolophia (Insularepraonetha) ferrugineoinincta</i> Aurivillius, 1926 | E |   | Zuzarte & Ser-rano, 1996 |  |
|   | <i>Pterolophia (Insularepraonetha) insularis</i> Breuning, 1938            | E |   | Zuzarte & Ser-rano, 1996 |  |
|   | <i>Pterolophia (Principiraonetha) principis</i> Aurivillius, 1910          | E |   | Aurivillius, 1910        |  |
|   | <i>Pterolophia (Principiraonetha) pseudoprincipis</i> Breuning, 1943       | E |   | Breuning, 1943           |  |
|   | <i>Pterolophia (Pterolophia) thomensis</i> Breuning, 1938                  | E |   | Breuning, 1938           |  |
| <i>Ropica Pascoe, 1858</i>                                | <i>Ropica thomensis</i> Breuning, 1970                                     | E |   | Breuning, 1970           |  |
| <i>Sleistratoma Lepetier &amp; Audinet-Serville, 1830</i> | <i>Steirastoma stellio</i> Pascoe, 1866                                    | I |   | Zuzarte & Ser-rano, 1996 | *  |
| <i>Sternotomis Percheron, 1836</i>                        | <i>Sternotomis (Pseudolemur) rufozonata</i> Fairmaire, 1902                | E |   | Fairmaire, 1902          | <i>Pseudolemur rufozonata</i>              |
|   | <i>Sternotomis (Ultilemur) ducalis</i> (Klug, 1835)                        | R | R | Henriques, 1917          | <i>Ultilemur ducalis</i>                   |

(continued)

| Higher taxonomy                              | Species  | P   | ST | A | Reference                | ML | Synonyms                         |
|--|--|---|----|---|--------------------------|----|----------------------------------|
| <i>Tragocephala</i> Dejean, 1835             | <i>Tragocephala guerinii</i> White, 1856                       | R   |    |   | Lepesme & Breuning, 1950 |    |                                  |
| <b>Subfamily Parandrinae Blanchard, 1845</b> |  |   |    |   |                          |    |                                  |
| <i>Acutandra</i> Santos-Silva, 2002          | <i>Acutandra barclayi</i> Bouyer, Dumont & Santos-Silva, 2012  | E   |    |   | Bouyer et al., 2012      |    |                                  |
|  | <i>Acutandra dasilyan</i> Bouyer, Dumont & Santos-Silva, 2012  | E   |    |   | Bouyer et al., 2012      |    |                                  |
|  | <i>Acutandra dekahayei</i> Bouyer, Dumont & Santos-Silva, 2012 | E   | E  |   | Bouyer et al., 2012      | *  |                                  |
|  | <i>Acutandra oremans'i</i> Bouyer, Dumont & Santos-Silva, 2012 | E   |    |   | Bouyer et al., 2012      |    |                                  |
| <b>Subfamily Prioninae Latreille, 1802</b>   |  |   |    |   |                          |    |                                  |
| <i>Ceratocentrus</i> Aurivillius, 1903       | <i>Ceratocentrus oremans'i</i> Delahaye & Camiade, 2016        | E   |    |   | Villiers, 1957           |    | <i>Acanthophorus spinicornis</i> |
|  | <i>Ceratocentrus principiensis</i> (Nylander, 2000)            | E   |    |   | Nylander, 2000           |    |                                  |
| <i>Macrotoma</i> Audinet-Serville, 1832      | <i>Macrotoma lugensis</i> Hope, 1833                           | E   |    |   | Tordo, 1956              | *  | <i>Telotoma hayesi</i>           |
|  | <i>Macrotoma palmata</i> (Fabricius, 1793)                     | R   | R  |   | Tordo, 1956              |    |                                  |
| <i>Mallodon</i> Lacordaire, 1869             | <i>Mallodon downesii</i> Hope, 1843                            | R   | R  |   | Fainmaire, 1891          | *  |                                  |
| <i>Sarothrogastra</i> Karsch, 1881           | <i>Sarothrogastra edulis</i> (Karsch, 1881)                    | E   |    |   | Karsch, 1881             |    | <i>Macrotona edulis</i>          |
|  | <i>Sarothrogastra feai</i> (Lameere, 1912)                     |   |    | E | Lameere, 1912            |    |                                  |
| <b>Family Chrysomelidae Latreille, 1802</b>  |  |   |    |   |                          |    |                                  |
| <b>Subfamily Bruchinae Latreille, 1802</b>   |  | <i>Callosobruchus maculatus</i> (Fabricius, 1775) | I  |   | Luna de Carvalho, 1984   |    |                                  |
| <i>Callosobruchus</i> Pic, 1902              |  |   |    |   |                          |    |                                  |

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|--|--|---|----------------------------------|----------------------------|
| <i>Pachymerus</i> Thunberg, 1805             | <i>Pachymerus nucleorum</i> (Fabricius, 1792)                        | I | Castel-Branco, 196 <sub>16</sub> | <i>Pachymerus lacerdae</i> |
| <i>Zabrotes</i> Horn, 1885                   | <i>Zabrotes subfasciatus</i> (Bohemian, 1833)                        | I | Luna de Carvalho, 1984           |                            |
| <b>Subfamily Cassidinae Chapuis, 1875</b>    |  |   |                                  |                            |
| <i>Aspidomorpha</i> Hope, 1840               | <i>Aspidimorpha (Afroaspidimorpha) nigronaculata</i> (Herbst, 1799)  | R | Coache & Rainon, 2020            |                            |
|  | <i>Aspidimorpha (Aspidimorpha) isparenta</i> Boheman, 1854           | R | Coache & Rainon, 2020            |                            |
|  | <i>Aspidimorpha (Aspidimorpha) obsoleta</i> (Klug, 1855)             | R | Coache & Rainon, 2020            |                            |
|  | <i>Aspidimorpha (Aspidimorpha) quinquefasciata</i> (Fabricius, 1801) | R | Henriques, 1917                  |                            |
|  | <i>Aspidimorpha (Aspidimorpha) submutata</i> Weise, 1899             | R | Coache & Rainon, 2020            |                            |
|  | <i>Aspidimorpha (Aspidocassis) confinis</i> (Klug, 1835)             | R | Coache & Rainon, 2020            |                            |
| <i>Chiridopsis</i> Spaeth, 1922              | <i>Chiridopsis aubei</i> (Bohemian, 1855)                            | R | Coache & Rainon, 2020            | *                          |
| <i>Laccocera</i> Boheman, 1855               | <i>Laccocera (Orphadella) corrugata</i> (Sahlberg, 1823)             | R | Microland                        | *                          |
| <b>Subfamily Criocerinae Latreille, 1804</b> |  |   |                                  |                            |
| <i>Haitita</i> Fairmaire, 1891               | <i>Haitita limbatella</i> Fairmaire, 1891                            | E | Fairmaire, 1891                  |                            |
| <i>Lema</i> Fabricius, 1798                  | <i>Lema rubricollis</i> Klug, 1835                                   | R | Jordan, 1903                     |                            |
| <b>Subfamily Eumolpinae Hope, 1840</b>       |  |   |                                  |                            |
| <i>Afroerydenus</i> Selman, 1965             | <i>Afroerydenus varicolor</i> (Berlioz, 1919)                        | E | Berlioz, 1919                    | *                          |
| <i>Cheiridella</i> Jacoby, 1904              | <i>Cheiridella principis</i> Zoia, 2017                              | E | Zoia, 2017                       |                            |
| (continued)                                  |  |   |                                  |                            |

| Higher taxonomy                         | Species  | P  | ST | A | Reference                   | ML | Synonyms  |
|---|--|----|----|---|-----------------------------|----|---|
| <i>Paraitivongius</i> Pic, 1936         | <i>Paraitivongius (Micromenius)</i> sp.                        | E  |    |   | Zoia, 2017                  |    |   |
|   | <i>Paraitivongius (Paraitivongius) inexpectatus</i> Zoia, 2017 | R  |    |   | Zoia, 2017                  |    |   |
| <i>Rhembastus</i> Harold, 1877          | <i>Rhembastus piceus</i> Zoia, 2017                            | E  |    |   | Zoia, 2017                  |    |   |
| Subfamily Galerucinae Latreille, 1802   |  |    |    |   |                             |    |   |
| <i>Lamprocopa</i> Hincks, 1949          | <i>Lamprocopa delata</i> (Erichson, 1843)                      | R  |    |   | Jordan, 1903                |    |   |
|   | <i>Lamprocopa occidentalis</i> Weise, 1895                     | R  |    |   | Microland                   | *  | <i>Aniacophora delata</i> ; <i>Aulacophora delata</i> |
| <i>Longitarsus</i> Latreille, 1829      | <i>Longitarsus</i> sp.   | R? |    |   | Microland                   | *  |   |
| <i>Manobia</i> Jacoby, 1885             | <i>Manobia</i> sp.   | R? |    |   | Microland                   | *  |   |
| <i>Nisotra</i> Baly, 1864               | <i>Nisotra theobroma</i> Laboissière, 1920                     | E  |    |   | Laboissière, 1920           | *  |   |
| <i>Notometa</i> Jacoby, 1899            | <i>Notometa jolivei</i> Biondi & D'Alessandro, 2015            | E  |    |   | Biondi & D'Alessandro, 2015 |    |   |
| Subfamily Hispinae Gyllenhal, 1813      |  |    |    |   |                             |    |   |
| <i>Dactylispa</i> Weise, 1897           | <i>Dactylispa aculeata</i> (Klug, 1835)                        | R  |    |   | Gestro, 1905                |    |   |
|   | <i>Dactylispa canicollis</i> Gestro, 1905                      | E  |    |   | Gestro, 1905                |    |   |
|   | <i>Dactylispa incredula</i> Gestro, 1905                       | E  |    |   | Gestro, 1905                |    |   |
|   | <i>Dactylispa nigricornis</i> Gestro, 1905                     | E  |    |   | Gestro, 1905                |    |   |
| <i>Platypria</i> Guérin-Méneville, 1840 | <i>Platypria (Dichiripsa) paucispinosa</i> Gestro, 1905        | R  |    |   | Gestro, 1905                |    | <i>Platypria feae</i>                                 |
| <i>Thomispa</i> Würmli, 1975            | <i>Thomispa feae</i> (Gestro, 1906)                            | E  |    |   | Gestro, 1905                | *  | <i>Trichispa feae</i>                                 |

|   |   |   |                      |                           |  |  |  |
|---|---|---|----------------------|---------------------------|--|--|--|
| Family Cicindelidae Latreille, 1802     |   |   |                      |                           |  |  |  |
| Subfamily Cicindelinae W. Horn, 1926    |   |   |                      |                           |  |  |  |
| <i>Cylindera</i> Westwood, 1831         | <i>Cylindera (Ifasina) octoguttata</i><br>(Fabricius, 1787) | R |                      | Serrano, 2008             |  |  |  |
| <i>Lophyra</i> Motschulsky, 1861        | <i>Lophyra neglecta</i> (Dejean, 1825)                      | R | Gomes Alves,<br>1956 |                           | <i>Lophyra discoidea</i>   |  |  |
| <i>Myriochila</i> Motschulsky, 1862     | <i>Myriochila melancholica</i><br>(Fabricius, 1798)         | R | Jordan, 1903         |                           | <i>Myriochila melancholica;</i><br><i>Ciindela melanacholica</i> |  |  |
| Family Ciidae Leach, 1819               |   |   |                      |                           |  |  |  |
| Subfamily Cinae Leach, 1819             |   |   |                      |                           |  |  |  |
| <i>Kylographus</i> Meli., 1849          | <i>Xylographus nitidissimus</i> Pic, 1916                   | R | Pic 1916             |                           |  |  |  |
| Family Cleridae Latreille, 1802         |   |   |                      |                           |  |  |  |
| Subfamily Korynetinae Laporte, 1836     |   |   |                      |                           |  |  |  |
| <i>Necrobia</i> Olivier, 1800           | <i>Necrobia rufipes</i> (De Geer, 1775)                     | I |                      | Luna de<br>Carvalho, 1984 |  |  |  |
| Family Coccinellidae Latreille, 1807    |   |   |                      |                           |  |  |  |
| Subfamily Chilocorinae Mulsant, 1846    |   |   |                      |                           |  |  |  |
| <i>Chilocorus</i> Leach, 1815           | <i>Chilocorus cacti</i> (Linnaeus, 1767)                    | R |                      | Castel-Branco,<br>1963    |  |  |  |
|   | <i>Chilocorus pilosus</i> Sicard, 1920                      | E |                      | Sicard, 1920              |  |  |  |
| <i>Endochilus</i> Weise, 1898           | <i>Endochilus plagiatus</i> Sicard, 1920                    | E |                      | Sicard, 1920              |  |  |  |
|   | <i>Endochilus styx</i> Sicard, 1911                         | E |                      | Sicard, 1911              |  |  |  |
| <i>Exochomus</i> Redtenbacher, 1843     | <i>Exochomus flavipes</i> (Thunberg,<br>1781)               | R |                      | Sicard, 1920              |  | <i>Exochomus nigromaculatus</i><br><i>insulicola</i> |  |
|   | <i>Exochomus nigrifrons</i> Gerstäcker,<br>1871             | R |                      | Fürsch, 1974              |  | <i>Brunus nigrifrons</i>                             |  |
| Subfamily Coccinellinae Latreille, 1807 |   |   |                      |                           |  |  |  |
| <i>Cheilomenes</i> Mulsant, 1850        | <i>Cheilomenes sulphurea</i> (Olivier,<br>1791)             | R | R                    | Henriques,<br>1917        |  |  |  |

(continued)

| Higher taxonomy                             | Species  | P | ST | A | Reference              | ML | Synonyms   |
|---|--|---|----|---|------------------------|----|--|
| <i>Coccinella</i> Linnaeus, 1758            | <i>Coccinella intermedia</i> (Crotch, 1874)                          | E |    |   | Gordon, 1987           |    |  |
| <i>Micraspis</i> Chevrolat in Dejean, 1836  | <i>Micraspis striata</i> (Fabricius, 1792)                           | R |    |   | Hounkpati et al., 2020 |    | <i>Alesia striata</i>                                  |
| <i>Oenopia</i> Mulsant, 1850                | <i>Oenopia doderoi</i> (Sicard, 1911)                                | E |    |   | Sicard, 1911           |    | <i>Coccinella doderoi</i> ; <i>Synharmonia doderoi</i> |
| <i>Thea</i> Mulsant, 1846                   | <i>Thea moniqueae</i> Fürsch, 1974                                   | E |    |   | Fürsch, 1974           |    |  |
| Subfamily <i>Epilachninae</i> Mulsant, 1846 |  |   |    |   |                        |    |  |
| <i>Chnoorriba</i> Dejean, 1835              | <i>Chnoorriba elaterii</i> (Rossi, 1794)                             | R |    |   | Hounkpati et al., 2020 |    |  |
| Subfamily <i>Exoplectrinae</i> Crotch, 1874 |  |   |    |   |                        |    |  |
| <i>Aulis</i> Mulsant, 1850                  | <i>Aulis nigricordis</i> Fürsch, 1974                                | E |    |   | Fürsch, 1974           |    |  |
| Subfamily <i>Microtechinae</i> Leng, 1920   |  |   |    |   |                        |    |  |
| <i>Scymnomorphus</i> Weise, 1897            | <i>Scymnomorphus minuta</i> Fürsch, 1974                             | E |    |   | Fürsch, 1974           |    | <i>Stukunahikona minuta</i>                            |
|   | <i>Scymnomorphus principiensis</i> Gomes Alves & Castel-Branco, 1962 | E |    |   |                        |    |  |
| Subfamily <i>Ortaillinae</i> Mulsant, 1850  |  |   |    |   |                        |    |  |
| <i>Rodolia</i> Mulsant, 1850                | <i>Rodolia cardinalis</i> (Mulsant, 1850)                            | I |    |   | Castel-Branco, 1963    |    |  |
|   | <i>Rodolia seabrai</i> Sicard, 1920                                  | E |    |   | Sicard, 1920           |    |  |
|   | <i>Rodolia vulpina</i> Fürsch, 1974                                  | E |    |   | Fürsch, 1974           |    |  |
| Subfamily <i>Scymninae</i> Mulsant, 1846    |  |   |    |   |                        |    |  |
| <i>Cryptognatha</i> Mulsant, 1850           | <i>Cryptognatha nodiceps</i> Marschall, 1912                         | I |    |   | Castel-Branco, 1963    |    |  |
|   | <i>Nephus derroni</i> Fürsch, 1974                                   | E |    |   | Fürsch, 1974           |    |  |
|   | <i>Nephus theobromae</i> Fürsch, 1974                                | E |    |   | Fürsch, 1974           |    |  |

|   |  |                        |                                 |
|---|--|------------------------|---------------------------------|
| <i>Platynaspis</i> Redtenbacher, 1843             | <i>Platynaspis capicola</i> Crotch, 1874         | R                      | Fürsch 1974                     |
| <i>Scymnus</i> Cuvier, 1816                       | <i>Scymnus levallanti</i> Mulsant, 1850          | R                      | Fürsch, 1974                    |
|   | <i>Scymnus nubilus</i> Mulsant, 1850             | R                      | Hounkpati et al., 2020          |
|   | <i>Scymnus canariensis</i>                       |                        |                                 |
|   |  |                        |                                 |
|   |  |                        |                                 |
| <i>Scymnus oblongoides</i> Fürsch, 1974           | E  | Fürsch, 1974           |                                 |
| <i>Scymnus scapuliferus</i> Mulsant, 1850         | R  | Gomes Alves, 1973      |                                 |
| <i>Scymnus senegalensis</i> Mader, 1955           | R  | Hounkpati et al., 2020 |                                 |
| <i>Stethorus</i> Weise, 1885                      | <i>Stethorus chazeaui</i> Fürsch, 1974           | E                      | Fürsch, 1974                    |
| Subfamily <b>Sticholotidinae</b> Weise, 1901      |  |                        |                                 |
| <i>Pharoscymnus</i> Bedel, 1906                   | <i>Pharoscymnus exiguus</i> Weise, 1913          | R                      | Gomes Alves, 1973               |
|   | <i>Pharoscymnus teistrictus</i> Sicard, 1930     | R                      | Fürsch, 1974                    |
|   | <i>Pharoscymnus tomeensis</i> Fürsch, 1974       | E                      | Fürsch, 1974                    |
| Family <b>Curculionidae</b> Latreille, 1802       |  |                        |                                 |
| Subfamily <b>Conoderinae</b> Schönherr, 1833      |  |                        |                                 |
| <i>Panoptes</i> Gerstaecker, 1860                 | <i>Panoptes convexus</i> Karsch, 1881            | E                      | Karsch, 1881                    |
| Subfamily <b>Cryptorhynchinae</b> Schönherr, 1825 |  |                        |                                 |
| <i>Cyamobolus</i> Schönherr, 1837                 | <i>Cyamobolus greeffi</i> Karsch, 1881           | E                      | Karsch, 1881                    |
| <i>Mechistocerus</i> Fauvel, 1862                 | <i>Mechistocerus nubeculosus</i> Fairmaire, 1891 | R                      | Fairmaire, 1891                 |
|   |  |                        | <i>Cyanobulus greenffi</i>      |
| Subfamily <b>Entiminae</b> Schönherr, 1823        |  |                        | <i>Meictiocerus nubeculosus</i> |
| <i>Phyllobius</i> Germar, 1824                    | <i>Phyllobius verruculatus</i> Karsch, 1881      | E                      | Karsch, 1881                    |

(continued)

| Higher taxonomy                              | Species   | P  | ST | A | Reference                  | ML | Synonyms                      |
|--|---|----|----|---|----------------------------|----|-------------------------------|
| <i>Saotornia</i> Borovec & Anderson, 2021    | <i>Saotornia tuberculata</i> Borovec & Anderson, 2021 | E  |    |   | Borovec & Anderson, 2021   |    |                               |
| Subfamily <b>Molytinae</b> Schönherr, 1823   |   |    |    |   |                            |    |                               |
| <i>Aethiopacorep</i> Voisin, 1992            | <i>Aethiopacorep africanus</i> (Hustache, 1932)       |    | E  |   | Cristóvão & Lyal, 2018     |    |                               |
| <i>Sternuchopsis</i> Heller, 1917            | <i>Sternuchopsis</i> sp.                              | R? |    |   | Microland                  | *  |                               |
| <i>Titillayo</i> Cristóvão & Lyal, 2018      | <i>Titillayo barclayi</i> Cristóvão & Lyal, 2018      | E  |    |   | Cristóvão & Lyal, 2018     |    |                               |
|  | <i>Titillayo perriniae</i> Cristóvão & Lyal, 2018     | E  |    |   | Cristóvão & Lyal, 2018     |    |                               |
|  | <i>Titillayo saotomense</i> Cristóvão & Lyal, 2018    | E  |    |   | Cristóvão & Lyal, 2018     |    |                               |
|  | <i>Titillayo turneri</i> Cristóvão & Lyal, 2018       | E  |    |   | Cristóvão & Lyal, 2018     |    |                               |
| Subfamily <b>Platypodinae</b> Shuckard, 1839 |   |    |    |   |                            |    |                               |
| <i>Chaetastus</i> Numberg 1953               | <i>Chaetastus tuberculatus</i> (Chapuis, 1865)        | R  |    |   | Beaver & Löyttyniemi, 1985 |    |                               |
| <i>Costaroplatus</i> Numberg, 1963           | <i>Costaroplatus pernix</i> (Schedl, 1941)            | E  |    |   | Wood & Bright, 1992        |    | <i>Platyscapus pernix</i>     |
| <i>Dolopygus</i> Browne, 1962                | <i>Dolopygus erichsoni</i> (Chapuis, 1865)            | R  |    |   | Beaver & Löyttyniemi, 1985 |    | <i>Crossotarsus erichsoni</i> |
|  | <i>Dolopygus ibex</i> Schedl, 1941                    | E  |    |   | Wood & Bright, 1992        |    |                               |
| <i>Periommatus</i> Chapuis, 1866             | <i>Periommatus excisus</i> Strohmeyer, 1912           | R  | R  |   | Wood & Bright, 1992        |    |                               |

|  |   |   |   |   |                                  |
|--|---|---|---|---|----------------------------------|
| <i>Platypus</i> Herbst, 1793                       | <i>Platypus hintzi</i> Schaufuss, 1897                | I | Wood & Bright,<br><a href="#">1992</a>    |   |                                  |
|  | <i>Platypus intermedius</i> (Schedl,<br>1937)         | R | Wood & Bright,<br><a href="#">1992</a>    |   | <i>Stenoplatypus intermedius</i> |
|  | <i>Platypus parallelus</i> (Fabricius,<br>1801)       | I | Wood & Bright,<br><a href="#">1992</a>    |   |                                  |
| Subfamily <b>Scolytinae</b> Latreille, 1804        |   |   |   |   |                                  |
| <i>Hapalogenius</i> Hagedorn, 1912                 | <i>Hapalogenius dubius</i> Eggers, 1920               | R | Medler, 1980                              |   | <i>Hylesinopsis dubius</i>       |
| <i>Hypothenemus</i> Westwood, 1836                 | <i>Hypothenemus hampei</i> (Ferrari,<br>1867)         | I | Kaden, 1930                               |   | <i>Stephanoderes hampei</i>      |
| <i>Xyleborus</i> Eichhoff, 1864                    | <i>Xyleborus ferrugineus</i> (Fabricius,<br>1801)     | I | Luna de<br>Carvalho <a href="#">1984</a>  |   |                                  |
| Family <b>Dryophthoridae</b> Schönher, 1825        |   |   |   |   |                                  |
| Subfamily <b>Dryophthorinae</b> Schönher, 1825     |   |   |   |   |                                  |
| <i>Cosmopolites</i> Chevrolat, 1885                | <i>Cosmopolites sordidus</i> (Germar,<br>1824)        | R | Jordan, 1903                              |   | <i>Sphenophorus sordidus</i> ;   |
| <i>Sitophilus</i> Schönher, 1838                   | <i>Sitophilus oryzae</i> (Linnaeus, 1763)             | I | Luna de<br>Carvalho, <a href="#">1984</a> |   | <i>Sphenophorus striatus</i>     |
| Subfamily <b>Rhynchophorinae</b> Schönher, 1833    |   |   |   |   |                                  |
| <i>Metamasius</i> Horn, 1873                       | <i>Metamasius hemipterus</i> Linnaeus,<br>1758        | R | Microland                                 | * |                                  |
| <i>Tennoschoita</i> Chevrolat, 1885                | <i>Tennoschoita quadrimaculata</i><br>Csiki, E., 1936 | R | Henriques,<br><a href="#">1917</a>        |   |                                  |
| Family <b>Dytiscidae</b> Leach, 1815               |   |   |   |   |                                  |
| Subfamily <b>Copelatinae</b> Van den Branden, 1885 |   |   |   |   |                                  |
| <i>Copelatus</i> Erichson, 1832                    | <i>Copelatus pallidus</i> Régimbart,<br>1895          | R | Regimbart,<br><a href="#">1904</a>        | * |                                  |

(continued)

| Higher taxonomy  | Species   | P | ST | A            | Reference       | ML | Synonyms   |
|--|---|---|----|--------------|-----------------|----|--|
| <b>Subfamily Dytiscinae Leach, 1815</b>                |   |   |    |              |                 |    |  |
| <i>Cybister</i> Curtis, 1827                           | <i>Cybister (Melanectes) vulneratus</i><br>Klug, 1834 | R | R  | Jordan, 1903 |                 |    | <i>Trogus binotatus</i> ; <i>Melanectes vulneratus</i> ; <i>Cybister binotatus</i> |
| <b>Family Elateridae Leach, 1815</b>                   |   |   |    |              |                 |    |  |
| <b>Subfamily Agrypninae Candèze, 1857</b>              |   |   |    |              |                 |    |  |
| <i>Calais</i> Laporte de Castelnau, 1836               | <i>Calais controversa</i> (Karsch, 1881)              | E |    | Karsch, 1881 |                 | *  | <i>Ctenicera controversa</i> ; <i>Alaus chalcolepidinus</i>                        |
| <i>Elasmosomus</i> Schwarz, 1903                       | <i>Elasmosomus mocquerysi</i><br>(Fleutiaux, 1902)    | E | E  | Girard, 2017 |                 |    |  |
| <i>Lanelater</i> Arnett, 1952                          | <i>Lanelater glabratus</i> (Gyllenhal,<br>1817)       | R |    | Girard, 2017 | *               |    | <i>Lanelater substritus</i>  |
| <b>Subfamily Denticollinae Stein &amp; Weise, 1877</b> |   |   |    |              |                 |    |  |
| <i>Melanoxanthus</i> Déjean, 1833                      | <i>Melanoxanthus inaequalis</i><br>Candèze, 1881      |   | R  |              | Girard, 2017    |    |  |
| <b>Subfamily Elaterinae Leach, 1815</b>                |   |   |    |              |                 |    |  |
| <i>Propsephus</i> Hyslop, 1921                         | <i>Propsephus athoides</i> (Candèze,<br>1881)         |   | R  |              | Fairmaire, 1891 |    |  |
|  | <i>Propsephus campyloides</i> (Candèze,<br>1897)      | E |    |              | Fairmaire, 1891 |    | <i>Psephus athoides</i>  |
|  | <i>Propsephus melanoides</i><br>(Fairmaire, 1891)     | E |    |              | Fairmaire, 1891 |    |  |
|  | <i>Propsephus scitulus</i> Schwarz, 1909              | E |    |              | Girard, 2017    |    |  |
| <b>Subfamily Lissominae Laporte, 1835</b>              |   |   |    |              |                 |    |  |
| <i>Lissomus</i> Dahlman, 1824                          | <i>Lissomus francisci</i> Karsch, 1881                |   | E  |              | Karsch, 1881    | *  |  |
| <b>Family Endomychidae Leach, 1815</b>                 |   |   |    |              |                 |    |  |
| <b>Subfamily Lycopterdininae Bromhead, 1838</b>        |   |   |    |              |                 |    |  |
| <i>Ancylodus</i> Costa, 1854                           | <i>Ancylodus meridionalis</i> Stroheter,<br>1962      | R |    |              | Microland       | *  |  |

|  |  |   |   |                                    |                                    |  |  |
|--|--|---|---|------------------------------------|------------------------------------|--|--|
| Family <b>Gyrinidae</b> Latreille, 1810        |  |   |   |                                    |                                    |  |  |
| Subfamily <b>Gyrininae</b> Latreille, 1810     |  |   |   |                                    |                                    |  |  |
| <i>Orectogyrus</i> Régimbart, 1884             | <i>Orectogyrus (Lobogyrus) lionotus</i><br>Régimbart, 1884       |   | R |                                    | Régimbart,<br><a href="#">1904</a> |  |  |
| Family <b>Histeridae</b> Gyllenhal, 1808       |  |   |   |                                    |                                    |  |  |
| Subfamily <b>Dendrophilinae</b> Reitter, 1909  |  |   |   |                                    |                                    |  |  |
| <i>Platyomalus</i> Cooman, 1948                | <i>Platyomalus digitatus</i> (Wollaston,<br>1867)                | R |   | Gomy, 2004                         |                                    |  |  |
|  | <i>Platyomalus longicornis</i> (Lewis,<br><a href="#">1906</a> ) | E | E | Lewis, <a href="#">1906</a>        |                                    |  |  |
| Subfamily <b>Histerinae</b> Gyllenhal, 1808    |  |   |   |                                    |                                    |  |  |
| <i>Apobletes</i> Marseul, 1861                 | <i>Apobletes macer</i> (Lewis, <a href="#">1906</a> )            | E |   | Lewis, <a href="#">1906</a>        |                                    |  |  |
| <i>Corticalinus</i> Gomy, <a href="#">2004</a> | <i>Corticalinus minusculus</i> (Schmidt,<br>1893)                | R | R | Gomy, <a href="#">2004</a>         |                                    |  |  |
| <i>Hololepta</i> Paykull, 1811                 | <i>Hololepta syntexis</i> Lewis, <a href="#">1900</a>            | R | R | Lewis, <a href="#">1900</a>        | *                                  |  |  |
| <i>Pachyraerus</i> Marseul, 1854               | <i>Pachyraerus chlorites</i> Lewis,<br><a href="#">1900</a>      | R |   | Lewis, <a href="#">1900</a>        |                                    |  |  |
|  | <i>Pachyraerus cyanescens</i><br>Erichson, 1834                  | R | R | Gomy, <a href="#">2004</a>         | *                                  |  |  |
| <i>Platylister</i> Lewis, 1892                 | <i>Platylister (Ricinodendrus)<br/>foliaceus</i> (Paykull, 1811) | R | R | Gomy, <a href="#">2004</a>         | *                                  |  |  |
| <i>Terebrus</i> Erichson, 1834                 | <i>Terebrus braganzei</i> Lewis, <a href="#">1900</a>            | R |   | Lewis, <a href="#">1900</a>        |                                    |  |  |
| Family <b>Hybosoridae</b> Erichson, 1847       |  |   |   |                                    |                                    |  |  |
| Subfamily <b>Hybosorinae</b> Erichson, 1847    |  |   |   |                                    |                                    |  |  |
| <i>Hybosorus</i> MacLeay, 1819                 | <i>Hybosorus illigeri</i> Reiche, 1853                           |   | R | Kuijten, <a href="#">1983</a>      |                                    |  |  |
| Family <b>Hydrophilidae</b> Latreille, 1802    |  |   |   |                                    |                                    |  |  |
| Subfamily <b>Sphaeridiinae</b> Latreille, 1802 |  |   |   |                                    |                                    |  |  |
| <i>Coelostoma</i> Brullé, 1835                 | <i>Coelostoma rufitarse</i> (Bohemian,<br>1851)                  |   | R | Régimbart,<br><a href="#">1907</a> |                                    |  |  |

(continued)

| Higher taxonomy                                    | Species   | P  | ST | A | Reference                              | ML | Synonyms |
|--|---|----|----|---|--|----|----------|
| <i>Dactylosternum</i> Wollaston, 1854              | <i>Dactylosternum abdominalis</i> (Fabricius, 1792)               | R  |    |   | Réginbart,<br><a href="#">1907</a>     |    |          |
|  | <i>Dactylosternum intermedium</i> Réginbart, <a href="#">1907</a> | R  |    |   | Réginbart,<br><a href="#">1907</a>     |    |          |
|  | <i>Dactylosternum profundum</i> Réginbart, <a href="#">1907</a>   | E  |    |   | Réginbart,<br><a href="#">1907</a>     |    |          |
| <i>Megasternini</i> Mulsant, 1844                  | Unidentified species  | R? |    |   | Microland                              | *  |          |
| <i>Pachysternum</i> Moitschulsky, 1863             | <i>Pachysternum capense</i> (Mulsant, 1844)                       | R  | R  |   | Réginbart,<br><a href="#">1907</a>     |    |          |
| <i>Pelosoma</i> Mulsant, 1844                      | <i>Pelosoma buccalis</i> (Réginbart, <a href="#">1907</a> )       | E  |    |   | Réginbart,<br><a href="#">1907</a>     |    |          |
| <hr/>  |   |    |    |   |  |    |          |
| Family Laemophloeidae Gängbauer, 1899              |   |    |    |   |  |    |          |
| Subfamily Laemophloeinae Gängbauer, 1899           |   |    |    |   |  |    |          |
| <i>Cryptolestes</i> Gängbauer, 1899                | <i>Cryptolestes atulus</i> Lefkovitch, <a href="#">1962</a>       | R  |    |   | Lefkovitch,<br><a href="#">1962</a>    |    |          |
|  | <i>Cryptolestes ferrugineus</i> (Stephens, 1831)                  | I  |    |   | Luna de Carvalho, <a href="#">1984</a> |    |          |
|  | <i>Cryptolestes pusillus</i> (Schönherr, 1817)                    | I  |    |   | Luna de Carvalho, <a href="#">1984</a> |    |          |
| <i>Placonotus</i> Mac Leay, 1871                   | <i>Placonotus boliviari</i> (Grouvelle, 1905)                     | R  |    |   | Lefkovitch,<br><a href="#">1962</a>    |    |          |
|  | <i>Placonotus politissimus</i> (Wollaston, 1867)                  | R  |    |   | Lefkovitch,<br><a href="#">1962</a>    |    |          |
|  | <i>Placonotus testaceus</i> (Fabricius, 1787)                     | I  |    |   | Luna de Carvalho, <a href="#">1984</a> |    |          |
| <i>Xylolestes</i> Lefkovitch, <a href="#">1962</a> | <i>Xylolestes unicolor</i> (Grouvelle, 1908)                      | R  |    |   | Lefkovitch,<br><a href="#">1962</a>    |    |          |
| <hr/>  |   |    |    |   |  |    |          |
| Family Limnichidae Erichson, 1846                  | Unidentified species  |    | R? |   | Microland                              | *  |          |

|  |  |   |  |                              |   |   |  |
|--|--|---|--|------------------------------|---|---|--|
| Family <b>Lucanidae</b> Latreille, 1804          |  |   |  |                              |   |   |  |
| Subfamily <b>Lucaninae</b> Latreille, 1804       |  |   |  |                              |   |   |  |
| <i>Figulus</i> MacLeay, 1819                     |  |   |  |                              |   |   |  |
|  | <i>Figulus anthracinus</i> Klug, 1832                      | R |  | Griffini, 1906               |   |   |  |
|  | <i>Figulus decipiens</i> Albers, 1884                      | E |  | Gomes Alves,<br>1973         | * | <i>Figulus sublaevis decipiens</i>  |  |
|  | <i>Nigidius bubalus</i> (Swederus, 1787)                   | R |  | Klug, 1835                   |   | <i>Nigidius auriculatus</i>   |  |
| <i>Nigidius</i> MacLeay, 1819                    | <i>Nigidius endroedi</i> Gomes Alves,<br>1973              | E |  | Gomes Alves,<br>1973         |   |   |  |
| <i>Prosopocoilus</i> Westwood, 1845              |  |   |  |                              |   |   |  |
|  | <i>Prosopocoilus antilopus amicorum</i><br>Matsumoto, 2019 | E |  | Matsumoto,<br>2019           |   | <i>Prosopocoilus antilopus</i>  |  |
|  | <i>Prosopocoilus antilopus beisa</i><br>Kriesche, 1919     | E |  | Griffini, 1906               |   | <i>Prosopocoilus antilopus</i>  |  |
|  | <i>Prosopocoilus antilopus insulanus</i><br>Kriesche, 1919 | E |  | Fairmaire, 1891              | * | <i>Prosopocoilus antilopus</i>  |  |
|  | <i>Prosopocoilus downesii savagei</i><br>(Hope, 1835)      | R |  | Griffini, 1906               | * | <i>Metapodontus downesi</i>   |  |
|  | <i>Prosopocoilus senegalensis</i> (Klug,<br>1835)          | R |  | Bartolozzi &<br>Werner, 2004 |   |   |  |
| Family <b>Lycidae</b> Laporte de Castelnau, 1838 |  |   |  |                              |   |   |  |
| Subfamily <b>Lycinae</b> Laporte, 1836           |  |   |  |                              |   |   |  |
| <i>Flagrax</i> Kasanisev, 1992                   |  |   |  |                              |   |   |  |
|  | <i>Flagrax bifoveolatus</i> Pic, 1924                      | E |  | Pic, 1926                    | * |   |  |
| <i>Stadenus</i> Waterhouse, 1879                 |  |   |  | Fairmaire, 1891              |   | <i>Stadenus semiflavus</i> ; <i>Stadenus</i><br><i>auberti semiflavus</i>   |  |
| Family <b>Lymexyliidae</b> Fleming, 1821         |  |   |  |                              |   |   |  |
| Subfamily <b>Atractocerinae</b> Laporte, 1840    |  |   |  |                              |   |   |  |
| <i>Atractocerus</i> Palisot de Beauvoir, 1801    | <i>Atractocerus brevicornis</i> (Lin-<br>naeus, 1766)      | R |  | Jordan, 1903                 |   | <i>Atractocerus africanus</i> ;<br><i>Atractocerus frontalis</i> ;<br><i>Atractocerus brevicornis</i><br><i>africanus</i> |  |

| Higher taxonomy                                | Species   | P | ST | A                        | Reference | ML                                  | Synonyms |
|--|---|---|----|--------------------------|-----------|-------------------------------------|----------|
| Family <b>Mordellidae</b> Latreille, 1802      |   |   |    |                          |           |                                     |          |
| Subfamily <b>Mordellinae</b> Latreille, 1802   |   |   |    |                          |           |                                     |          |
| <i>Glipostenia</i> Ermisch, 1941               | <i>Glipostenia nemoralis</i> Franciscolo, 1962  | R |    | Microland                | *         |                                     |          |
| <i>Ophthalmooglipa</i> Franciscolo, 1952       | <i>Ophthalmooglipa horaki</i> Ruzzier, 2015     | E |    | Ruzzier, 2015            | *         |                                     |          |
|  | <i>Ophthalmooglipa leblanci</i> Ruzzier, 2015   | E |    | Ruzzier, 2015            |           |                                     |          |
| Family <b>Mycteridae</b> Oken, 1843            |   |   |    |                          |           |                                     |          |
| Subfamily <b>Hemipeplinae</b> Lacondaire, 1854 |   |   |    |                          |           |                                     |          |
| <i>Hemipeplus</i> Latreille, 1825              | <i>Hemipeplus africanus</i> Grouvelle, 1915     | R |    | Microland                | *         |                                     |          |
| Family <b>Nitidulidae</b> Latreille, 1802      |   |   |    |                          |           |                                     |          |
| Subfamily <b>Carpophilinae</b> Erichson, 1842  |   |   |    |                          |           |                                     |          |
| <i>Carpophilus</i> Stephens, 1830              | <i>Carpophilus dimidiatus</i> (Fabricius, 1792) | I |    | Luna de Carvalho, 1984   |           |                                     |          |
|  | <i>Carpophilus hemipterus</i> (Linnaeus, 1758)  | I |    | Luna de Carvalho, 1984   |           |                                     |          |
| Subfamily <b>Epuraeinae</b> Kirejtshuk, 1986   |   |   |    |                          |           |                                     |          |
| <i>Epurea</i> Erichson, 1845                   | <i>Epureae ocularis</i> Fairmaire, 1849         | R |    | Microland                | *         | <i>Epureae (Haptocnus) ocularis</i> |          |
| Family <b>Oedemeridae</b> Latreille, 1810      |   |   |    |                          |           |                                     |          |
| Subfamily <b>Oedemerinae</b> Latreille, 1810   |   |   |    |                          |           |                                     |          |
| <i>Alloxanthoides</i> Svhla, 1985              | <i>Alloxanthoides lateritincta</i> (Pic, 1920)  | R |    | Serrano unpublished data |           |                                     |          |
| <i>Ditylomorphula</i> Svhla, 1985              | <i>Ditylomorphula bicolorites</i> (Pic, 1922)   | E |    | Pic, 1922                |           |                                     |          |
| <i>Monostyges</i> Vazquez, 2004                | <i>Monostyges semipiceus</i> (Karsch, 1881)     | E |    | Karsch, 1881             |           | <i>Damerces semipicea</i>           |          |

|  |  |    |   |                           |   |                           |  |
|--|--|----|---|---------------------------|---|---------------------------|--|
| Family <b>Passalidae</b> Leach, 1815                     |  |    |   |                           |   |                           |  |
| Subfamily <b>Passalinae</b> Leach, 1815                  |  |    |   |                           |   |                           |  |
| <i>Didymus</i> Hincks, 1933                              | <i>Didymus laevis</i> (Klug, 1835)                               | E  | E | Gomes Alves,<br>1965      | * |                           |  |
| <i>Pentalobus</i> Kaup, 1868                             | <i>Pentalobus barbatus</i> (Fabricius,<br>1801)                  | R  |   | Jordan, 1903              |   | <i>Pselaphus barbatus</i> |  |
| Family <b>Philidae</b> Heer, 1843                        |  |    |   |                           |   |                           |  |
| Subfamily <b>Acrotrichinae</b> Reitter, 1909             |  |    |   |                           |   |                           |  |
| <i>Acrotrichis</i> Motschulsky, 1848                     | <i>Acrotrichis (Ctenopteryx)<br/>discoloroides</i> Johnson, 1969 | R  |   | Darby, 2020               |   |                           |  |
|  | <i>Acrotrichis tersa</i> Johnson, 1969                           | R  |   | Darby, 2020               |   |                           |  |
| Family <b>Ptilodactylidae</b> Laporte de Castelnau, 1836 |  |    |   |                           |   |                           |  |
|  | Unidentified species   | R? |   | Microland                 | * |                           |  |
| Family <b>Ptinidae</b> Latreille, 1802                   |  |    |   |                           |   |                           |  |
| Subfamily <b>Anobiinae</b> Fleming, 1821                 |  |    |   |                           |   |                           |  |
| <i>Stegobium</i> Motschulsky, 1860                       | <i>Stegobium panicum</i> (Linnaeus,<br>1758)                     | I  |   | Luna de<br>Carvalho, 1984 |   |                           |  |
| Subfamily <b>Xyletininae</b> Gistel, 1848                |  |    |   |                           |   |                           |  |
| <i>Lastioderma</i> Stephens, 1835                        | <i>Lastioderma serricorne</i> (Fabricius,<br>1792)               | I  |   | Luna de<br>Carvalho, 1984 |   |                           |  |
| Family <b>Scarabaeidae</b> Latreille, 1802               |  |    |   |                           |   |                           |  |
| Subfamily <b>Bolboceratinae</b> Mulsant, 1842            |  |    |   |                           |   |                           |  |
| <i>Bolbocaffer</i> Vulcano Martinez & Pereira<br>1969    | <i>Bolbocaffer pallens</i> (Kolbe, 1835)                         | R  |   | Paulian, 1941             |   | <i>Odontaeus pallens</i>  |  |
| Subfamily <b>Cetoniinae</b> Leach, 1815                  |  |    |   |                           |   |                           |  |
| <i>Chlorocala</i> Kirby, 1828                            | <i>Chlorocala viridicyanea</i> (Palissot de<br>Beauvois, 1821)   | R  |   | Janson, 1907              |   |                           |  |
| <i>Diphognatha</i> Gory & Percheron, 1833                | <i>Diphognatha gagates</i><br>Forster, 1771                      | R  |   | Jordan, 1903              |   |                           |  |

(continued)

| Higher taxonomy                           | Species   | P | ST | A | Reference             | ML | Synonyms                                   |
|---|---|---|----|---|-----------------------|----|--|
| <i>Dischista</i> Burmeister, 1842         | <i>Dischista rufa</i> (De Geer, 1778)                 | R |    |   | Jordan, 1903          |    |  |
| <i>Grammopyga</i> Kolbe, 1895             | <i>Grammopyga cincticollis</i> (Hope, 1842)           | R |    |   | Janson, 1907          |    | <i>Pachnoda rufa</i> ; <i>Cetonia rufa</i> |
|   | <i>Grammopyga marginicollis</i> (Moser, 1904)         | E |    |   | Moser, 1904           |    |  |
| <i>Leucocelis</i> Burmeister, 1842        | <i>Leucoelis jeana</i> Janson, 1907                   | E |    |   | Janson, 1907          |    |  |
| <i>Pachnoda</i> Burmeister, 1842          | <i>Pachnoda canui</i> Rigout & Allard, 1992           | E |    |   | Rigout & Allard, 1992 |    |  |
|   | <i>Pachnoda prasina</i> Karsch, 1881                  | E |    |   | Karsch, 1881          |    | <i>Cetonia prasina</i>                     |
| <i>Phaneresthes</i> Kraatz, 1894          | <i>Phaneresthes flavosignata</i> (Moser, 1904)        | E |    |   | Moser, 1904           |    |  |
| <i>Pseudoheterophana</i> Allard, 1990     | <i>Pseudoheterophana canui</i> Allard, 1990           | E |    |   | Allard, 1990          |    |  |
| <i>Pseudotephraea</i> Kraatz, 1882        | <i>Pseudotephraea ancilla ancilla</i> (Harold, 1879)  | E |    |   | Harold, 1879          |    |  |
|   | <i>Pseudotephraea ancilla canui</i> Antoine, 1992     | E |    |   | Jordan, 1903          |    | <i>Tephraea ancilla</i>                    |
| <i>Uloptera</i> Burmeister, 1842          | <i>Uloptera canui</i> Antoine, 1992                   | E |    |   | Antoine, 1992         |    |  |
| Subfamily <b>Dynastinae</b> MacLeay, 1819 |   |   |    |   |                       |    |  |
| <i>Cyphonistis</i> Burmeister, 1847       | <i>Cyphonistes caninus</i> Karsch, 1881               | E |    |   | Karsch, 1881          |    |  |
| <i>Oryctes</i> Hellwig, 1798              | <i>Oryctes (Rykaneus) capucinus</i> Arrow, 1937       | R |    |   | Vesco et al., 1999    |    |  |
|   | <i>Oryctes (Rykaneus) latecavatus</i> Fairmaire, 1891 | E |    |   | Fairmaire, 1891       |    |  |
|   | <i>Oryctes (Rykaneus) monoceros</i> Olivier, 1789     | I |    |   | Vargas Ferreira, 1967 |    |  |

|  |  |   |   |                 |                              |
|--|--|---|---|-----------------|------------------------------|
| <i>Rhizophrys</i> Westwood, 1842       | <i>Rhizophrys canui</i> Dechambre, 1983  | E |   | Dechambre, 1983 |                              |
|  | <i>Rhizophrys mucronatus cedrici</i> Dechambre, 1983                             | E |   | Dechambre, 1983 | *                            |
| <i>Tennorhynchus</i> Hope, 1837        | <i>Tennorhynchus (Tennorhynchus) coronatus diana</i> (Palisot de Beauvois, 1805) | R |   | Henriques, 1917 | <i>Tennorhynchus diana</i>   |
|  | <i>Tennorhynchus (Tennorhynchus) tridentatus</i> Lansberge, 1886                 | R |   | Krell, 1994     |                              |
| <hr/>                                  |  |   |   |                 |                              |
| Subfamily Melolonthinae MacLeay, 1819  |  |   |   |                 |                              |
| <i>Apogonia</i> Kirby, 1819            | <i>Apogonia decellei</i> Lacroix, 2008   | E |   | Lacroix, 2008   | *                            |
|  | <i>Apogonia insulana</i> Karsch, 1882  | E |   | Karsch, 1882    | *                            |
|  | <i>Apogonia tomeensis</i> Lacroix, 2008  | E |   | Lacroix, 2008   | *                            |
| <hr/>                                  |  |   |   |                 |                              |
| Subfamily Orphninae Erichson, 1847     |  |   |   |                 |                              |
| <i>Stenosternus</i> Karsch, 1881       | <i>Stenosternus costatus</i> Karsch, 1881  | E |   | Karsch, 1881    | <i>Mecistocerus costatus</i> |
| <hr/>                                  |  |   |   |                 |                              |
| Subfamily Scarabaeinae Latreille, 1802 |  |   |   |                 |                              |
| <i>Onthophagus</i> Latreille, 1802     | <i>Onthophagus (Onthophagus) sellatus</i> Klug, 1845                             | R | R | d'Orbigny, 1905 |                              |
|  | <i>Onthophagus (Trichonthophagus) juvenus</i> Klug, 1835                         | R |   | d'Orbigny, 1905 |                              |
| <i>Paraphytus</i> Harold, 1877         | <i>Paraphytus africanus</i> Boucomont, 1923                                      | R | R | Paulian, 1949   | *                            |
|  | <i>Phalops fimbriatus</i> (Klug, 1835)   | R |   | d'Orbigny, 1913 |                              |
| <i>Proagoderus</i> Lansberge, 1883     | <i>Proagoderus laticollis</i> Klug, 1835   | R |   | d'Orbigny, 1913 |                              |
| <hr/>                                  |  |   |   |                 |                              |

(continued)

| Higher taxonomy                               | Species  | P  | ST | A                      | Reference | ML | Synonyms |
|---|--|----|----|------------------------|-----------|----|----------|
| <b>Subfamily Trichiinae Fleming, 1821</b>     |  |    |    |                        |           |    |          |
| <i>Clastocnemis</i> Burneister & Schaum, 1840 | <i>Clastocnemis quadrifimaculatus</i> oremansii Antoine, 2005        | E  |    | Antoine, 2005          | *         |    |          |
|   | <i>Clastocnemis quadrifimaculatus</i> <i>principis</i> Antoine, 2005 | E  |    | Antoine, 2005          |           |    |          |
| <i>Comythovalgus</i> Kolbe, 1894              | <i>Comythovalgus aenulus</i> Kolbe, 1897                             | R  |    | Janson, 1907           |           |    |          |
| <i>Cryptodontus</i> Burneister, 1847          | <i>Cryptodontus latreilleanus</i> desaegeri Burgeon, 1946            | E  |    | Henriques, 1917        | *         |    |          |
| <b>Family Silvanidae Kirby, 1837</b>          |  |    |    |                        |           |    |          |
| <b>Subfamily Silvaninae Kirby, 1837</b>       |  |    |    |                        |           |    |          |
| <i>Alasverus</i> Gozis, 1881                  | <i>Alasverus advena</i> (Waltl, 1834)                                | I  |    | Luna de Carvalho, 1984 |           |    |          |
|   | <i>Cryptamorpha</i> sp.  | R? |    | Microland *            |           |    |          |
| <i>Oryzaephilus</i> Wollaston, 1854           | <i>Oryzaephilus mercator</i> (Fauvel, 1889)                          | I  |    | Luna de Carvalho, 1984 |           |    |          |
| <i>Oryzaephilus</i> Ganglbauer, 1899          | <i>Oryzaephilus surinamensis</i> (Linnaeus, 1758)                    | I  |    | Luna de Carvalho, 1984 |           |    |          |
| <b>Family Staphylinidae Lameere, 1900</b>     |  |    |    |                        |           |    |          |
| <b>Subfamily Osoriinae Erichson, 1839</b>     |  |    |    |                        |           |    |          |
| <i>Afrosorius</i> Fagel, 1958                 | <i>Afrosorius assimilis</i> (Fauvel, 1903)                           | R  |    | Ferreira, 2014         |           |    |          |
|   | <i>Afrosorius curtipennis</i> Fagel, 1958                            | E  |    | Fagel, 1958            |           |    |          |
|   | <i>Afrosorius striifrons</i> (Kolbe, 1889)                           | R  |    | Ferreira, 2014         |           |    |          |
|   | <i>Afrosorius viettei</i> Fagel, 1958                                | E  |    | Fagel, 1958            |           |    |          |
| <i>Nacaeus</i> Blackwelder, 1942              | <i>Nacaeus aethiops</i> (Eppelsheim, 1895)                           | R  |    | Fauvel, 1903           |           |    |          |

|  |   |   |  |                |  |  |
|--|---|---|--|----------------|--|--|
| Subfamily <b>Paederinae</b> Fleming, 1821      |   |   |  |                |  |  |
| <i>Paederus</i> Fabricius, 1775                | <i>Paederus angusticeps</i> Bernhauer,<br>1915        | R |  | Fagel, 1966    |  |  |
| <i>Rugilus</i> Leach, 1819                     | <i>Rugilus rubelloides</i> (Fagel, 1951)              | R |  | Fagel, 1953    |  |  |
| <i>Tracypum</i> Fagel, 1977                    | <i>Tracypum vietnamum</i> Fagel, 1977                 | E |  | Fagel, 1977    |  |  |
| Subfamily <b>Staphylininae</b> Latreille, 1802 |   |   |  |                |  |  |
| <i>Philonthus</i> Stephens, 1826               | <i>Philonthus longicornis</i> Stephens,<br>1832       | R |  | Ferreira, 2014 |  |  |
|  | <i>Philonthus peregrinus</i> Fauvel,<br>1866          | R |  | Ferreira, 2014 |  |  |
| Subfamily <b>Tachyporinae</b> MacLeay, 1825    |   |   |  |                |  |  |
| <i>Tachinomorphus</i> Kraatz, 1859             | <i>Tachinomorphus africanus</i><br>(Eppelsheim, 1895) | R |  | Fauvel, 1903   |  |  |
| Family <b>Tenebrionidae</b> Latreille, 1802    |   |   |  |                |  |  |
| Subfamily <b>Diaperinae</b> Latreille, 1802    |   |   |  |                |  |  |
| <i>Ceropria</i> Laporte & Brullé, 1831         | <i>Ceropria anthracina</i> Quedenfeldt,<br>1885       | R |  | Gebien, 1921   |  |  |
|  | <i>Ceropria romandi</i> Laporte &<br>Brullé, 1831     | R |  | Gebien, 1921   |  |  |
| <i>Gnathidium</i> Gebien, 1920                 | <i>Gnathidium cephalotes</i> Gebien,<br>1921          | E |  | Gebien, 1921   |  |  |
| <i>Hypophloeus</i> Fabricius, 1790             | <i>Hypophloeus insularis</i> Gebien,<br>1921          | R |  | Gebien, 1942   |  |  |
|  | <i>Hypophloeus picenus</i> Gebien,<br>1921            | E |  | Gebien, 1921   |  |  |
|  | <i>Hypophloeus sternalis</i> Gebien,<br>1914          | E |  | Gebien, 1914   |  |  |
| <i>Ischnarthron</i> Gebien, 1920               | <i>Ischnarthron longipes</i> Gebien,<br>1921          | E |  | Gebien, 1921   |  |  |

(continued)

| Higher taxonomy                                     | Species   | P | ST | A | Reference       | ML | Synonyms   |
|---|---|---|----|---|-----------------|----|--|
| <i>Microcrypticus</i> Gebien, 1921                  | <i>Microcrypticus scriptipennis</i> (Fairmaire, 1875) | R |    |   | Gebien, 1942    |    |  |
| <i>Playdema</i> Laporte de Castelnau & Brullé, 1831 | <i>Playdema capucinum</i> Gebien, 1921                | E |    |   | Gebien, 1921    |    |  |
| <i>Stomylus</i> Fährreus, 1870                      | <i>Stomylus maculosus</i> (Thomson, 1858)             | R |    |   | Gebien, 1942    |    | <i>Pselaphidion macularium</i> ; <i>Pselaphidion maculosum</i> ; <i>Playdema maculosum</i> |
| Subfamily <b>Lagriinae</b> Latreille, 1825 (1820)   |   |   |    |   |                 |    |  |
| <i>Luprops</i> Hope, 1833                           | <i>Luprops chalceus</i> Gebien, 1921                  | R |    |   | Microland       | *  |  |
| <i>Physolagria</i> Fairmaire, 1891                  | <i>Physolagria molleri</i> Fairmaire, 1891            | E |    |   | Fairmaire, 1891 | *  |  |
| <i>Prioccelis</i> Hope, 1840                        | <i>Prioccelis haesitans</i> Kolbe, 1903               | E |    |   | Jordan, 1903    | *  | <i>Prioccelis serrata haesitans</i>  |
| Subfamily <b>Phrena patinae</b> Solier, 1834        |   |   |    |   |                 |    |  |
| <i>Afrotagalus</i> Gebien, 1942                     | <i>Afrotagalus vietiei</i> Ardoin, 1958               | E |    |   | Ardoin, 1958    |    |  |
| Subfamily <b>Stenochiinae</b> Kirby, 1837           |   |   |    |   |                 |    |  |
| <i>Alcyonotus</i> Pascoe, 1882                      | <i>Alcyonotus insularis</i> Ardoin, 1958              | E |    |   | Ardoin, 1958    |    |  |
| <i>Derosphaerus</i> Thomson, 1858                   | <i>Derosphaerus globicollis</i> Thomson, 1858         | R | R  | R | Gebien, 1942    |    |  |
|   | <i>Derosphaerus monosus</i> (Motschulsky, 1872)       | R | R  |   | Gebien, 1921    |    |  |
| <i>Eremobatodes</i> Gebien, 1943                    | <i>Eremobatodes crux</i> (Gebien, 1921)               | E |    |   | Gebien, 1942    | *  | <i>Eremobates crux</i>   |
|   | <i>Eremobatodes metallicus</i> (Ardoin, 1958)         | E |    |   | Ardoin, 1958    |    | <i>Eremobates metallicus</i>   |
| <i>Menephilus</i> Mulsant, 1854                     | <i>Menephilus carbonatus</i> Gebien, 1921             | E | E  |   | Gebien, 1921    |    |  |
|   | <i>Menephilus conquinatus</i> Karsch, 1881            | E |    |   | Karsch, 1881    | *  |  |

|   |   |   |                           |                               |
|---|---|---|---------------------------|-------------------------------|
| <i>Nesosphaerotus</i> Gebien, 1921      | <i>Nesosphaerotus aeneus</i> Gebien,<br>1921        | E | Gebien, 1921              | *                             |
|   | <i>Nesosphaerotus egena</i> Gebien,<br>1921         | E | Gebien, 1921              |                               |
|   | <i>Nesosphaerotus justi</i> Karsch, 1881            | E | Karsch, 1881              | *                             |
|   |   |   | Ardoin, 1962              | <i>Derosphaerus justi</i>     |
|   | <i>Nesosphaerotus kuhzeri</i> Ardoin,<br>1962       | E |                           |                               |
|   | <i>Nesosphaerotus marquesi</i> Karsch,<br>1881      | E | Karsch, 1881              | <i>Derosphaerus marquesii</i> |
|   | <i>Nesosphaerotus simplicifrons</i><br>Gebien, 1921 | E | Gebien, 1921              |                               |
|   | <i>Nesosphaerotus striatipennis</i><br>Gebien, 1921 | E | Gebien, 1921              |                               |
|   | <i>Nesosphaerotus viettei</i> Ardoin,<br>1958       | E | Ardoin, 1958              | *                             |
| <i>Strongylium</i> Ditmar, 1809         | <i>Strongylium camiadei</i> Robiche,<br>2000        | E | Robiche, 2000             |                               |
|   | <i>Strongylium feai</i> Gebien, 1921                | E | Gebien, 1921              | *                             |
| <hr/>                                   |   |   |                           |                               |
| Subfamily Tenebrioninae Latreille, 1802 |   |   |                           |                               |
| <i>Alphitobius</i> Stephens, 1829       | <i>Alphitobius laevigatus</i> (Fabricius,<br>1781)  | I | Luna de<br>Carvalho, 1984 |                               |
|   | <i>Alphitobius viator</i> Mulsant &<br>Godart, 1868 | R | Gebien, 1942              |                               |
| <i>Amenophis</i> Thomson, 1858          | <i>Amenophis insularis</i> Gebien, 1921             | E | Gebien, 1921              |                               |
|   | <i>Amenophis minor</i> Gebien, 1921                 | E | Gebien, 1921              |                               |
|   | <i>Amenophis striata</i> Gebien, 1921               | E | Gebien, 1921              |                               |
|   | <i>Cryphaeus taurus</i> (Fabricius, 1801)           | R | Jordan, 1903              | *                             |
|   | <i>Diaclina parallela</i> (Thomson,<br>1858)        | R | Gebien, 1921              |                               |

(continued)

| Higher taxonomy                             | Species  | P | ST | A                      | Reference | ML | Synonyms                        |
|---|--|---|----|------------------------|-----------|----|---------------------------------|
| <i>Gonocephalum</i> Solier, 1834            | <i>Gonocephalum angolense</i><br><i>subtilistratum</i> Kolbe, 1887 | R |    | Gebien, 1921           |           |    | <i>Gonocephalum granicolle</i>  |
|   | <i>Gonocephalum calcariipes</i> (Karsch, 1881)                     | R |    | Karsch, 1881           |           |    | <i>Opatrum calcaripes</i>       |
|   | <i>Gonocephalum fœae</i> Gebien, 1921                              | E |    | Gebien, 1921           |           |    |                                 |
|   | <i>Gonocephalum prolatum</i><br>(Erichson, 1843)                   | R | R  | Gebien, 1921           |           |    |                                 |
|   | <i>Gonocephalum simplex</i> (Fabricius, 1801)                      | R |    | Gebien, 1942           |           |    |                                 |
| <i>Hoplonyx</i> Thomson, 1858               | <i>Hoplonyx insularis</i> Gebien, 1921                             | E |    | Gebien, 1921           |           |    |                                 |
| <i>Megacantha</i> Westwood, 1843            | <i>Megacantha dentata</i> (Fabricius, 1801)                        | R |    | Gebien, 1921           |           |    |                                 |
|   | <i>Nesopatrum Josephii</i> (Karsch, 1881)                          | E |    | Karsch, 1881           |           |    | <i>Opatriinus josephi</i>       |
| <i>Palorus</i> Mulsant, 1854                | <i>Palorus carinicollis</i> Gebien, 1921                           | R |    | Gebien, 1921           |           |    | <i>Platyotus carinicollis</i>   |
|   | <i>Palorus subdepressus</i> (Wollaston, 1864)                      | R |    | Gebien, 1921           |           |    |                                 |
| <i>Peltoides</i> Laporte de Castelnau, 1832 | <i>Peltoides senegalensis</i> Laporte de Castelnau, 1832           | R |    | Gebien, 1921           |           |    |                                 |
| <i>Tenebrio</i> Linnaeus, 1758              | <i>Tenebrio (Afrotenebrio) guineensis</i> Imhoff, 1843             | R |    | Gebien, 1921           |           |    |                                 |
| <i>Tribolium</i> Macleay 1825               | <i>Tenebrio legalii</i> Robiche, 2009                              | E |    | Robiche, 2009          |           |    |                                 |
|   | <i>Tribolium castaneum</i> (Herbst, 1797)                          | I |    | Luna de Carvalho, 1984 |           |    |                                 |
|   | <i>Tribolium semicostata</i> Gebien, 1921                          | R |    | Gebien, 1921           |           |    | <i>Tenebrioloma semicostata</i> |
| <i>Ulloma</i> Dejean, 1821                  | <i>Ulloma collaris</i> Gebien, 1921                                | E |    | Gebien, 1942           |           |    |                                 |
|   | <i>Ulloma costae</i> Karsch, 1881                                  | E |    | Karsch, 1881           | *         |    |                                 |
|   | <i>Ulloma laesicollis</i> Thomson, 1858                            | R |    | Gebien, 1921           |           |    |                                 |

|  |  |   |  |                                 |   |
|--|--|---|--|---------------------------------|---|
| <i>Zidalus</i> Mulsant & Rey, 1852             | <i>Zidalus latipes</i> (Sahlberg, 1823)          | R |  | Gebien, 1921                    | <i>Opatrinus atratus</i> ; <i>Opatrinus opacus</i>        |
| <hr/>  |  |   |  |                                 |   |
| Family <b>Trogossitidae</b> Latreille, 1802    |  |   |  |                                 |   |
| Subfamily <b>Trogosittinae</b> Latreille, 1802 |  |   |  |                                 |   |
| <i>Tennoscheila</i> Westwood, 1830             | <i>Tennoscheila patricioi</i> (Karsch, 1881)     | E |  | Karsch, 1881                    | <i>Trogositta patriciae</i> ; <i>Trogositta patricioi</i> |
| <i>Tenebroides</i> Piller & Mittelpacher, 1783 | <i>Tenebroides maroccanus</i> Reitter, 1884      | I |  | Luna de Carvalho, 1984          |   |
|  | <i>Tenebroides mauritanicus</i> (Linnaeus, 1758) | I |  | Luna de Carvalho, 1984          |   |
| <hr/>  |  |   |  |                                 |   |
| Family <b>Zopheridae</b> Solier, 1834          |  |   |  |                                 |   |
| Subfamily <b>Colydinae</b> Billberg, 1820      |  |   |  |                                 |   |
| <i>Bitoma</i> Herbst, 1793                     | <i>Bitoma siccana</i> (Pascoe, 1863)             | R |  | Pope, 1961                      | <i>Bitoma lyciformis</i>                                  |
| <i>Mecedanum</i> Erichson, 1845                | <i>Mecedanum auberti</i> (Fairmaire, 1882)       | R |  | Serrano,<br>unpublished<br>data |   |
| <i>Microprius</i> Fairmaire, 1868              | <i>Microprius rufulus</i> (Moischulsky, 1863)    | R |  | Pope, 1961                      | <i>Microprius confusus</i>                                |

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