Lepidopteran biodiversity of Ethiopia: current knowledge and future perspectives

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Abstract

Lepidoptera is the second largest order of insects. Encompassing moths and butterflies, it is regarded as one of the most important components of biodiversity. Here, an updated comprehensive overview of Lepidoptera recorded in Ethiopia is presented, composed of 2,438 taxa in 48 families, of which 664 are endemic. Records were compiled from various literature sources and website databases. Although still being far from complete, this review provides important baseline data for understanding zoogeographic patterns and thus for undertaking effective conservation action. Further research on Ethiopian Lepidoptera is encouraged.

Keywords

Africa, butterflies, checklist, DNA barcoding, endemic, Ethiopian moths

Introduction

Ethiopia is among the largest countries in the African continent, located in the horn of Africa, covering a total area of 1,127,127 km² (Gordon and Carillet 2003; EBI 2015; Tesfu et al. 2018). It belongs to the Afro-tropical Region (former Ethiopian Region) and, based on the bioclimatic classification of Burgess et al. (2004), comprises the zones “Sahelian Savanna”, “Somalian Xeric Bushland and Shrubland” and “Ethiopian...
Montane forest and Alpine Moorland” (Hacker 2019). The country’s topography is very diverse, with 20 mountains peaks above 4,000 meters. The highest mountain, Ras Dashen, peaks 4,620 m above sea-level, the fourth-highest in Africa, whilst the third-lowest point in Africa, the Danakil Depression, reaches down to 125 m below sea level. The dominating topographic element is the vast and fertile central highland that accounts for 37% of the land area of the country with an average elevation from 1,500 to 2,400 m that deserved the country to be known as ‘roof of Africa’. It is the largest block of land above 1,500 m in Africa (Clausnitzer and Dijkstra 2005), dissected by the Great Rift Valley and surrounded by lowlands along the periphery (Gordon and Carillet 2003). The mean annual rainfall ranges from 500 mm to 2,800 mm and the mean annual temperatures range from around 10° to above 30 °C. Because of these diverging abiotic parameters, the country is endowed with an amazingly diversity of plant, animal and microbial organisms (EBI 2015). According to Clausnitzer (2014), the rate of endemism in Ethiopia’s flora and fauna is exceptionally high as a result of vast highlands being isolated by the surrounding dry lowlands. Only the most eurytopic and mobile species (usually those of the lowlands) tend to be found in both Ethiopia and the rest of tropical Africa. In the same manner, Kravchenko et al. (2007) stated that the territory of Ethiopia hosts an extraordinarily diverse landscape including high mountains, lowlands, deserts and tropical rain forests that resulted in a hyperdiverse fauna and flora. Likewise, in consequence of its rich biodiversity, Ethiopia is acknowledged as one of the 20-mega-biodiverse countries in the world (Mittermeier et al. 2011; Tesfu et al. 2018).

Lepidoptera represent the second largest insect order, which consists of approximately 140 different families and 160,000 species that have been described and recognised worldwide, so far (Biodiversity Institute of Ontario 2006; Kristensen et al. 2007; Nieukerken et al. 2011). Lepidoptera comprise nearly 17% of all insect species, and some recent estimates suggest that the real number of Lepidoptera species would set up to 500,000 species (Brandao et al. 2009).

The aims of this paper are to give an updated comprehensive presentation of the actual knowledge of Ethiopian Lepidoptera and to provide some estimates for the expected biodiversity of this major insect order in the country.

Materials and methods

The present review is based on all pertinent published scientific papers. In addition, records from up to date and relevant online databases were also included, particularly, records from the Natural History Museum of London website (“NHMUK”: Beccaloni et al. 2003), the Barcode of Life Data Systems (“BOLD”: Ratnasingham and Hebert 2007), the African moth website (Goff 2008), LepiMap (Navarro 2007), the African Butterfly Database (Sáfián et al. 2009), the Afmoth website (De Prins and De Prins 2019) and the Afrotropical Butterflies and Skippers digital encyclopaedia (Williams 2018). In all cases, records were included only when sample identifica-
tions were made at specific (or subspecific) level, and the provenience from Ethiopia was clearly indicated. Data from entomological collections but not publicly accessible were not considered.

We followed the classification system and nomenclature (valid names and synony-
mies) used in De Prins and De Prins (2019) with some updates coming from more recent publications. For Rhopalocera, the Afrotropical Butterflies and Skippers digital encyclopaedia (Williams 2018) served as reference. These two outstanding references have also represented the fundamental database and resource for our compilation of the lepidopteran fauna of Ethiopia.

Lepidoptera exploration in Ethiopia: from early explorers to present

Many entomologists have contributed to our current knowledge of the Ethiopian Lepidoptera fauna. The following selection provides the most significant contributions made by past pioneers and current explorers.

Johann Christoph Friedrich Klug in 1829 was the first to mention Abyssinia, the former name of Ethiopia, in the description of a new Lepidoptera species, the butterfly *Pontia eupompe* (Klug, 1829) now *Colotis danae* ssp. *eupompe* (Nazari et al. 2011), indicating as locus typicus “in Arabia deserta, in Sinai monte, in Dongala et Habessinia”.

From the mid-nineteenth century, additional descriptions came from few authors such as Félix Edouard Guérin-Méneville (1849), Louis Reiche (1850), and Hippolyte Lucas (1852). However, the most significant advance in the nineteenth century was made by the French entomologist Achille Guenée, who published various contributions between 1852 and 1858. He described 31 new species belonging to the Noctuoideae and Geometroidea, based on material collected mainly by Georg Wilhelm Schimper in 1850. In all cases, the locus typicus was indicated as “Abyssinia” (Guénée 1852).

Other important contributions to the study of Ethiopian Lepidoptera were made subsequently, many of which have reported the description of new species from specimens collected in the country. For instance, George Hampson described 23 species from different families in the period between 1896 and 1930 (Hampson 1896, 1898, 1899, 1905, 1909, 1910, 1913, 1916, 1918, 1919, 1926, 1930). Edward Meyrick firstly reported Microlepidoptera from the country, with 40 new species, from the material collected during the expeditions carried out by Hugh Scott and Omer-Coper in 1926–1927 (Meyrick 1932). The most important contribution to the study of butterflies was made by Lionel Walter Rothschild and Karl Jordan, during the first decades of the twentieth century, with 34 new taxa (Rothschild 1902, 1926; Rothschild and Jordan 1900, 1903, 1905). Debauche (1937) reported 42 geometrid species from Ethiopia with eight new descriptions. Likewise, Emilio Berio published many papers dedicated to the Erebidae and Noctuidae of East Africa, describing from Ethiopia 12 and 37 species, respectively (Berio 1939a, 1940a, 1943, 1944, 1945, 1947, 1954, 1962, 1975, 1977), some of them from the localities of Adu-Abuna and Metema, at that time part of Eritrea, but now in Tigray, Northern Ethiopia (Berio 1937, 1939b,
Pierre-Claude Rougeot has explored the country several times in 1970s and described 55 new species belonging to various families (Rougeot 1974, 1975, 1977, 1984, Plantrou and Rougeot 1979; Laporte and Rougeot 1981; Rougeot and Laporte 1983). The two French entomologists Bernard Laporte and Claude Herbulot in their publications described from Ethiopia 137 new noctuid (specifically, eight species of Erebidae, two species of Nolidae, and 127 Noctuidae) and 22 new geometrid taxa, respectively (Herbulot 1983, 1993, 2002; Laporte 1974, 1975, 1976, 1978; Rougeot 1977, 1984; Laporte and Rougeot 1981; Rougeot and Laporte 1983; Rougeot et al. 1991).

With the new millennium, the country has awakened a renewed interest from entomologists, which led to the description of 255 new taxa in 18 years. In particular, major contributions to Ethiopian Lepidoptera were made by Hermann H. Hacker, with various colleagues, for Erebidae, Nolidae and Noctuidae (178 new taxa); David Agassiz for Yponomeutidae (five new taxa); Jósef Razowski and Pasquale Trematerra for Tortricidae (34 new taxa described); Axel Hausmann, Andrea Sciarretta and Francesco Parisi for Geometridae (27 new taxa); Ulf Eitschberger and Tomas Melichar for Sphingidae, with eleven new taxa (Hacker and Fibiger 2007; Hacker and Zilli 2007; Haxaire and Melichar 2008; Hausmann et al. 2014, 2016; Hacker et al. 2008, 2012; Razowski and Trematerra 2010, 2012; Hacker and Mey 2010; Hacker 2011, 2013, 2014, 2016, 2019; Eitschberger and Ströhle 2011; Melichar and Řezáč 2015; Eitschberger and Melichar 2016; Melichar et al. 2016; Razowski et al. 2018; Agassiz 2019).

Many of these and other minor contributions resulted from dedicated expeditions, such as the “Joint Ethiopian-Russian Biological Expedition” lead by Vasiliy Kravchenko from Tel Aviv University, Israel; the “Ethiopian Insects Project”, between the Ethiopian Wildlife Conservation Authority (EWCA), the Bavarian State Collection of Zoology (ZSM) and the Museum Thomas Witt (MWM) in Munich, Germany; the projects carried out by the Italian entomologists of the University of Molise with EWCA and Ethiopian Biodiversity Institute (Kravchenko et al. 2007; Sciarretta et al. 2014; Hausmann et al. 2016).

**Current state of knowledge on Ethiopian Lepidoptera**

Based on the results of our current review, 2,438 Lepidoptera taxa (species or subspecies) are known to occur in Ethiopia hitherto, belonging to 48 families (Table 1; full list at: [https://doi.org/10.5281/zenodo.3234617](https://doi.org/10.5281/zenodo.3234617)). This number includes 170 taxa which are not reported by the scientific literature but have been extracted from the above-mentioned websites.

In particular, 929 species or subspecies were described from type specimens collected in Ethiopia, 131 of them, mostly butterflies, at subspecific level (Table 2). It is interesting to note that endemic taxa number 664, approximately 27% of the total Lepidoptera. This high number can be explained by the particular physical and biogeographical history of the country and a broad range of different ecosystems with great diversity of habitats.
Given these numbers, knowledge on the Ethiopian butterflies and moths appear to be particularly unsatisfactory, when compared to their (estimated) potential total numbers with other countries. For instance, the two most diverse European Mediterranean countries, i.e., France and Italy, with a combined land surface comparable to Ethiopia, have ca. 5,109 and 5,086 species of Lepidoptera, respectively (Stoch 2003; Wikipedia 2011).

To better evaluate the level of knowledge of the lepidopteran fauna in Ethiopia, and to roughly estimate the real biodiversity, we can compare it with neighboring
Table 1. Ethiopian Lepidoptera families and number of taxa (species and subspecies) reported.

| No. | Family          | Total number of taxa | Common name                  |
|-----|-----------------|----------------------|------------------------------|
| 1   | Bedelliidae     | 1                    | Narrow-winged moths          |
| 2   | Blastobasidae   | 2                    | Scavenger moths              |
| 3   | Bombycidae      | 2                    | Silkworm moths               |
| 4   | Brahmaeidae     | 2                    | Brahmin moths                |
| 5   | Carposinidae    | 1                    | Fruitworm moths              |
| 6   | Choreutidae     | 2                    | Metalmark moths              |
| 7   | Cosmopterigidae | 4                    | Cosmet moths                 |
| 8   | Cossidae        | 17                   | Carpenterworm moths          |
| 9   | Crambidae       | 109                  | Grass moths                  |
| 10  | Depressariidae  | 2                    | Flat-bodied moths            |
| 11  | Drepanidae      | 1                    | Hook-tips                    |
| 12  | Elachistidae    | 1                    | Grass miner moths            |
| 13  | Epermeniidae    | 1                    | Fringe-tufted moths          |
| 14  | Erebididae      | 523                  | Tiger moths                  |
| 15  | Eupterotidae    | 8                    | Snout moths                  |
| 16  | Euteliidae      | 10                   | Euteliid moths               |
| 17  | Gelechiidae     | 10                   | Twirler moths                |
| 18  | Geometridae     | 306                  | Geometer moths               |
| 19  | Glyphipterigidae| 1                    | Sedge moths                  |
| 20  | Gracillariidae  | 13                   | Leafminer moths              |
| 21  | Hesperiidae     | 36                   | Skipper butterflies          |
| 22  | Hybniidae       | 1                    | Teak moths                   |
| 23  | Lasiocampidae   | 38                   | Lappet moths                 |
| 24  | Limacodidae     | 15                   | Slug caterpillar moths        |
| 25  | Lycaenidae      | 116                  | Gossamer-winged butterflies  |
| 26  | Lyonetiidae     | 2                    | Lyonet moths                 |
| 27  | Metarbelidae    | 4                    | Wood-borer moths             |
| 28  | Noctuidae       | 471                  | Owlet moths                  |
| 29  | Nolidae         | 85                   | Tuft moths                   |
| 30  | Notodontidae    | 28                   | Prominent moths              |
| 31  | Nymphalidae     | 178                  | Brush-footed butterflies      |
| 32  | Oecophoridae    | 1                    | Concealer boths              |
| 33  | Papilionidae    | 17                   | Swallowtail butterflies       |
| 34  | Pieridae        | 79                   | Yellows, Whites, & Sulphurs  |
| 35  | Pluritellidae   | 5                    | Diamondback moths            |
| 36  | Psychidae       | 6                    | Bagworm moths                |
| 37  | Pterophoridae   | 39                   | Plume moths                  |
| 38  | Pyralidae       | 31                   | Snout moths                  |
| 38  | Saturniidae     | 53                   | Emperor moths                |
| 40  | Scythrididae    | 7                    | Flower moths                 |
| 41  | Sesiidae        | 6                    | Clearwing moths              |
| 42  | Sphingidae      | 81                   | Hawk moths                   |
| 43  | Thyrididae      | 9                    | Picture-winged leaf moths    |
| 44  | Tineidae        | 38                   | Fungus moths                 |
| 45  | Torricidae      | 60                   | Leafroller moths             |
| 46  | Uraniidae       | 3                    | Swallowtail moths            |
| 47  | Yponomeutidae   | 6                    | Ermine moths                 |
| 48  | Zygaenidae      | 8                    | Burnet moths                 |
|     | **Total**       | **2438**             |                              |
Table 2. List of Lepidoptera taxa originally described from Ethiopia (only valid names are listed). An asterisk (*) denotes that the town is in Sudan, but the river originates in Ethiopia. The type locality is recorded with the corrected spelling or current locality name in square brackets. The endemic taxa from Ethiopia are indicated with E in the last column. Synonymies are not reported. De Prins and De Prins (2019) and Williams (2018) have been used as a basic reference for the preparation of the list.

| Family       | Taxon                          | Author                     | Type Locality                      |
|--------------|--------------------------------|----------------------------|------------------------------------|
| 1            | Blastobasidae                  | Blastobasis eridryas       | Mt Chillálo                        |
| 2            | Brahmaeidae                    | Dactyloceras richinnii     | Adi Abuna [in Tigray, Ethiopia]    |
| 3            | Carposinidae                   | Carposina candace          | Jem-Jem Forest                     |
| 4            | Choreutidae                    | Choreutis argynatras      | Mt Zukwala/Cuqala                  |
| 5            | Telophanthis aethiopica       | Meyrick, 1932              | Mt Chillálo                        |
| 6            | Cosmopterigidae                | Acaleniella secretifera    | Mt Chillálo                        |
| 7            | Cosmoptericis epimargadula    | Meyrick, 1932              | 14 km S of Debre Tabor, Alemsaga Forest |
| 8            | Cossidae                       | Aethalopterys obscurascens | Centr. Abyss., Maraquo             |
| 9            | Camellocossus aethiopica      | Yakovlev & Witt, 2017     | Ioubdo, Birbir                     |
| 10           | Camellocossus latibela         | Yakovlev & Witt, 2017     | Ethiopia SE, Bale, 11 km SW        |
| 11           | Camellocossus strobi             | Yakovlev & Witt, 2017     | Goba, Bale Mts                     |
| 12           | Macrocosus sidamo              | Rougeot, 1977              | Kaffa, Ghimira                     |
| 13           | Oreocossus ungemachi           | Rougeot, 1977              | Kaffa, Ghimira                     |
| 14           | Strigocossus kushit            | Rougeot, 1977              | Kaffa, Ghimira                     |
| 15           | Crambidae                      | Adelpherupa aethiopolialis | SW Abyssinia [Ethiopia], Dijemma [Jimmma] |
| 16           | Athrodites dasyia              | Rougeot, 1977              | Kaffolé [Kofale]                   |
| 17           | Alphacrambus cristatus         | Bassi, 1995                | Kaffolé [Kofale]                   |
| 18           | Ancylolomia jacquelineae       | Rougeot, 1984              | Kaffolé [Kofale]                   |
| 19           | Ancylolomia shafferi           | Rougeot, 1977              | Kaffolé [Kofale]                   |
| 20           | Ancylolomia shefferials        | Rougeot, 1984              | Kaffolé [Kofale]                   |
| 21           | Chilo laniferalis              | Hampson, 1896              | Abyssinia [Ethiopia]               |
| 22           | Classyphana aphrodite          | Bleszyński, 1964          | Dire Dawa                          |
| 23           | Crambus arnaudiae              | Rougeot, 1977              | Kaffolé [Kofale]                   |
| 24           | Crambus bachi                  | Bassi, 2012                | Kaffolé [Kofale]                   |
| 25           | Crambus bellinii               | Bassi, 2014                | Kaffolé [Kofale]                   |
| 26           | Crambus boislamberti           | Rougeot, 1977              | Kaffolé [Kofale]                   |
| 27           | Crambus dedalus                | Bassi, 2000                | Kaffolé [Kofale]                   |
| 28           | Crambus descarpentriési        | Rougeot, 1977              | Kaffolé [Kofale]                   |
| 29           | Crambus jupiter                | Bleszyński, 1963          | Ethiopia SW, Gamu-Gofa, Konso      |
| 30           | Crambus netuncus               | Bassi, 2012                | Near Debra Libanos                 |
| 31           | Crambus richteri               | Bleszyński, 1963          | Kaffa, Ghimira                     |
| 32           | Dembea verrucicolora           | Ragonot, 1888              | Abyssinia [Ethiopia]               |
| 33           | Eucnemus donum                 | Schouten, 1988             | Haro-Alli, Guur                   |
| 34           | Euclasta sidamona              | Rougeot, 1977              | Kaffolé [Kofale]                   |
| 35           | Euclastia castalii             | Warren, 1892               | Abyssinia [Ethiopia]               |
| 36           | Leucinodes ethiopica           | Mally, Korycinska, Agassiz, | Dire Dawa Region, Dire Dawa District, Dire Dawa |
| 37           | Lyopria nigricornis            | Hampson, 1898              | Abyssinia [Ethiopia]               |
| 38           | Noorda trimaculalis            | Amsel, 1965                | Ethiopia SW, Gamu-Gofa, Konso      |
| Family                  | Taxon                          | Author               | Type          | Locality                   |
|------------------------|-------------------------------|----------------------|---------------|-----------------------------|
| Crambidae              | Noorda unipunctalis          | Amsel, 1963          | Konso         | E                           |
| Pagydida               | Pagyda pulvereiambulalis     | (Hampson, 1918)      | Diré Daouá [Dire Dawa] | E                           |
| Pediasi                | Pediasi ferruginea           | Bleszyński, 1963    | Kaffa, Gembi  | E                           |
| Pediasi                | Pediasi simiensis            | Bleszyński, 1962    | Soddu Province, Wolamo [Walta] | E                           |
| Prionapteryx           | Prionapteryx selenalis       | (Hampson, 1919)     | Taddecha Mulika | E                           |
| Prionotalis            | Prionotalis frisi            | Bleszyński, 1963    | Ethiopia SW, Gamu-Gofa, Konso | E                           |
| Tegostona              | Tegostona richteri           | Amsel, 1963          | Awash         | E                           |
| Depressariidae         | Odites aethiopicus           | Lyovsky, 2001        | Kaffa, Gembi  | E                           |
| Elachistidae           | Elachista delocharisi        | Meyrick, 1932        | Jem-Jem Forest | E                           |
| Erebididae             | Achaea monodi                | Laporte, 1975        | near Kebré-Mengist [Kibre Mengist] | E                           |
| Afrosura               | Afrosura rivulsa ethiopica   | Durante, 2009        | Menegesha-Suba state Forest | E                           |
| Afrosura               | Afrosura indecisa orientalis | Durante, 2009        | Menegesha-Suba state Forest | E                           |
| Afrosura               | Afrosura terlinea            | Durante, 2009        | Langano Lake  | E                           |
| Afrojavaonica          | Afrojavaonica kostlani       | (Gaede, 1923)        | Adis-Ababa    | E                           |
| Alpensia               | Alpensia gernipuncta         | (Hampson, 1916)      | Abyssinia [Ethiopia] | E                           |
| Amata                  | Amata alicia                 | (Butler, 1876)       | Abyssinia [Ethiopia] | E                           |
| Amata                  | Amata magrettii              | Berio, 1937          | Metema [in Tigray, Ethiopia] | E                           |
| Amata                  | Amata rufina                 | (Oberthür, 1878)     | Abyssinia [Ethiopia] | E                           |
| Amata                  | Amata shoa                   | (Hampson, 1898)      | Abyssinia [Ethiopia] | E                           |
| Amata                  | Amata velatipennis           | Walker, 1865         | Marako        | E                           |
| Amphicallia            | Amphicallia kostlani         | Strand, 1911         | Gipfel des Suygala | E                           |
| Amucta                 | Amucta nigriignata           | Gaede, 1923          | Addis Ababa   | E                           |
| Amsactarcia            | Amsactarcia radiosa          | (Pagenstecher, 1903) | Darassum      | E                           |
| Anomis                 | Anomis sabulifera            | (Guénée, 1852)       | Abyssinia [Ethiopia] | E                           |
| Antiophilebia           | Antiophilebia bourgognei     | Laporte, 1975        | Arba Minch    | E                           |
| Aroa                   | Aroa quadriplagata           | Pagenstecher, 1903   | Galata        | E                           |
| Asurina                | Asurina xanthophata          | Toulgoët, 1977       | Ethiopia      | E                           |
| Beriodesma             | Beriodesma smithii           | (Holland, 1897)      | River Darde  | E                           |
| Brunia                 | Brunia birkettsmithi         | (Toulgoët, 1977)     | Kébré-Mengist [Kibre Mengist] | E                           |
| Brunia                 | Brunia dorsti                | (Toulgoët, 1977)     | Kébré-Mengist [Kibre Mengist] | E                           |
| Callohisma             | Callohisma vietti            | Laporte, 1975        | Arba Minch    | E                           |
| Carcinactia            | Carcinactia rougeoti         | Toulgoët, 1977       | Bale Reserve, Dinsbo | E                           |
| Casama                 | Casama impuna                | (Hering, 1926)       | Abyssinia [Ethiopia] | E                           |
| Cautatha               | Cautatha abyssinia           | Hacker, Fiebig & Stadie | Reg. South Nations, Bonga Guesthouse | E                           |
| Cautatha               | Cautatha bifasciata          | Hacker, Fiebig & Stadie | Reg. South Nations, road Shishinda-Bonga, 6 km, w Wushwush | E                           |
| Cerocala               | Cerocala confusa             | Warren, 1913         | Abyssinia [Ethiopia] | E                           |
| Clytie                 | Clytie thibauti              | Laporte, 1991        | Kibre Mengist | E                           |
| Corgatha               | Corgatha hyperxanthes        | Hacker, Fiebig & Stadie | Reg. South Nations, Bonga Guesthouse | E                           |
| Corgatha               | Corgatha minutulana          | Hacker, 2019         | Southern Prov., 6 km ENE Weyro, Segen river | E                           |
| Corpta                 | Corpta canescens septentrionalis | Hacker, 2016       | 12 km W of Jinka, near border of Mago National Park | E                           |
| Crambiforma            | Crambiforma leucocepta       | Hampson, 1926        | Harrar        | E                           |
| Cryptotida             | Cryptotida digitata          | Kühne, 2005          | Harar         | E                           |
| Cryptotida             | Cryptotida gigantea          | Kühne, 2005          | Harar         | E                           |
| Cerena                 | Cerena curvilinea            | Hampson, 1913        | Taddecha Mulika | E                           |
| Cyana                  | Cyana abyssinica             | Karisch, 2003        | Akaki River, Addis Ababa | E                           |
| Family           | Taxon                 | Author                  | Type Locality                                      |
|------------------|-----------------------|-------------------------|----------------------------------------------------|
| 87 Erebidae      | Cyana ethiopica       | Karisch, 2013           | near Kebré-Mengist [Kibre Mengist] E               |
| 88               | Dasychira grisea      | Pagenstecher, 1903      | Bone                                              | E         |
| 89               | Dasychira pleia       | Collenette, 1938        | Abyssinia [Ethiopia]                               | E         |
| 90               | Digama meridionalis deliae | Berio, 1939        | Adu-Abuna [in Tigray, Ethiopia]                   | E         |
| 91               | Donuctenusa fiorii    | Berio, 1940             | Ogaden, Uarder [Warder] E                          | E         |
| 92               | Enargeiosia elegans   | (Butler, 1877)          | Athbara*                                          | E         |
| 93               | Eublemma accedens aethiopica | Hacker, 2019         | Ethiopia, 3 km N Turmi, Mango Camping Site         | E         |
| 94               | Eublemma aethiopiana  | Hacker, 2019            | Jinka, Mago Nat. Park, Magoriverside              | E         |
| 95               | Eublemma baccatrix    | Hacker, 2019            | Southern Prov., 2.6 km EE Wondo Genet              | E         |
| 96               | Eublemma colacteana   | Hacker, 2019            | 12 km W Jimmer, border Mago Nat. Park              | E         |
| 97               | Eublemma costivinata  | Berio, 1945             | Borana Nagelli [Borena Nagelle]                   | E         |
| 98               | Eublemma диредаона    | Hacker, 2019            | Dire Daoua, Abyssinia E                            | E         |
| 99               | Eublemma ferruginata  | Hacker, 2019            | 20 ESE Sashamane, Wondo Genet                     | E         |
| 100              | Eublemma heteropatura | Hacker, 2019            | Oromia, 7 km NW Yabelo                            | E         |
| 101              | Eublemma joergmuelleri| Hacker & Schrier, 2019  | Ethiopia, Awash N.P., Ethiopia, Awash N.P., Headquarter | E         |
| 102              | Eublemma perturbata   | Hacker, 2019            | Oromia prov., 6.5 km ne Shebe                     | E         |
| 103              | Eublemma plectoversa  | Hacker, 2019            | 8 km N Turmi                                      | E         |
| 104              | Eublemma schreieri    | Hacker, 2019            | Oromia, lkm W vill. Alwuya                        | E         |
| 105              | Eublemma sidamonia    | Hacker, Fiebig & Stadie, 2019 | Sidamo, Yabello, vic. 6km SO near Deritu village | E         |
| 106              | Eublemma siticulina   | Hacker, 2019            | Dire Daoua, Abyssinia E                            | E         |
| 107              | Eublemma uhlenhuthi   | Wiltshire, 1988         | Abyssinia, Dire Daoua [dire-dawa]                 | E         |
| 108              | Euproctis chrysophaea | (Walker, 1865)          | Abyssinia [Ethiopia]                               | E         |
| 109              | Eyralpenus scioana    | (Oberthür, 1880)        | Scioa [Shoa]                                       | E         |
| 110              | Gabilia doriae        | (Oberthür, 1880)        | Mahal Uonz, between Harrar and Addis Abeba [Awash River] |
| 111              | Kenyarcctia melanogastra | (Holland, 1897)        | Gof [Gofa]                                        | E         |
| 112              | Hypena abyssinialis   | Guenée, 1854            | Abyssinia [Ethiopia]                               | E         |
| 113              | Hypena padelekorum    | Lödl, 1995               | Djem-Djem [Jem Jem] Forest E                      | E         |
| 114              | Hypena philippi       | Laporte, 1991           | Arba Minch                                        | E         |
| 115              | Hyposada zavattarri   | Berio, 1944             | Gondaraba                                         | E         |
| 116              | Hypotachia fiorii     | Berio, 1943             | Diredauna [Dire Dawa]                             | E         |
| 117              | Hypotachia glaucata   | (Holland, 1897)         | Sjeik Husein [Shek Hussein]                       | E         |
| 118              | Ischmarctia cinera    | (Pagenstecher, 1903)    | Gogoru                                            | E         |
| 119              | Laelia dabano         | Collenette, 1934        | Dabano River                                      | E         |
| 120              | Lithacodia awassensis | Berio, 1984             | Awassa Lake                                       | E         |
| 121              | Lithacodia persubtilis| Berio, 1984             | Kebré-Mengist                                     | E         |
| 122              | Marcipa rougueti      | Pellrier, 1975          | Kebré-Mengist                                     | E         |
| 123              | Metachrostis debivar  | (Berio, 1947)           | Ogaden, Uahual [Wawwal] E                         | E         |
| 124              | Metachrostis pheographa| Hacker, 2011           | 12 km W of Jinka, border Mago National Park       | E         |
| 125              | Metarcctia carmel     | Kiriakoff, 1957         | SW Abyssinia [Ethiopia], Kambatta                  | E         |
| Family       | Taxon                               | Author                  | Type | Locality                                      |
|--------------|-------------------------------------|-------------------------|------|-----------------------------------------------|
| Erebidae     | Metarctia gada                       | Rougeot, 1977           | D    | Dinsho Reserve, Réserve de Balé              |
|              | Metarctia haematricha                | Hampson, 1905           | K    | Kutai Metha                                  |
|              | Metarctia humatina                   | Strand, 1920            | Z    | Zugi Tsana, Zegie Tana                      |
|              | Metarctia negusi                     | Kiriakoff, 1957         | A    | Abyssinia [Ethiopia]                          |
|              | Metarctia noctis                     | Druce, 1910             | D    | Diri Daoua, Diri Dawa                        |
|              | Metarctia satfeldi                   | Kiriakoff, 1960         | V    | Villagio                                      |
|              | Metarctia unicolor                   | (Oberthür, 1880)        | O    | Oromo Country, Fin-Fekére                    |
|              | Micralarctia punctatum purpurus      | (Butler, 1878)          | A    | Abyssinia [Ethiopia]                          |
|              | Oediblemmia peregrina                | Hacker, Fiebig & Stadie, 2019 | E   | Reg. South Nations, Sheiko Forest Road Teppi Mizan Teferi |
|              | Ophiusa dianaria                     | (Guenée, 1852)          | A    | Abyssinia [Ethiopia]                          |
|              | Pantydia dafasi                      | Laporte, 1975           | N    | Koffalé [Koffalé]                            |
|              | Paramarbla abysinica                 | Collenette, 1956        | B    | Birbir, Joubdo [Yubdo]                       |
|              | Panaonagylla sarvattoria             | Berio, 1939             | N    | Negelli [Negelle]                            |
|              | Pericyma schreieri                   | Hacker, 2016            | A    | Gamu-Gofa Province, 3 km N of Turmi          |
|              | Phlyometra angensteini               | Hacker, 2019            | A    | Arba Minch                                   |
|              | Plecopterodes melilua                | (Holland, 1897)         | S    | Sjeikh Husein [Shek Hussein]                 |
|              | Plecopterodes molydena               | Berio, 1954             | G    | Gorgorà, Lake Tana                          |
|              | Podomachla antinortii                | (Oberthür, 1880)        | M    | Mahal Uonz [Awash River]                     |
|              | Polymona ruffermur ellitoni          | Collenette, 1938        | A    | Abyssinia [Ethiopia]                          |
|              | Prolata ethiopica                    | (Hacker, 2011)          | A    | Arba Minch Region, Omo Province, Gemu Gofa   |
|              | Pseudemicodes varia                  | Berio, 1944             | E    | Elolo                                        |
|              | Pterelus attipalpa                   | Hampson, 1910           | A    | Arbara River                                 |
|              | Rhabdophera exarata                  | (Mabille, 1890)         | A    | Abyssinia [Ethiopia]                          |
|              | Ruanda nuda                          | (Holland, 1897)         | R    | River Darde                                 |
|              | Seydelia geometrica                  | (Oberthür, 1883)        | S    | Scioa [Shoa]                                 |
|              | Spilosoma mediopunctata              | (Pagenstecher, 1903)    | A    | Arbarone                                     |
|              | Spilosaoma quadiracumula             | Toulgoët, 1977          | L    | Lalkóli                                      |
|              | Stenilema aurantiaca                 | Hampson, 1909           | A    | Abyssinia [Ethiopia]                          |
|              | Stenilema halisellasi                 | (Birke-Smeeth, 1965)    | A    | Addis Ababa, University College Campus       |
|              | Stenilema aegrota                     | Le Cerf, 1922           | H    | Harar                                        |
|              | Stracilla translucida                 | (Oberthür, 1880)        | S    | Scioa [Shoa], Mahal Uonz                     |
|              | Syngatha eremitia                    | Hacker, Fiebig & Stadie, 2019 | E   | Reg. South Nations, Bonga Guesthouse         |
|              | Syngatha parasctotoides               | Hacker, 2019            | E    | 12 km W Jinka, border Mago National Park     |
|              | Syngatha simplicicata                 | Hacker, Fiebig & Stadie, 2019 | E   | Reg. South Nations, Sheko Forest Road Teppi Mizan Teferi |
|              | Tegiapa ambiguosa                    | Hacker, Fiebig & Stadie, 2019 | E   | Reg. South Nations, road Shishinda-Bonga, 6 km W Wushwush |
|              | Tegiapa obliqua                      | Hacker, Fiebig & Stadie, 2019 | E   | Sidamo, Yabello vic., 10 km W road to Konso |
|              | Tegiapa schreieteri                  | Hacker, 2019            | O    | Oromia Prov., 6 km ESE Jimma                 |
|              | Tracotona abyssinica                 | (Rothschild, 1933)      | C    | Central Abyssinia [Ethiopia], Maraco [Marako] |
|              | Tracotona neumanni                    | Rothschild, 1933        | E    | SW Abyssinia [Ethiopia], Kambatta             |
| Family     | Taxon                                                      | Author          | Type Locality                                      |
|-----------|------------------------------------------------------------|-----------------|---------------------------------------------------|
|           | Teracotona postalbida                                     | (Gaede, 1926)   | Abyssinia [Ethiopia]                               |
| 165       | Teracotona clara rubiginea                                | (Toulgoët, 1977)| Fisha Genet                                       |
| 166       | Teracotona seminigra                                      | (Hampson, 1905) | Zegi Tsana [Tana]                                 |
| 167       | Thyretes negus                                             | Oberthür, 1878  | Abyssinia [Ethiopia]                               |
| 168       | Tegreana nathaliannae                                     | Lapore, 1991    | Wollo, Ataye                                      |
| 169       | Tegreana sandiae                                          | Lapore, 1991    | Wollo Ataye                                      |
| 170       | Trigonodes exportata                                      | Guenée, 1852    | Abyssinia [Ethiopia]                               |
| 171       | Tyronca alabuensis alabuenis                              | Wiltshire, 1970 | Abalu                                             |
| 172       | Tyronca balnearia mutabilis                               | Hacker, 2016    | 15 km N of Arba Minch, 2 km after junction to Chencha |
| 173       | Tyronca heterophya                                        | Hacker, 2016    | Omo Region, Gemu Gofa Province, Arba Minch         |
| 174       | Ulotrichopus phaoleucus griesus                           | Kühne, 2005     | Addis Ababa                                       |
| 175       | Uetheisa ambana                                           | Jordan, 1939    | Abyssinia [Ethiopia]                               |
| 176       | Zekelita heteroleuca                                      | Hacker, 2016    | Southern Province, 11.2 km W of Bonga             |
| 177       | Zekelita lehmanni magnificaaria                           | Hacker, 2016    | 10.5 km W of Weyto                                |
| 178       | Zekelita nilotica                                         | Hacker, 2016    | 30 km SE of Bahir Dar, Tisisat above Blue Nile falls |
| 179       | Phiala abyssinica                                         | Aurivillius, 1904| Zegi Tsana [Tana]                                 |
| 180       | Phiala bergeri                                            | Rougeot, 1975   | Bale                                              |
| 181       | Rhodopteriana abyssinica                                  | (Rothschild, 1917)| Harrar [Harar]                                   |
| 182       | Rhodopteriana sidamoensis                                 | Darge, 2013     | Sidamo Province, near Mega                         |
| 183       | Eutelia favillatrix                                       | Guenée, 1852    | Abyssinia [Ethiopia]                               |
| 184       | Stenosticta schreieri                                     | Hacker, 2010    | 3 km N Türmi, Mango                               |
| 185       | Aphanostricta maxima                                      | Bidziliya & Mey, 2016| Lake Tana, Bahir Dar                           |
| 186       | Chrysoesthia paridis                                      | (Vári, 1963)    | Little Akaki River, near Addis Ababa              |
| 187       | Stegasta sattleri                                         | Bidziliya & Mey, 2011| Addis Ababa                                       |
| 188       | Stomopteryx ochrosena                                     | Meyrick, 1932   | Addis Alam [Alem], ca. 20 miles W. of Addis Ababa |
| 189       | Chiasmia abyssinica                                       | Krüger, 2001    | Harrar [Harar]                                    |
| 190       | Chiasmia procidata                                        | (Guenée, 1858)  | Abyssinia [Ethiopia]                               |
| 191       | Chiasmia streniata                                        | (Guenée, 1858)  | Abyssinia [Ethiopia]                               |
| 192       | Chiasmia trinotatula                                      | Krüger, 2001    | Kabarutar, 56 miles W of Lake Tana                |
| 193       | Cleona oculata sidamo                                     | Herbulot, 1977  | Kébré-Mengist [Kibre Mengist]                     |
| 194       | Cleona pavitzkiae etesiae                                 | Fletcher, 1967  | Harar                                             |
| 195       | Coenina dentataria                                        | Swinhoe, 1904   | Abyssinia [Ethiopia]                               |
| 196       | Comibaena theodori                                        | Hausmann & Parisi, 2014| Kaffa Province, 10 km N of Bonga                 |
| 197       | Drepanogynis nigerrima                                     | (Swinhoe, 1904) | Abyssinia [Ethiopia]                               |
| 198       | Epigynopteryx flavedinaria                                | (Guenée, 1857)  | Abyssinia [Ethiopia]                               |
| 199       | Epigynopteryx rougeoti                                     | Herbulot, 1977  | Dinsha Marshes                                    |
| 200       | Epigynopteryx scotti                                       | Fletcher, 1959  | Ethiopia N, Simien, near Mindigabsa               |
| 201       | Eastria marginata                                         | (Swinhoe, 1904) | Abyssinia [Ethiopia]                               |
| 202       | Eupithecia angulata                                       | Fletcher, 1951  | Harar                                             |
| 203       | Eupithecia dinsoenus                                      | Herbulot, 1983  | Dinso Col                                         |
| 204       | Eupithecia incommoda                                      | Herbulot, 1983  | Dinso Reserve                                     |
| 205       | Eupithecia insinuata                                      | Fletcher, 1950  | Lekamit [Naqamte]                                |
| 206       | Eupithecia inspinata                                      | Fletcher, 1950  | Lekamit [Naqamte]                                |
| Family           | Taxon                        | Author                       | Type | Locality                               |
|------------------|------------------------------|------------------------------|------|----------------------------------------|
| Geometridae      | Eupithecia ochralba          | Herbulot, 1983               | Dinsho Reserve | E                                      |
|                  | Eupithecia pseudoadelliata   | Fletcher, 1951               | Harar | E                                      |
|                  | Eupithecia rougeoti          | Herbulot, 1983               | Dinsho Reserve | E                                      |
|                  | Eupithecia urbanata          | Fletcher, 1956               | Harar | E                                      |
|                  | Geodena brunneomarginata     | Karisch, 2003                | Shoa, 50 km W of Adis Ababa | E                                      |
|                  | Hemistola aetherea          | Debauche, 1937               | Addis Ababa | E                                      |
|                  | Henicosula negus             | Krüger, 2017                 | Diré Daoua [Dawa] | E                                      |
|                  | Heterostegane serrata        | (Fletcher, 1958)             | Diré Daoua [Dare Dawa] | E                                      |
|                  | Hydrelia candace             | Prout, 1929                  | Addis Ababa | E                                      |
|                  | Hypochrosis chiarinii        | (Oberthür, 1883)             | Scioa [Shoa] | E                                      |
|                  | Idaea glomerata              | (Prout, 1937)                | Abyssinia [Ethiopia] | E                                      |
|                  | Lomographa indularia         | (Guénée, 1858)               | Abyssinia [Ethiopia] | E                                      |
|                  | Mimoclystis pudicata cerchei | (Oberthür, 1883)             | Scioa [Shoa], Let-Maresh [Jet Marafia] | E                                      |
|                  | Nothofidonia zenoleuca       | Prout, 1928                  | Woliso, between Hauash [Awash] and Omo | E                                      |
|                  | Odontopera briela            | (Debauche, 1937)             | Mt Chilállo [Chilalo] | E                                      |
|                  | Odontopera integraria        | Guénée, 1858                 | Abyssinia [Ethiopia] | E                                      |
|                  | Odontopera protecta          | Herbulot, 1983               | Dinsho Reserve | E                                      |
|                  | Omphacodes pulchrimoria      | Prout, 1923                  | Abyssinia [Ethiopia] Central | E                                      |
|                  | Oreometra ras                | Herbulot, 1983               | near Mount Batu | E                                      |
|                  | Piercia zukwalensis          | Debauche, 1937               | Mt Zukwa/Cuqala | E                                      |
|                  | Pingasa abyssiniaria         | (Guénée, 1858)               | Harar | E                                      |
|                  | Platypela bifida             | Herbulot, 1984               | near Kébére-Mengist [Kibre Mengist] | E                                      |
|                  | Prasinocyma aquamarina       | Hausmann, Sciarretta & Parisi, 2016 | Bale Mts, 10 km S Rira | E                                      |
|                  | Prasinocyma aetherae         | (Debauche, 1937)             | Addis Ababa | E                                      |
|                  | Prasinocyma albivenata       | Herbulot, 1983               | Dinsho Marsh | E                                      |
|                  | Prasinocyma amharensii       | Hausmann, Sciarretta & Parisi, 2016 | SW Debre Sina & Sembo, Umg. Debre Sina | E                                      |
|                  | Prasinocyma angolica         | Hausmann, Sciarretta & Parisi, 2016 | 7 km NW Yabello | E                                      |
|                  | Prasinocyma angulifera       | Hausmann, Sciarretta & Parisi, 2016 | southern Bale Mts, Harenna Forest | E                                      |
|                  | Prasinocyma batesi distans   | Hausmann, Sciarretta & Parisi, 2016 | Addis Ababa | E                                      |
|                  | Prasinocyma baumquartneri    | Hausmann, Sciarretta & Parisi, 2016 | Harenna Forest | E                                      |
|                  | Prasinocyma berylaria        | Hausmann, Sciarretta & Parisi, 2016 | 13 km W Yabello Motel | E                                      |
|                  | Prasinocyma bongaensis       | Hausmann, Sciarretta & Parisi, 2016 | Bonga, 12 km E | E                                      |
|                  | Prasinocyma discipuncta      | Hausmann, Sciarretta & Parisi, 2016 | 16 km SW Kibre Mengist | E                                      |
|                  | Prasinocyma fallax           | Hausmann, Sciarretta & Parisi, 2016 | SW Debre Sina & Sembo, Umg. Debre Sina | E                                      |
|                  | Prasinocyma fusca            | Hausmann, Sciarretta & Parisi, 2016 | Harenna Forest | E                                      |
|                  | Prasinocyma gojaci           | Prout, 1930                  | Addis Ababa [Addis Ababa] | E                                      |
|                  | Prasinocyma gemnifera        | Hausmann, Sciarretta & Parisi, 2016 | Wushwush, 7.4 km w | E                                      |
| Family         | Taxon                              | Author                          | Type Locality               |
|---------------|-----------------------------------|---------------------------------|----------------------------|
| Geometridae   | Prasinocyma germinaria            | (Guenée, 1857)                  | Abyssinia [Ethiopia]        |
|               | Prasinocyma getachewi             | Hausmann, Sciarretta & Parisi,  | Arba Minch                  |
|               |                                   | 2016                            |                             |
|               | Prasinocyma hailei                | Debauche, 1937                  | Addis Ababa                 |
|               | Prasinocyma immaculata thiacouri  | Herbulot, 1993                  | Debre Zeit                  |
|               | Prasinocyma levensorum            | Hausmann, Sciarretta & Parisi,  | Harenna Forest, Karcha clearing |
|               |                                   | 2016                            |                             |
|               | Prasinocyma lutulenta             | Hausmann, Sciarretta & Parisi,  | Arba Minch                  |
|               |                                   | 2016                            |                             |
|               | Prasinocyma magic                 | Hausmann, Sciarretta & Parisi,  | Mago National park          |
|               |                                   | 2016                            |                             |
|               | Prasinocyma monikae               | Hausmann, Sciarretta & Parisi,  | 13 km W Yabello, Motel      |
|               |                                   | 2016                            |                             |
|               | Prasinocyma pedicata aethiopica   | Hausmann, Sciarretta & Parisi,  | 16 km SW Kibre Mengist      |
|               |                                   | 2016                            |                             |
|               | Prasinocyma robusta               | Hausmann, Sciarretta & Parisi,  | 13 km W Yabello, Motel      |
|               |                                   | 2016                            |                             |
|               | Prasinocyma septentrionalis       | Hausmann, Sciarretta & Parisi,  | Arba Minch                  |
|               |                                   | 2016                            |                             |
|               | Prasinocyma shoa shoa             | Herbulot, 1993                  | Debre Zeit                  |
|               | Prasinocyma shoa yabellenus       | Hausmann, Sciarretta & Parisi,  | 13 km W Yabello, Motel      |
|               |                                   | 2016                            |                             |
|               | Prasinocyma stefani               | Hausmann, Sciarretta & Parisi,  | Bonga, 12 km E              |
|               |                                   | 2016                            |                             |
|               | Prasinocyma tranquilla            | Prout, 1917                     | NW of Harar, Diredaua [Dire Dawa] |
|               | Prasinocyma trematerai simienensis| Hausmann, Sciarretta & Parisi,  | Semien Mountains, chennek Camp |
|               |                                   | 2016                            |                             |
|               | Prasinocyma trematerai trematerai | Hausmann, Sciarretta & Parisi,  | Dinsho                      |
|               |                                   | 2016                            |                             |
|               | Prolepis fiebigi                  | Stadie & Stadie, 2016           | Omo Region, Province of Gemu Gofa, Arba Minch |
|               |                                   |                                 |                             |
|               | Prolepis neumanni                 | Prout, 1932                     | Djiren, Djimma [Jimma]      |
|               |                                   |                                 |                             |
|               | Prolepis sibovoni                  | Stadie & Stadie, 2016           | Sidamo, 13 km W of Yabello, Motel |
|               |                                   |                                 |                             |
|               | Protosteira decolonata            | Herbulot, 1984                  | Semyen, Sankaber            |
|               | Rhodometra labdoides              | Herbulot, 1997                  | Choa [Shoa], Debré Zeit     |
|               | Rhodometra plectaria              | (Guenée, 1857)                  | Abyssinia [Ethiopia]        |
|               | Rougostiella pseudonictua         | Herbulot, 1983                  | Kébré-Mengist [Kibre Mengist] |
|               | Scopula cymna                     | Prout, 1928                     | Gura, Dagaje                |
|               | Scopula scotti                    | Debauche, 1937                  | Addis Ababa                 |
|               | Scopula silonaria                 | (Guenée, 1858)                  | Abyssinia [Ethiopia]        |
|               | Scopula simplificata              | Prout, 1928                     | NE Africa, Ganale River     |
|               | Sesquiaetera lonchota             | Prout, 1931                     | Diré Daoua [Dire Dawa], NW of Harrar |
|               | Somatina psylhiaria               | (Guenée, 1857)                  | Abyssinia [Ethiopia]        |
|               | Tephronia aethiopica              | Herbulot, 1983                  | Shoa, Menagesha Forest      |
|               | Traminda neptunaria               | (Guenée, 1857)                  | Abyssinia [Ethiopia]        |
|               | Trimetopia aetheraria             | Guenée, 1858                    | Abyssinia [Ethiopia]        |
|               | Xanthorhoe abyssinica             | Herbulot, 1977                  | Boré Forest                 |
|               | Xanthorhoe terna                  | Herbulot, 1984                  | Shoa, Menagesha Forest      |
|               | Xanthorrhoe altai                 | Herbulot, 1983                  | Chensha                     |
|               | Xanthorhoe alta                   | Debauche, 1937                  | Mt Chillâlo, Albaso         |
| Family              | Taxon                           | Author            | Type Locality                                    |
|---------------------|---------------------------------|-------------------|-------------------------------------------------|
| 282 Geometridae     | Xanthorhoe cadra                | (Debauche, 1937)  | Mt Chillálo, from forest of Kosso-trees          |
| 283                 | Xanthorhoe cuneoignata          | Debauche, 1937    | Mt Chillálo, Albasso                            |
| 284                 | Xanthorhoe exceclusima          | Herbulot, 1977    | Mt Baru                                         |
| 285                 | Xenimphia sabue amarei          | Hausmann, 2006    | Arba Minch, Region of Omo, Gemu Gofa,           |
| 286                 | Xylopteryx emunctaria           | (Guenée, 1858)    | Abyssinia [Ethiopia]                            |
| 287                 | Xylopteryx guta                  | Herbulot, 2000    | Balé, Harena Forest                             |
| 288                 | Xylopteryx naphelaria           | (Oberthür, 1880)  | Scioa [Shoa]                                    |
| 289                 | Zamarada excavata pollex        | Fletcher, 1974    | Jibabor [Jibabor] Gore                         |
| 290                 | Zamarada hyalinaria             | (Guenné, 1857)    | Abyssinia [Ethiopia]                            |
| 291                 | Zamarada melasma                | Fletcher, 1974    | Dire Daoua [Dire Dawa]                          |
| 292                 | Zamarada secaturia              | (Guenné, 1857)    | Abyssinia [Ethiopia]                            |
| 293                 | Zamarada shoa                   | Herbulot, 2002    | Shoa, 50 km W of Addis Ababa                    |
| 294                 | Zamarada torrida                | Fletcher, 1974    | Dire Daoua [Dire Dawa]                          |
| 295 Glyphipterigidae| Usana semiconoris               | Meyrick, 1932     | Jem-Jem Forest                                  |
| 296 Gracilliidae    | Acrocercops heteroloba          | Meyrick, 1932     | Jem-Jem Forest                                  |
| 297                 | Acrocercops orianassa           | Meyrick, 1932     | Mt Zukwala/Cauqala                              |
| 298                 | Caloptilia macropleurata        | (Meyrick, 1932)   | Jem Jem Forest                                  |
| 299                 | Metacercops hexactis            | (Meyrick, 1932)   | Jem-Jem Forest                                  |
| 300 Metriochroma cariae | Vári, 1963                     | Addis Ababa, Little Akaki River                |
| 301                 | Metriochroma scotinopa          | Vári, 1963        | Dabra Zeit [Debre Zeit]                         |
| 302 Gracilliidae    | Porphyroella homotropha         | Vári, 1963        | Addis Ababa, Little Akaki River                |
| 303                 | Stomphastis heringi             | Vári, 1963        | Near Addis Ababa, Little Akaki River           |
| 304                 | Stomphastis horrens             | (Meyrick, 1932)   | Jem-Jem Forest                                  |
| 305 Hesperiidae     | Abantis meneliki                | Berger, 1979      | Harrar                                          |
| 306                 | Apallaga menageshiae            | Libert, 2014      | Mt Menagesha, NW Addis Abeba                    |
| 307                 | Coeliades chalybe               | Carpenter, 1935   | Alanga River                                    |
| 308 Coeliades       | Coeliades menelik menelik       | (Ungernach, 1932) | Lilm, dans la pays de Sayo                      |
| 309                 | Ereis mixta                     | Evans, 1937       | Dire Daouna [Dire Dawa]                         |
| 310                 | Metisella formosus mittoni      | Carcasson, 1961   | Mega                                             |
| 311 Sarangessa      | lucidella helena                | Evans, 1947       | Harar                                           |
| 312 Lasiocampidae  | Beraldale perobliqua monostriata| Berio, 1940       | Adi-Abuna [in Tigray, Ethiopia]                 |
| 313 Bombycosis      | abysinica                       | Joannou & Krüger, 2009 | Addis Ababa                                    |
| 314 Malocampa       | tougoeti                        | Rougeot, 1977     | Kébré-Mengist [Kibre Mengist]                   |
| 315 Odontochlopetryx| ethonha                         | Tams, 1931        | Djoubdo [Yubdo], Birbir                        |
| 316 Odontochlopetryx| lajonquieri                     | Rougeot, 1977     | near Kébré-Mengist [Kibre Mengist]              |
| 317 Pellastrica     | bararia                         | Zolotuhin & Gurkovich, 2009 | Harar                                           |
| 318 Sena donaldsoni| rougeeti                         | Lajonquière, 1977 | Arba Minch                                      |
| 319 Sena scotti     | (Tams, 1931)                    | Djem-Djem [Jem-Jem] Forest                        |
| 320 Stoermeriana    | abbayensis                      | (Rougeot, 1984)   | Bahar-Dar, marais du Nil Bleu, Abbay            |
| 321 Stoermeriana    | chavaillonii                    | (Rougeot, 1984)   | Melka-Kontouré                                  |
| 322 Stoermeriana    | da                              | (Hering, 1928)    | Eli                                             |
| 323 Stoermeriana    | laportei                        | (Rougeot, 1977)   | Kébré-Mengist [Kibre Mengist]                   |
| 324 Stoermeriana    | marinuscolor                    | (Rougeot, 1984)   | Shoa, Menagesha Forest                          |
| 325 Stoermeriana    | saurayetae                      | (Rougeot, 1984)   | Awassa Lake                                    |
| 326 Stoermeriana    | tansi                           | (Rougeot, 1977)   | Dinsha Marshes, Balé                            |
| 327 Stoermeriana    | vietti                          | (Rougeot, 1977)   | Dinsho Marshes                                  |
## Lepidopteran Biodiversity of Ethiopia

| Family                  | Taxon                              | Author               | Type Locality                          |
|-------------------------|------------------------------------|----------------------|----------------------------------------|
| Lepidopterae            | Crothaema flava                    | Berio, 1940          | Adi-Abuna [in Tigray, Ethiopia]        |
| Lepidopterae            | Hamaritia johanni                 | Rougeot, 1977        | Kêbré-Mengist [Kibre Mengist]          |
| Lepidopterae            | Hamaritia medona moulini          | Rougeot, 1977        | Kêbré-Mengist [Kibre Mengist]          |
| Lepidopterae            | Jordaniana lactea                 | (Pagenstecher, 1903) | Galane                                 |
| Lepidopterae            | Anthene amanah                     | (Guérin-Méneville, 1849) | Dire Dawa                             |
| Lycaenidae              | Anthene butleri butleri           | (Oberthür, 1880)     | Mantek; Mahal-Uonz                     |
| Lycaenidae              | Anthene chajnackii                | Libert, 2010         | 10 km NW of Neghelli                   |
| Lycaenidae              | Anthene confusa                    | Libert, 2010         | Touloudimtou [Tullu Dimtu]             |
| Lycaenidae              | Anthene contrastata               | (Ungemach, 1932)     | Bedelle                                |
| Lycaenidae              | Anthene definita                   | (Pagenstecher, 1902) | Ginir                                  |
| Lycaenidae              | Anthene dulcis                     | (Pagenstecher, 1902) | Gambe beim Abasse-See                  |
| Lycaenidae              | Anthene hodani                     | (Talbot, 1935)       | Kibish River                           |
| Lycaenidae              | Anthene opalina janna             | Gabriel, 1949        | Fich-Babile Road                       |
| Lycaenidae              | Anthene opalina opalina           | Stempffer, 1946      | Callafo [Kafafo], Webi Shebeli, Ogaden |
| Lycaenidae              | Anthene pitmani aethiopana        | Libert, 2010         | Ghibe River, Addis Abeba-Jimma road    |
| Lycaenidae              | Anthene princeps                   | (Butler, 1876)       | Arbara*                                |
| Lycaenidae              | Anthene saddacus                   | (Talbot, 1935)       | Ethiopia                                |
| Lycaenidae              | Anthene suquala                    | (Pagenstecher, 1902) | Suquala                                |
| Lycaenidae              | Axiocerses maureli                | Dufrane, 1954        | Harrar                                  |
| Lycaenidae              | Azanus jesus                        | (Guérin-Méneville, 1849) | Abyssinie [Ethiopia]                   |
| Lycaenidae              | Cacyreus ethiopicus                | (Tite, 1961)         | 25 km north of Quhta                    |
| Lycaenidae              | Cacyreus fructa ghimirra           | Talbot, 1935         | Shoa Ghimirira province                 |
| Lycaenidae              | Chilades elicola                   | (Strand, 1911)       | Eli, Ethiopia                           |
| Lycaenidae              | Deudorix lorisona baronica         | Ungemach, 1932       | Baro River                             |
| Lycaenidae              | Deudorix ungemachici               | Libert, 2004         | Ethiopia                                |
| Lycaenidae              | Eicochrysops antoto                | (Strand, 1911)       | Umgebung unterhalb Antotos             |
| Lycaenidae              | Eicochrysops merymae               | Rougeot, 1983        | Province de Gondar, environs de Debarek |
| Lycaenidae              | Eicochrysops mesapusi sebagadis    | (Guérin-Méneville, 1849) | Abyssinie [Ethiopia]                   |
| Lycaenidae              | Euychrysops abysinicus             | (Aurivillius, 1922)  | Tchaahanani; Debasso                   |
| Lycaenidae              | Euychrysops cyclopteris            | (Butler, 1876)       | Arbara*                                |
| Lycaenidae              | Euychrysops maunsei                | Storage, 1950        | Bahrdâr [Babar Dar] sulle rive meridionali del Lago Tana |
| Lycaenidae              | Abyssinia [Ethiopia]               |                      |                                        |
| Lycaenidae              | Euychrysops nandensis              | (Neave, 1904)        | Lake Tana                              |
| Lycaenidae              | Hypolycaena ogadenensis            | Stempffer, 1946      | Dagahbur, Ogaden                       |
| Lycaenidae              | Iolaus craus été maureli           | Dufrane, 1954        | Harrar [Harar]                         |
| Lycaenidae              | Iolaus piaggiae                    | Oberthür, 1883       | Kolla di Giagaguè-Agher                 |
| Lycaenidae              | Lachnocnema abyssinica             | Libert, 1996         | Dire Daouna [Dawa]                      |
| Lycaenidae              | Lepidochrysops abyssinensis        | (Strand, 1911)       | Eli                                    |
| Lycaenidae              | L. a. oculus                       | (Ungemach, 1932)     | Ouama                                  |
| Lycaenidae              | Lepidochrysops guichardi           | Gabriel, 1949        | 10 miles West of Addis Ababa           |
| Lycaenidae              | Lepidochrysops lunulifer           | (Ungemach, 1932)     | Didessa                                |
| Lycaenidae              | Lepidochrysops negu                 | (Felder & Felder, 1865) | Africa septentrionali-orientalis: Bogo |
| Lycaenidae              | Lepidochrysops pterou lilacina     | (Ungemach, 1932)     | Didessa                                |
| Lycaenidae              | Lepidochrysops chemisani           | (Ungemach, 1932)     | Didessa                                |
| Family          | Taxon                                      | Author                | Type Locality                      |
|-----------------|--------------------------------------------|-----------------------|------------------------------------|
| Lycaenidae      | Lepidochrysops subvariegata                | Talbot, 1935          | Dirre Dawa                         |
|                 | Leptomyrina boschi                         | Strand, 1911          | Abyssinie [Ethiopia]               |
|                 | Lycaena phlaeas pseudophaeas               | (Lucas, 1866)         | Abyssinie [Ethiopia]               |
|                 | Myrina silenus nzaiae                     | Stoneham, 1937        | Western Kenya to Ethiopia and      |
|                 |                                            |                       | Eritrea                            |
|                 | Pentila pauli nas                          | Talbot, 1935          | S.W. Abyssinia [Ethiopia],         |
|                 |                                            |                       | Pokodi [Bokoji]                    |
|                 | Stiugeta bowkeri ethiopica                | (Stempffer & Bennett, 1958) | Harrar [Harar]                     |
|                 | Tarucus ungemachi                         | Stempffer, 1942       | Rivière Baro Abyssinie             |
|                 |                                             |                       | [Ethiopia] occidentale             |
|                 | Thermoniphas colonata                      | (Ungemach, 1932)      | Youbdo                             |
|                 | Tuxentius cretnus                          | (Butler, 1876)        | Arba*                              |
|                 | Tuxentius kaffana                          | (Talbot, 1935)        | Nado's Province, Yeki; Mocha       |
|                 |                                             |                       | District, Gamadura                 |
|                 | Uranothauma antinorii                      | (Oberthür, 1883)      | Torrente di Sciotalit              |
|                 | Uranothauma nubifer distinctesignatus      | (Strand, 1911)        | [Ethiopia]                         |
|                 | Zintha hintza resplendens                 | (Butler, 1876)        | Arba*                              |
| Metarbelidae    | Aethiopina semicirculata                   | Gaede, 1929           | Abyssinia [Ethiopia]               |
|                 | Salagena fetaealworkae                     | Rougeot, 1977         | near Koffolé [Koffale]             |
|                 | Tenga lemaire                             | Rougeot, 1977         | Dinsho Marches                     |
|                 | Tenga villiersi                            | Rougeot, 1977         | near Koffolé [Koffale]             |
|                 | Abrustola obliqua                          | Dufay, 1958           | Abyssinie [Ethiopia]               |
|                 | Abrustola rougeoti                         | Rougeot, 1977         | near Koffolé [Koffale]             |
|                 | Acosta albatrigna                          | Hacker, Legrain & Fibiger, 2008 | Arba Minch Region, Omo, Pro | Vence Gemu, Gofa |
|                 | Acosta amarei                              | Hacker, Legrain & Fibiger, 2010 | Gamu-Gofa Province, 10.5 km W of Weyto |
|                 | Acosta amhara                              | Hacker, Legrain & Fibiger, 2008 | Gamu-Gofa Province, 8 km N of Turnbull |
|                 | Acosta proesei                             | Hacker, Legrain & Fibiger, 2008 | Valley of the river Tekezé, 30 km N of Gashena |
|                 | Acosta roberthbecki                        | Hacker, Legrain & Fibiger, 2010 | Arba Minch Region, Gemu Gofa Province |
|                 | Acosta rufincincta                         | Hampson, 1910         | Arba*                              |
|                 | Acosta secta                               | Guenée, 1852          | Abyssinia [Ethiopia]               |
|                 | Acosta uhlenhuthi                          | Hacker, Legrain & Fibiger, 2008 | Diré Daouá [Dire Dawa]             |
|                 | Acostola boursini                          | (Berto, 1940)         | Lekemt [Naqamte]                   |
|                 | Acrapex abbayei                            | Laporte, 1984         | Dinsho Reserve                     |
|                 | Acrapex apeacangula                        | Laporte, 1984         | near Koffolé [Koffale]             |
|                 | Acrapex auseli                             | Laporte, 1984         | Fisha Genet                        |
|                 | Acrapex frameae                            | Laporte, 1984         | Dinsho Reserve                     |
|                 | Acrapex genrei                             | Laporte, 1984         | Dinsho Reserve                     |
|                 | Acrapex girardi                            | Laporte, 1984         | Dinsho Reserve                     |
|                 | Acrapex guiffayorum                       | Laporte, 1984         | Dinsho Reserve                     |
|                 | Acrapex mastawaiate                        | Laporte, 1984         | Arba Minch                         |
|                 | Acrapex matieri                            | Laporte, 1984         | Dinsho Reserve                     |
|                 | Acrapex satanas                            | Laporte, 1984         | Dinsho Reserve                     |
|                 | Acrapex soyena                            | Le Ru, 2017           | Gibe, Soyema Bridge                |
|                 | Acrapex ulnii                              | Laporte, 1991         | Koffolé [Koffale]                  |
|                 | Acrapex zaouditou                          | Laporte, 1991         | Koffolé [Koffale]                  |
|                 | Aedea albirena                             | (Hampson, 1926)       | Taddecha Mulilha                   |
| Family   | Taxon                     | Author         | Type | Locality          |
|----------|--------------------------|----------------|------|-------------------|
| Noctuidae| *Aedia konsonata*        | Hacker, 2016   | Konso| E                 |
|          | *Aedia marmoreata*       | Hacker, 2016   | 12 km W of Jinka | E |
|          | *Aegocera ferrugo*       | Jordan, 1926   | Hora Daka | E |
|          | *Agrotis hakenius*       | Laporte, 1977  | Dinsbo, Bale Reserve | E |
|          | *Agrotis cinchonina*     | Guenée, 1852   | Abyssinia [Ethiopia] | E |
|          | *Agrotis debivari*       | (Berio, 1962)  | Africa Orientale Italiana | E |
|          | *Agrotis separata*       | Guenée, 1852   | Abyssinia [Ethiopia] | E |
|          | *Amazonides berioi*      | (Laporte, 1984)| Lekemti [Naqamte] | E |
|          | *Amazonodes berioi*      | Laporte, 1974  | Dinsbo Col | E |
|          | *Amazonodes dubionoeodes*| Laporte, 1977  | Kébré-Mengist [Kibre Mengist] | E |
|          | *Amazonodes ezanai*      | (Laporte, 1984)| Kébré-Mengist [Kibre Mengist] | E |
|          | *Amazonides fumigera*    | Laporte, 1977  | Dinsbo Marshes | E |
|          | *Amazonides koffiolenus* | Laporte, 1977  | Koffolé [Koffale] | E |
|          | *Amazonides labuderae*   | Laporte, 1984  | Abba Hoye-Gara | E |
|          | *Amazonides pseudoberliozi*| Rougeot & Laporte, 1983 | Simyen, Sankaber | E |
|          | *Amazonides putrecta*    | (Guenée, 1852) | Abyssinia [Ethiopia] | E |
|          | *Amazonides sungmachi*   | (Laporte, 1984)| Ioumdo, Birbir, Nole Kabe | E |
|          | *Amazonides zarajakobi*  | Laporte, 1984  | Dinsbo Marshes | E |
|          | *Amphia hepialoides*     | Guenée, 1852   | Abyssinia [Ethiopia] | E |
|          | *Apospasta albirealis*   | Laporte, 1974  | Mt Batu | E |
|          | *Apospasta diffusa*      | Laporte, 1974  | Dinsbo Col | E |
|          | *Apospasta erici*        | Laporte, 1984  | Dinsbo Reserve | E |
|          | *Apospasta incongrua*    | Laporte, 1974  | Dinsbo Col | E |
|          | *Apospasta marayanae*    | Laporte, 1974  | Dinsbo Marshes | E |
|          | *Apospasta niger*        | Laporte, 1974  | Dinsbo Marshes | E |
|          | *Apospasta rougeoti*     | Laporte, 1991  | Boré Forest | E |
|          | *Apospasta rufa*         | Laporte, 1991  | Choa [Shoa], Menagesha [Menegash] | E |
|          | *Apopomphia subafricanus*| Laporte, 1974  |         | E |
|          | *Apopomphia subafricanus*| Laporte, 1974  |         | E |
|          | *Ariathia abyssinica*    | (Guenée, 1852) | Abyssinia [Ethiopia] | E |
|          | *Asidifrontia ungemachi* | (Laporte, 1978)| Metti | E |
|          | *Athetis aeschrioides*   | Berio, 1940    | Adi-Abu [in Tigray, Ethiopia] | E |
|          | *Athetis cannyoni*       | Laporte, 1977  | Dinsbo col | E |
|          | *Athetis vieitez*        | Laporte, 1991  | Choa [Shoa], Melka-Kontoure [Melka Kontoure] | E |
|          | *Axylia aregashae*       | Laporte, 1984  | near Kébré-Mengist [Kibre Mengist] | E |
|          | *Axylia bryi*            | Laporte, 1984  | Dinsbo Marshes | E |
|          | *Axylia destefanii*      | Berio, 1944    | El-Dire | E |
|          | *Axylia gabriellae*      | Laporte, 1975  | Boré Forest | E |
|          | *Axylia marthae*         | Laporte, 1984  | near Koffolé [Koffale] | E |
|          | *Axylia orbicularii*     | Laporte, 1984  | near Kébré-Mengist [Kibre Mengist] | E |
|          | *Axylia sanetenesi*      | Laporte, 1984  | near Mt Batu | E |
|          | *Axylia vespertina*      | Laporte, 1984  | near Kébré-Mengist [Kibre Mengist] | E |
|          | *Batuana abbahoyegarana* | Rougeot, 1983  | Abba Hoye-Gara, Wollo | E |
|          | *Batuana expectata*      | Laporte & Rougeot, 1981 | Gojam, Mt Choke | E |
|          | *Batuana lobelarum*      | Laporte, 1976  | near Dinsbo | E |
|          | *Batuana rougeoti*       | Laporte, 1976  | near Mt Batu | E |
| Family   | Taxon                                | Author             | Type Locality          |
|----------|--------------------------------------|--------------------|------------------------|
| Noctuidae| Berionycta beckroberti               | Kiss, 2017         | 15 km E of Yabello     |
|          | Berionycta behouneki                 | Kiss, 2017         | 13 km W of Yabello     |
|          | Berionycta berioi                    | Kiss, 2017         | 12 km NNE of Arba Minch|
|          | Berionycta nigra                     | Kiss, 2017         | 15 km E of Yabello     |
|          | Berionycta orbicularis               | Kiss, 2017         | 15 km E of Yabello     |
|          | Berionycta ponticamima               | Kiss, 2017         | 15 km E of Yabello     |
|          | Capillamentum gellyi                 | Laporte, 1984      | Addis Ababa            |
|          | Canadrina atriluca                   | Guenée, 1852       | Abyssinia [Ethiopia]   |
|          | Canadrina torpens                    | Guenée, 1852       | Abyssinia [Ethiopia]   |
|          | Carcharoda erlangeri                 | Rothschild, 1924   | Wäute Morehan [Mreham]|
|          | Cirrodes rosaceus                    | Rothschild, 1924   | Wäute Morehan [Mreham]|
|          | Claudafilea dinhoense                | Laporte, 1984      | Dinsho Reserve         |
|          | Compostata corneliae                 | Behounek & Beck, 2012 | Bale, Mountains, Province of |
|          |                                      |                    | Bale, Hangasso         |
|          | Compsotata scriptura                 | (Laporte, 1991)    | Debre Zeit             |
|          | Conservula scriptura                 | (Rougeot & Laporte, 1983) | Simyen, Sankaber       |
|          | Cucullia simoneani                   | Laporte, 1976      | Bale Reserve, Dinsho   |
|          | Cucullia tedijicolora                | Laporte, 1977      | Kibre-Mengist [Kibre Mengist] |
|          | Eucladodes achorrophilus             | Laporte, 1976      | Near Mt Batu           |
|          | Eucladodes baleensis                 | Laporte, 1976      | Bale Reserve           |
|          | Euplexia imperator                   | Laporte, 1984      | Dinsho Marshes         |
|          | Euplexia merieri                     | Laporte, 1984      | Arussi, near Koffolé [Koffale] |
|          | Euplexia pinoni                      | Laporte, 1984      | Kibre-Mengist [Kibre Mengist] |
|          | Euplexia shoana                      | Laporte, 1984      | Shoa, near Hosana      |
|          | Eucoa dodolense                      | Laporte, 1984      | Road to Dodola         |
|          | Eucoa montigenarum                   | Rougeot & Laporte, 1983 | Simyen, Sankaber       |
|          | Eucoa semenensis                     | Laporte, 1991      | Sankaber               |
|          | Eucoa wolitarum                      | Rougeot & Laporte, 1983 | Simyen, Sankaber       |
|          | Feliniopsis duponti                  | Laporte, 1974      | near Kibre-Mengist [Kibre Mengist] |
|          | Feliniopsis gersinae                 | Laporte, 1975      | near Kibre-Mengist [Kibre Mengist] |
|          | Feliniopsis insulata                 | Hacker & Fibiger, 2007 | Addis Ababa, Sholla    |
|          | Feliniopsis jinha                    | Hacker, 2010       | Gamu-Gofa Province, 10 km |
|          |                                    |                    | W of Jinka             |
|          | Ferexina jemjemenis                  | (Laporte, 1984)    | Kibre-Mengist [Kibre Mengist] |
|          | Heliophobus africana                 | Berio, 1977        | Addis Ababa            |
|          | Heliosthis saskai                    | (Berio, 1975)      | Addis Ababa            |
|          | Hemitertia mahdi                     | (Pagenstecher, 1903) | Hanadscho [Dinsho district] |
|          | Heraclia viettei                     | Kiriafolk, 1973    | Nole Kaba              |
|          | Hermonassoides abyssinica            | Berio, 1975        | Addis Ababa            |
|          | Hermonassoides dinhoensis            | Laporte, 1977      | Dinsho Marshes         |
|          | Hermonassoides marmorata             | Laporte, 1977      | Fisha Genet            |
|          | Hermonassoides maurici               | Laporte, 1975      | Koffale                |
|          | Hermonassoides mendehoense           | Laporte, 1984      | Dinsho                  |
|          | Hermonassoides minosi                | Laporte, 1991      | Managesha Forest       |
|          | Hermonassoides scipioni              | Laporte, 1977      | Dinsho, Bale Reserve   |
|          | Hicoda clarae                        | Berio, 1947        | Ogaden, Uarder [Wärder]|
|          | Hyperfrontia diraeae                 | Berio, 1962        | Dire-Daoua [Dire Dawa] |
|          | Hyperfrontia lambata                 | Berio, 1962        | El-Dire                |
|          | Koffoliania michaelliae              | Laporte, 1977      | near Koffolé [Koffale] |
|          | Leucania aedesiusi                   | Rougeot & Laporte, 1983 | Simyen, Sankaber       |
|          | Leucania argyrina                     | Laporte, 1984      | Bahar Dar              |
| No. | Family          | Taxon                   | Author                  | Type Locality                                           |
|-----|-----------------|-------------------------|-------------------------|---------------------------------------------------------|
| 508 | Noctuidae       | Leucania claudicans     | Guenée, 1852            | Abyssinia [Ethiopia]                                    |
| 509 | Leucania cyprium | (Laporte, 1984)         | Dinsho Marshes          | E                                                       |
| 510 | Leucania fusilida | (Laporte, 1984)         | Dinsho Marshes          | E                                                       |
| 511 | Leumicamia oreias | (Fletcher, 1959)       | Simien, above Lori      | E                                                       |
| 512 | Leumicamia palustris | Laporte, 1976      | Dinsho Marshes          | E                                                       |
| 513 | Leumicamia venustissima | (Laporte, 1974) | Bale Reserve            | E                                                       |
| 514 | Lophotarsia girmai   | Laporte, 1975        | Arba Minch              | E                                                       |
| 515 | Lophotarsia leucoplagoides | (Berio, 1941)     | El-Dire                 | E                                                       |
| 516 | Lophotarsia thereae | Beck & Behounck, 2013 |                          | E                                                       |
| 517 | Maghadena ingridae | Laporte, 1977      | Dinsho Reserve, Balé    | E                                                       |
| 518 | Maliattha eburnea | Hacker, 2016          | Oroma Province, 6 km ESE of Jimma |                                                       |
| 519 | Matopo berhanoui  | Laporte, 1984          | Melka-Kontouré [Konture] | E                                                       |
| 520 | Mentaxya brunelli  | Laporte, 1975         | near Kebré-Mengist [Kibre Mengist] | E                                                       |
| 521 | Mentaxya fouqueae  | Laporte, 1974         | Boré Forest             |                                                        |
| 522 | Mentaxya inconstans | Laporte, 1984      | Dinsho Marshes          | E                                                       |
| 523 | Mentaxya lacteifrons | Laporte, 1984      | Kebré-Mengist [Kibre Mengist] | E                                                       |
| 524 | Michelliana afroalpina | Laporte, 1976 | near Mt Batu             |                                                        |
| 525 | Micraxylia antemedialis | Laporte, 1975     | near Kebré-Mengist [Kibre Mengist] | E                                                       |
| 526 | Micraxylia hypericoides | Berio, 1962        | Oromo e Sidamo, Neghelli |                                                        |
| 527 | Micraxylia lividonidata | (Berio, 1940)      | Adi-Abuna [in Tigray, Ethiopia] | E                                                       |
| 528 | Mythimna altiphila | Hreblay & Legrain, 1996 | Addis Abeba [Ababa]      |                                                        |
| 529 | Mythimna amalaki  | Laporte, 1984          | Near Mt Batu            | E                                                       |
| 530 | Mythimna bieluta | Laporte, 1940          | Adi-Abuna [in Tigray, Ethiopia] | E                                                       |
| 531 | Mythimna germanae  | Laporte, 1991         | Melka Kontouré          |                                                        |
| 532 | Neostichis teruworkae | Laporte, 1984  | Near Hosana              | E                                                       |
| 533 | Nocthadena griseoviridis | Laporte, 1976     | Near Mt Batu            |                                                        |
| 534 | Numeniastes selenis | Fletcher, 1963      | Harar                    |                                                        |
| 535 | Nyodes biardi    | Laporte, 1984          | Shashemane              |                                                        |
| 536 | Ochreoleuca sidamona | Laporte, 1977    | Fisha-Genet             |                                                        |
| 537 | Odontestra richinii | Berio, 1940        | Adi-Abuna [in Tigray, Ethiopia] | E                                                       |
| 538 | Odontestra variegata | Berio, 1940      | Adi-Abuna [in Tigray, Ethiopia] | E                                                       |
| 539 | Odontestra vitta  | Berio, 1975           | Addis Ababa              |                                                        |
| 540 | Oligia adactricula | Guenée, 1852         | Abyssinie [Ethiopia]    |                                                        |
| 541 | Oligia arhaminchenis | Laporte, 1991    | Arba Minch               |                                                        |
| 542 | Oligia genettae  | Laporte, 1991          | Kebré-Mengist [Kibre Mengist] | E                                                       |
| 543 | Omphalestra nellyae | (Berio, 1939)  | Adua [in Ethiopia]       |                                                        |
| 544 | Ozarba alberti phaeoxantha | Hacker, 2016     | Dire Dawa                |                                                        |
| 545 | Ozarba didymochra | Hacker, 2016          | Gamu-Gofa Province, 8 km E of Weyto | E                                                       |
| 546 | Ozarba fuscunda | Hacker, 2016          | Oromia, 3 km NNE of Finchawa |                                                        |
| 547 | Ozarba grisescens | Berio, 1947          | Harrar [Harar], Dire Dawa |                                                        |
| 548 | Ozarba latizonata | Hacker, 2016          | Gamu-Gofa Province, 8 km E of Weyto |                                                        |
| 549 | Ozarba naumannii | Hacker, 2016          | Gamo Gofa Province, Konso | E                                                       |
| Family          | Taxon                       | Author       | Type Locality                                           |
|-----------------|-----------------------------|--------------|---------------------------------------------------------|
| 550 Noctuidae   | Ozarba permutata            | Hacker, 2016 | 20 km ESE of Sashemene, Wondo Genet                     |
| 551             | Ozarba rubrofusca           | Berio, 1947  | Ogaden, Uarder [Werder]                                 |
| 552             | Ozarba tenuis               | Hacker, 2016 | Province of Gamo Gofa, 8 km N of Turmi                  |
| 553             | Ozarba uhlenbushi           | Hacker, 2016 | Dire Dawa                                              |
| 554             | Phylophila corgartha        | Berio, 1984  | Arba Minch                                             |
| 555             | Phylophila richinii         | Berio, 1940  | Adi-Abuna [in Tigray, Ethiopia]                        |
| 556             | Pseudozarba nilotica        | Hacker, 2016 | 30 km SE of Bahir Dar, Tissiat above Blue Nile Falls   |
| 557             | Pusillathetis fiorii        | Berio, 1976  | Uarder [Warder in Ogaden]                              |
| 558             | Ramesodes oblonga           | Berio, 1976  | Adi Abuna [in Tigray, Ethiopia]                        |
| 559             | Rhodochaetra dinhoense      | Laporte, 1974| Dinsho Marshes                                        |
| 560             | Rougostia abyssinica        | (Hampson, 1918)| Kuitai Mecha                                           |
| 561             | Rougostia aethiopica        | Laporte, 1974| Dinsho swamp                                           |
| 562             | Rougostia ludovici          | Laporte, 1974| Bale Reserve                                           |
| 563             | Rougostia ludovicoides      | Laporte, 1977| Dinsho Marshes                                        |
| 564             | Rougostia obscura           | Laporte, 1974| Dinsho Col                                             |
| 565             | Rougostia roseogrisea       | Laporte, 1974| Near Mt Batu                                           |
| 566             | Rougostia rougeoti          | Laporte, 1984| Mt Batu Forest                                         |
| 567             | Schinia ennatae             | (Laporte, 1984)| Addis Ababa                                            |
| 568             | Schinia magdaleaena         | (Laporte, 1976)| Bale Reserve, Dinsho                                   |
| 569             | Schinia ungemachi           | (Berio, 1945)| Oromo Sidamo, Uollega [Wollega]                        |
| 570             | Schinia saxathiata          | (Berio, 1940)| Adi-Abuna [in Tigray, Ethiopia]                        |
| 571             | Scioneusa bouardi           | (Laporte, 1984)| near Koffolé [Koffale]                                 |
| 572             | Scioneusa excelsa           | (Laporte, 1976)| Near Mt Batu                                           |
| 573             | Scioneusa franciscate       | Laporte, 1991| Choa, Hosana                                          |
| 574             | Scioneusa secata            | Berio, 1977  | Addis Ababa                                            |
| 575             | Sesamia enanouae            | Laporte, 1991| Gojam, Bahr-Dar, marais du Nil Bleu                   |
| 576             | Sesamia roumeti             | Laporte, 1991| Gojam, Bahr-Dar                                        |
| 577             | Solgaitiana petrovi         | Laporte, 1984| Kébré-Mengüst [Kibre Mengist]                         |
| 578             | Spodoptera excelsa          | Rougeot & Laporte, 1983| Simyen, Sankaber                                      |
| 579             | Subnoctua arbuscinensis     | Laporte, 1984| Arba Minch                                            |
| 580             | Thiacidas robertheki        | Hacker & Zilli, 2007| Awassa, Awassa Lake, Bale Region                      |
| 581             | Thioropis decimata          | Berio, 1977  | Addis Ababa                                            |
| 582             | Thioropis uncinata          | Berio, 1977  | Addis Ababa                                            |
| 583             | Thysanoplasia asaphria      | (Dufay, 1977)| near Koffolé [Koffale]                                 |
| 584             | Thysanoplasia dolera        | Dufay, 1977  | near Koffolé [Koffale]                                 |
| 585             | Timona flavocarnea          | Hampson, 1903| Abyssinia [Ethiopia]                                   |
| 586             | Timona zanuttarii           | Berio, 1944  | El-Dire                                               |
| 587             | Tracheplexia annabellae     | Laporte, 1991| Menagesha Forest                                       |
| 588             | Tracheplexia coletae        | Laporte, 1991| Gemu-Gofa, Arba-Minch                                  |
| 589             | Tracheplexia lignerni       | Laporte, 1984| Fort Wôsha                                            |
| 590             | Tracheplexia petryesi       | Laporte, 1991| Menagesha Forest                                       |
| 591             | Tracheplexia richinii       | Berio, 1973  | Adiu Abuna [in Tigray, Ethiopia]                       |
| 592             | Tycomarptes adami          | Laporte, 1974| Dinsho Col                                            |
| 593             | Tycomarptes aethiopica      | Laporte, 1974| Mt Batu                                                |
| 594             | Tycomarptes berini          | Laporte, 1974| Boré Forest                                            |
| 595             | Tycomarptes bipunctata      | Laporte, 1974| Boré Forest                                            |
| 596             | Tycomarptes bipunctatoides  | Laporte, 1974| near Koffolé [Koffale]                                 |
| No. | Family | Taxon | Author | Type | Locality |
|-----|--------|-------|--------|------|----------|
| 597 | Noctuidae | Tycomarptes gelladarum | Rougeot & Laporte, 1983 | Simyen, Sankaber | E |
| 598 | Noctuidae | Tycomarptes inferior | (Guenée, 1852) | Abyssinia [Ethiopia] | |
| 599 | Noctuidae | Tycomarptes journauci | Laporte, 1977 | Near Mt Batu | E |
| 600 | Noctuidae | Tycomarptes limoni | Laporte, 1974 | near Koffolé [Koffiâle] | E |
| 601 | Noctuidae | Tycomarptes semyensis | Rougeot & Laporte, 1983 | Simyen, Sankaber | E |
| 602 | Noctuidae | Tycomarptes thibauti | Laporte, 1974 | Boré Forest | E |
| 603 | Noctuidae | Vietteania chojnackii | (Laporte, 1984) | Dinsoho Marshes | E |
| 604 | Nolidae | Arcyphon a zanderi | Felder & Rogenhofer, 1875 | Abyssinia [Ethiopia] | |
| 605 | Nolidae | Bryophilois martinae | Laporte, 1991 | Gemu-Gofa, Konso | E |
| 606 | Nolidae | Characoma adiabunensis | Berio, 1940 | Adi-Abuna [in Tigray, Ethiopia] | E |
| 607 | Nolidae | Earias richinii | Berio, 1940 | Adi-Abuna [in Tigray, Ethiopia] | E |
| 608 | Nolidae | Eligma neumanni | Rothschild, 1924 | Blue Nile, Abera Koritscha, | Uta Dera |
| 609 | Nolidae | Escarpamenta damanana abisinica | Hacker, 2013 | 6 km E of Weyto, Weyto River | E |
| 610 | Nolidae | Euvotina littoralis abisinica | Hacker, 2012 | Southern Province, Jinka, Mago National Park, 350 m SW of Headquarter, | E |
| 611 | Nolidae | Gigtantoceras villiersi | Laporte, 1975 | Arba Minch | E |
| 612 | Nolidae | Meganola cerographa | Hacker, 2012 | Oromia District, 6.5 km N of Bonga | E |
| 613 | Nolidae | Meganola coffeana | Hacker, 2012 | Oromia Province, 6.5 km NE of Shebe | E |
| 614 | Nolidae | Meganola ethiopica | Hacker, 2012 | Addis Ababa | E |
| 615 | Nolidae | Meganola harenna | Hacker, 2014 | Harenna Forest, Karcha Camp Ground | E |
| 616 | Nolidae | Meganola leucometabola | Hacker, 2012 | Oromia Province, 6.5 km N of Bonga | E |
| 617 | Nolidae | Meganola longisigna | Hacker, 2012 | Oromia Region, 1 km W of village Aluweya | E |
| 618 | Nolidae | Meganola lupii | Hacker & Hausmann, 2012 | Oromia Province, 13 km S. of Agere Maryam | E |
| 619 | Nolidae | Meganola pachygrapha | Hacker, 2012 | Oromia Province, 6.5 km N of Bonga | E |
| 620 | Nolidae | Meganola poliovittata | Hacker, 2012 | Oromia Province, 6 km E of Jimma | E |
| 621 | Nolidae | Meganola pyrrhomorpha | Hacker, 2012 | Oromia Province, 6.5 km N of Bonga | E |
| 622 | Nolidae | Meganola simillima | Hacker, 2012 | Oromia District, 13 km S of Agere Maryam | E |
| 623 | Nolidae | Meganola stadiensis | Hacker, 2014 | Harenna Forest, Karcha Camp Ground | E |
| 624 | Nolidae | Meganola stigmatolalis | Hacker, 2012 | Southern Province, 23 km WSW of Welkite, Gibe River | E |
| 625 | Nolidae | Meganola unilineata | Hacker, 2012 | Southern Province, 11.2 km W of Bonga | E |
| 626 | Nolidae | Ne Atatigis mesogonia | Hampson, 1905 | Atbara R. | |
| 627 | Nolidae | Nola abyssinica | Hacker, 2012 | Oromia Province, 13 km S of Agere Maryam | E |
| 628 | Nolidae | Nola afrotaietia | Hacker, 2012 | 12 km W Jinka, border Mago National Park | E |
| 629 | Nolidae | Nola anghara | Hacker, 2012 | Addis Ababa | E |
| 630 | Nolidae | Nola angensteini | Hacker, 2012 | Afar Region, NE of Mile Serdo Wildlife Refuge, Tendaho | E |
| Family            | Taxon                        | Author                  | Type Locality                              |
|-------------------|------------------------------|-------------------------|--------------------------------------------|
| Nolidae           | Nola balealpina              | Hacker, 2012            | Oromia Province, Bale Mountains National Park, Disho | E |
|                   | Nola calochromata            | Hacker, 2014            | Harenna Forest, Harenna Forest Road         | E |
|                   | Nola destituta               | Hacker, 2012            | Oromia Province, 8 km W of Nazret          | E |
|                   | Nola jarzabekae              | Hacker, 2012            | Oromia Province, Abiyata-Shala-Hayak National Park | E |
|                   | Nola omphalota eurotes      | Hacker, 2012            | Oromia Province, 6 km ESE of Jimma         | E |
|                   | Nola socotrensis vansoni    | Hacker, 2012            | 12 km W Jinka, border Mago NP              | E |
|                   | Nola sphaeromorpha           | Hacker, 2012            | Oromia Province, 13 km S of Agere Maryam,  | E |
|                   | Nolidia platygraphha        | Hacker, 2012            | Amhara Region, W of Mirab, Gojam Zone, 15 km NW of Bahar Dar | E |
|                   | Afroplitis quadratus        | (Viette, 1954)          | River Baro                                  | E |
|                   | Antheua birbirana           | Viette, 1954            | middle course of Birbir, Youbdo             | E |
|                   | Antheua gaelei              | Kiriakoff, 1962         | Addis Ababa                                 | E |
|                   | Antheua trivista            | (Hampson, 1910)         | Abyssinia [Ethiopia]                        | E |
|                   | Antistaura decorata         | Kiriakoff, 1965         | Derdaun, North-East of Harrar               | E |
|                   | Boscauwenia nora            | (Pagenstecher, 1903)    | Gianale                                     | E |
|                   | Desmeocraera kiriakoffi     | Thiaucourt, 1977        | near Këbré-Mengist [Kibre Mengist]         | E |
|                   | Eutimia smithii             | Holland, 1897           | Dombalok                                    | E |
|                   | Polelassothys callista      | Viette, 1954            | Moy. Dediassa [Didessa]                     | E |
|                   | Psalodes saalfeldi          | Kiriakoff, 1979         | Al Abed                                     | E |
|                   | Scalmicauda azebae          | Thiaucourt, 1977        | near Këbré-Mengist [Kibre Mengist]         | E |
|                   | Thaumetopoea apologetica    | Strand, 1911            | Addis Ababa                                 | E |
|                   |                      |                         | Arba Minch                                  | E |
|                   | Tricholoba rougeoi          | Thiaucourt, 1977        | Kalamet, Selska Valley                      | E |
|                   | Acraea aganica orientalis   | (Ungemach, 1932)        | Bouré                                       | E |
|                   | Acraea alcino nado          | (Ungemach, 1932)        | Bouré                                       | E |
|                   | Acraea chilo chilo          | Godman, 1880            | Kalamet, Selska Valley                      | E |
|                   | Acraea doublesdai           | Guérin-Ménéville, 1849  | Abyssinie [Ethiopia]                        | E |
|                   | Acraea epaea homochroa      | (Rothschild & Jordan, 1905) | Banka, Malo                    | E |
|                   | Acraea kabana               | Elringham, 1911         | Adje Kaka, Kafa                            | E |
|                   | Acraea oscari               | Rothschild, 1902        | Banka, Malo                                 | E |
|                   | Acraea poggei nas           | (Ungemach, 1932)        | Oullaga [Wollega]                           | E |
|                   | Acraea zetes sidamona       | Rothschild & Jordan, 1905 | Alata, Sidamo                              | E |
|                   | Acraea zoumi                | Pierre, 1995            | Ethiopia                                    | E |
|                   | Amauris echeria steckeri    | Kheil, 1890             | Abyssinia                                   | E |
|                   | Amauris hecata stictica     | Rothschild & Jordan, 1903 | Anderatscha                               | E |
|                   | Amauris niavesis aesthiops  | Rothschild & Jordan, 1903 | Anderatscha                               | E |
|                   | Amauris ochleas darrus      | Rothschild & Jordan, 1903 | Anderatscha                               | E |
|                   | Antanartia abyssinica       | (C. & R. Felder, [1867]) | Ethiopia                                   | E |
|                   | Antanartia schaeuea diluta  | Rothschild & Jordan, 1903 | Kaffa                                       | E |
|                   | Argyris hyperbius neumanni  | Rothschild, 1902        | Kaffa                                       | E |
|                   | Aterica galene incisa       | Rothschild & Jordan, 1903 | between Kankati and Djibbe, Djimma [Jimma] | E |
| Family          | Taxon                                  | Author                        | Type Locality                      |
|-----------------|----------------------------------------|-------------------------------|-----------------------------------|
| Nymphalidae     | Bicyclus pavonis                       | (Butler, 1876)                | Abyssinia [Ethiopia]              |
|                 | Bicyclus saflitza aethiopi             | (Rothschild & Jordan, 1905)   | Lake Abassi                      |
|                 | Charaxes etephe abysinicus             | Rothschild, 1900              | Scioa [Shoa]                      |
|                 | Charaxes eurinone birhirica            | Ungemach, 1932                | Youbdo                            |
|                 | Charaxes figini                         | van Someren, 1969             | Eritaea, Setit, El Eghin [Ethiopia] |
|                 | Charaxes galawadiwosi                  | Plantrou & Rougeot, 1979      | Arba-Minch                        |
|                 | Charaxes hansali hansali               | Van Someren, 1971             | Africa septentrional-orientalis: Bogos |
|                 | Charaxes jahlusa ganalenisi            | Carpenter, 1937               | Salvale, Ganale river             |
|                 | Charaxes janius janius                 | Oberthür, 1883                | Scioa [Shoa]                      |
|                 | Charaxes janius somalicus              | Rothschild, 1900              | Harrar Highlands, Somaliland      |
|                 | Charaxes kiri daria                    | Rothchild, 1903               | Jabalo                            |
|                 | Charaxes lactetinctus                  | Le Cerf, 1927                 | Youbdo (Birir)                    |
|                 | Charaxes leda                          | (Boisdaval, 1847)             | Marako                            |
|                 | Charaxes nicetinctus                   | Le Cerf, 1927                 | Ethiopia                          |
|                 | Charaxes numenes neumanni              | Rothschild, 1902              | Wori to Gamitscha, Kaffa          |
|                 | Charaxes pelias pagenstecheri          | Poulton, 1926                 | S Ethiopia                        |
|                 | Charaxes phoebus                       | Butler, 1866                  | Abyssinia [Ethiopia]              |
|                 | Charaxes rectani                       | Rothchild & Jordan, 1903      | Upper Urga, Kollu, Schoa [Shoa]   |
|                 | Charaxes saturnus pagenstecheri        | Poulton, 1926                 | S. Abyssinia [Ethiopia]           |
|                 | Charaxes sidamo                        | Plantrou & Rougeot, 1979      | Kebré-Mengist [Kibre Mengist]     |
|                 | Charaxes tiriates marginatus           | Rothchild & Jordan, 1903      | Scheko                            |
|                 | Eronia cleodona cleodona               | Hübner, [1823]                | Ethiopia                          |
|                 | Eronia leda                           | (Boisduval, 1847)             | Marako                            |
|                 | Euphaedra caerulescens submarginalis    | Hecq, 1997                    | [Ethiopia?]                       |
|                 | Euphaedra castanoides deficien         | Hecq, 1997                    | West, Didessa River               |
|                 | Euphaedra medon abouna                 | Ungemach, 1932                | Youbdo                            |
|                 | Euphaedra neumanni                     | Rothschild, 1902              | Scheko [Sheko]                    |
|                 | Euphaedra sauria abyssinica            | Rothschild, 1902              | Kankati forest, Djimma             |
|                 | Eurytela hierbas abyssinica            | Rothschild & Jordan, 1903     | Banka                             |
|                 | Exacanthe eurinome birbirica           | Ungemach, 1932                | Youbdo                            |
|                 | Hypolimnas salmacis platylena          | Rothschild & Jordan, 1903     | Scheko                            |
|                 | Junonia tere fumata                   | (Rothschild & Jordan, 1903)   | Gillet Mountains                  |
|                 | Laionomata madarakal                  | (Guérin-Méneville, 1849)      | Abyssinie [Ethiopia]              |
|                 | Melitaea abysinica                    | Oberthür, 1909                | Abyssinie [Ethiopia]              |
|                 | Neptis nemetes obtusa                 | Rothschild & Jordan, 1903     | Scheko                            |
|                 | Phalanta eurytis microps              | (Rothschild & Jordan, 1903)   | Walenso [Woliso], Gillet Mts      |
|                 | Phalanta phalantha aethiopica          | (Rothschild & Jordan, 1903)   | Gillet Mts                        |
|                 | Pseudacraea boisduvalii sayonis        | Ungemach, 1932                | Oumbi                             |
|                 | Pseudacraea eurytus mimoras           | Ungemach, 1932                | Oumbi                             |
|                 | Pseudacraea lucetia valensensis       | (Sharpe, 1896)                | Wensno [Woliso]                   |
|                 | Sevenia boisduvali kaffana            | (Rothschild & Jordan, 1903)   | Godjeb to Bonga, Kaffa             |
| Family             | Taxon                                | Author                          | Type Locality |
|--------------------|--------------------------------------|---------------------------------|---------------|
| Nymphalidae        | Telchinia aurivillii schecana         | Rothschild & Jordan, 1905       | Scheko [Sheiko] | E  |
|                    | Telchinia bonasia banka               | Eltringham, 1912                | Banka, Malo   | E  |
|                    | Telchinia guichardi                   | Gabriel, 1949                   | Lekempti      | E  |
|                    | Telchinia podusta aethiops            | Rothschild & Jordan, 1905       | Dereta Mts    | E  |
|                    | Telchinia necoda                      | Hewitson, 1861                  | Abyssinia [Ethiopia] | E  |
|                    | Telchinia peneleo gelonica            | (Rothschild & Jordan, 1905)     | Upper Gelo River | E  |
|                    | Telchinia perenna kaffiana            | (Rothschild, 1902)              | Kaffa         | E  |
|                    | Telchinia pharsalus rhodina           | Rothschild, 1902                | Kaffa         | E  |
|                    | Telchinia rangatana maji              | Carpenter, 1935                 | Maji Province  | E  |
|                    | Telchinia safie antinorii             | (Oberthür, 1880)                | Mahal-Uonz    | E  |
|                    | Telchinia safie safie                 | (C. & R. Felder, 1865)          | Abyssinia [Ethiopia] | E  |
|                    | Telchinia ungemachi                   | (Le Cerf, 1927)                 | Youbdo (Birbi) | E  |
|                    | Tirumala formosa neumannia            | (Rothschild & Jordan, 1903)     | Kaffa         | E  |
|                    | Vanessa abyssinica abyssinica         | Vane-Wright & Hughes, 2007      | Ethiopia      | E  |
|                    | Yphima impura paupera                 | Ungemach, 1932                  | Soubé-Boro    | E  |
|                    | Yphima simplicia                      | Butler, 1876                    | Arbara*       | E  |
| Papilionidae        | Graphium almanor birbiri              | (Ungemach, 1932)                | Baro          | E  |
|                    | Graphium angolanus baronis            | (Ungemach, 1932)                | Baro          | E  |
|                    | Papilio arnoldiana                    | Vane-Wright, 1995               | S.W. Abyssinia [Ethiopia], Grine | E  |
|                    | Papilio dardanus antinorii            | Oberthür, 1883                  | Abissinia, Feleklek and Scialtia | E  |
|                    | Papilio echerioidea leucopilus        | Rothschild, 1902                | Gara Mulata near Harat* | E  |
|                    | Papilio echerioidea oscari             | Rothschild, 1902                | Kaffa and Djima [Jimma] | E  |
|                    | Papilio microps                       | Storange, 1951                  | Shoa, Abyssinia [Ethiopia] centrals | E  |
|                    | Papilio nireus pseudonireus           | Felder & Felder, 1865           | Africa Septentrionali Oriental, Bogos | E  |
|                    | Papilio rex abyssinica                | Vane-wright, 1995               | S. W. Abyssinia [Ethiopia], Gunji River | E  |
|                    | Papilio wilsoni                       | Rothschild, 1926                | Nubar Hills, Taldi | E  |
|                    | Appias sylvia abyssinica              | Talbot, 1932                    | Joubda (Birbi) | E  |
| Pieridae            | Belenois gidica abyssinica            | (Lunas, 1852)                   | Abyssinie [Ethiopia] | E  |
|                    | Belenois gidica hypoxantha            | (Ungemach, 1932)                | Gambela       | E  |
|                    | Belenois raffrayi                     | Oberthür, 1878                  | Lac de Tzana [Lake Tana] | E  |
|                    | Belenois subeida halio                | (Ungemach, 1932)                | Nolá Kaba [in Wollega] | E  |
|                    | Belenois thyia tricolor               | Talbot, 1943                    | Abyssinie [Ethiopia] | E  |
|                    | Belenois zochalia gada                | (Ungemach, 1932)                | Nolé-Kaba [in Wollega] | E  |
|                    | Colias electo meneliki                | Berger, 1940                    | Gondar        | E  |
|                    | Colias exante marnoana                | Rogenhofer, 1884                | Ethiopia      | E  |
|                    | Colotis antevippe zera                | (Lunas, 1852)                   | Abyssinie [Ethiopia] | E  |
|                    | Colotis celimene celimene             | (Lunas, 1852)                   | Abyssinie [Ethiopia] | E  |
|                    | Colotis danae eupOMPOME               | (Klug, 1829)                    | in Arabia deserta, in Sinai monte, in Dongala et Habesinisa | E  |
|                    | Colotis etiqupe exole                 | (Reiche, 1850)                  | Abyssinie [Ethiopia] | E  |
|                    | Colotis betaena aspasia               | (Ungemach, 1932)                | Baro          | E  |
|                    | Colotis philidae acclatus             | (Butler, 1886)                  | Somali-land [False locality] | E  |
|                    | Colotis ungemachi                     | (Le Cerf, 1922)                 | N Ethiopia    | E  |
|                    | Dixoia charina septentrionalis        | (Bernardi, 1958)                | Djemdjem      | E  |
| Family     | Taxon                                           | Author               | Type Località                |
|------------|------------------------------------------------|----------------------|-----------------------------|
| Pieridae   | Eronia leda pupillata                          | Strand, 1911         | Marako                      |
|            | Euchloe belemia abysinica                      | Riley, 1928          | Mt. Chillálo**              |
|            | Eurema desjardinii regularis                  | (Butler, 1876)       | Arbará*                     |
|            | Leptosia alcesta pseudopupilla                 | Bernardi, 1959       | Haute-Orguessa              |
|            | Mylothris erlangeri                           | Pagenstecher, 1902   | Gewidscha                   |
|            | Mylothris mortoni baikii                      | Ungemach, 1932       | Alenga                      |
|            | Mylothris mortoni mortoni                    | Blachier, 1912       | Kaffa, dans l’Abyssinie [Ethiopia] meridionale |
|            | Mylothris ruepellii                           | (Koch, 1865)         | Abessynica                  |
|            | Mylothris sagala swaynei                      | Butler, 1899         | Harar Highlands              |
|            | Mylothris yulei amhara                        | Ungemach, 1932       | Alenga                      |
|            | Plutellidae                                    | (De Joannis & Verity, 1913) | Abyssinie [Ethiopia]         |
|            | Lepocnemis mapetelista                         | Meyrick, 1932        | Jem-Jem Forest              |
|            | Plutella dryoxyla                              | Meyrick, 1932        | Mt Chillálo                 |
|            | Plutella oxylopha                              | Meyrick, 1932        | Mt Chillálo                 |
|            | Plutella stichtocentra                         | Meyrick, 1932        | Mt Chillálo                 |
| Psychidae  | Acanthaepoche chrysa                           | Bourgogne, 1980      | Arba Minch                  |
|            | Oiketicoides aethiopica                       | Bourgogne, 1991      | Wollo, Lalibela              |
|            | Talporia aethiopica                           | Strand, 1911         | Mahenge                     |
|            | Cosmoclostis gorbunovi                        | Ustjuzhanin & Kovtunovich, 2011 | West Shewa, 2 km S of Ambo |
|            | Helinia aethiopicus                            | (Amsel, 1963)        | Gembi                        |
|            | Helinia ambo                                   | Ustjuzhanin & Kovtunovich, 2011 | West Shewa, 2 km S of Ambo |
|            | Helinia bigoti                                 | (Rougeot, 1983)      | Simyen, Sankaber             |
|            | Helinia negus                                  | (Gibeaux, 1994)      | Wondo-Genet                 |
|            | Merrifieldia lonnevi                           | Gielis, 2011         | Amhara Region, S of Debub, 8 km NW of Addis Zemen, Highway 3 |
|            | Panacaperea cuieriens                          | Meyrick, 1932        | Jem Jem Forest              |
|            | Platoptilia daemonicai                        | Meyrick, 1932        | Jem Jem Forest              |
|            | Platoptilia gordarensi                         | Gibeaux, 1994        | Gondar Province              |
|            | Platoptilia implacata                          | Meyrick, 1932        | Jem Jem Forest              |
|            | Pterophorus munderi                           | (Amsel, 1963)        | Gore                         |
|            | Stenoptilia aethiopica                        | Gibeaux, 1994        | Sidamo, Wondo-Genet          |
|            | Stenoptilia ambhane                           | Gielis, 2011         | Amhara Region, Semien North, 17 km NEE of Gondar, Simien Mts National Park |
|            | Stenoptilia rougesti                           | Gibeaux, 1994        | Bale, marais de Dinsbo       |
|            | Stenoptilia tyropiesta                         | Meyrick, 1932        | Mt Chillálo                 |
| Pyralidae  | Aglossodes dureti                              | (Rougeot, 1977)      | Arba Minch                  |
|            | Aglossodes navattae                           | Rougeot, 1977        | Arba Minch                  |
|            | Bostra eccella                                | Rougeot, 1984        | near Mt Batu                 |
|            | Bostra pseudoecocela                          | Rougeot, 1984        | Arba Minch                  |
|            | Denbrea venulosaella                          | Ragonot, 1888        | Abyssinia [Ethiopia]         |
|            | Emathreades pollex                            | Shaffer, 1998        | Kosogay Wágra               |
|            | Emmalocera erythristella                      | (Ragonot, 1888)      | Abyssinia [Ethiopia]         |
|            | Endostichia ellisoni                          | Whalley, 1963        | Harar                        |
|            | Harraria refpicta                             | Hampson, 1930        | Harrar [Harar]               |
|            | Loryma albilinealis                           | Hampson, 1917        | Diré Daouá [Dire Dawa]       |
| Family       | Taxon                                      | Author         | Type Locality               |
|--------------|--------------------------------------------|----------------|----------------------------|
| Pyralidae    | Megarthridia christyi                      | Rougeot, 1984  | Arba Minch E               |
|              | Nussia rougeoti                           | Leraut, 2015   | Koffolé [Koffale]          |
| Saturniidae  | Aurivillius cadioni                       | Bouyer, 2008   | 100 km E of Addis Ababa E  |
|              | Bunaepis birhiri                          | Bouvier, 1929  | Joubdo (Bibir) E           |
|              | Bunaeopsis obsie                          | (Guérin-Méneville, 1849) | Abyssinia [Ethiopia] |
|              | Eosia digennaroi                          | Bouyer, 2008   | Bale, S of Omar E          |
|              | Epiphora antoniorii                       | (Oberthür, 1880) | Scioa [Sha], Mahal Uonz [Awash River] |
|              | Epiphora bauninia aevarina                | (Butler, 1877)  | Arbara*                    |
|              | Epiphora fourneri                         | Rougeot, 1974  | Road Koffolé-Arussi [Koffale-Arsi] |
|              | Gonimbrasia belina abayana                | Rougeot, 1977  | Arba Minch E               |
|              | Gonimbrasia belina felderii               | Rothschild, 1895 | Bogos E                    |
|              | Gonimbrasia ellisoni                      | Lemaire, 1962  | Harar E                    |
|              | Gonimbrasia fletcheri                     | Rougeot, 1960  | Ethiopia E                 |
|              | Gonimbrasia facata                        | Rougeot, 1978  | Ethiopia E                 |
|              | Goodia smithii                            | (Holland, 1897) | East Africa [Ethiopia] E   |
|              | Gynanisa arba                             | Darge, 2008    | Arba Minch E               |
|              | Heniocha digennaroi                       | Bouyer, 2008   | Sidamo, Neguebe Borana E   |
|              | Holocera digennariana                     | Darge, 2008    | Shashemene (Arsi) E        |
|              | Ludia basili                             | Felder, 1874   | Bogos E                    |
|              | Ludia pupilata                            | Strand, 1911   | Antottos E                 |
|              | Micagnone leonardi                        | Bouyer, 2008   | Sidamo, Dilla E            |
|              | Nudaurelia fasciata                       | Gaede, 1927    | [Ethiopia] E               |
|              | Nudaurelia ungemacht                      | Bouvier, 1926  | Djemdejm [Jem Jem] E       |
|              | Pseudobunaea bayeri citrinarius           | Gaede, 1927    | Harrar [Harar]             |
|              | Pseudobunaea megana                       | Darge, 2012    | Sidamo Province, near Mega E|
|              | Urota melichari                           | Bouyer, 2008   | Sidamo Province, 15 km S of Negele |
|              | Scythris ethiopica                        | Bengtsson, 2014 | Lake Tana, Bahir Dar E    |
|              | Agrimelissa aethiopica                    | (Le Cerf, 1917) | Abyssinia [Ethiopia] E    |
|              | Jerbea darkovi                            | Gorbunov, 2018 | Oromia, 21.8 km NW (289.5°) of Dembi Dolo E |
|              | Melittia aethiennii                       | Hampson, 1919  | Harar E                    |
|              | Melittia ambo                             | Gorbunov, 2015 | West Shewa, 3 km S of Ambo E|
|              | Ceridia heuglini                          | (Felder C. & Felder R., 1874) | Abyssinia [Ethiopia] E |
|              | Ceridia quirini                           | Sulak, Naumann & Witt, 2016 | Oromia Region, road between Deritu and Dubuluk, near Deritu E |
|              | Chaerocina ellisoni                       | Hayes, 1963    | Harar E                    |
|              | Covelliana berioi                         | Eitschberger & Melichar, 2016 | near Debark Gondar E |
|              | Covelliana robertbecki                    | Eitschberger & Melichar, 2016 | Ethiopia Central, Oromia, southern Bale Mts, Harenna Forest E |
|              | Dovania dargeei                           | Pierre, 2000   | Metu E                     |
|              | Dovania neumanni                          | Jordan, 1926   | SW Abyssinia [Ethiopia], Dhimma [Jimma] E |
|              | Falcatula tamsi                           | Carcasson, 1968 | Harrar [Harar] E           |
|              | Leucophlebia neumanni                     | Rothschild, 1902 | Gelo River to Akobo River E |
|              | Lophostethus dumolinii riedeli            | Eitschberger & Ströhle, 2011 | Arba Minch E |

**Family**: Family name of the moth.

**Taxon**: Scientific name of the moth.

**Author**: Scientists who described the species.

**Type Locality**: Geographical location of the type locality where the species was first described.
| Family | Taxon | Author | Type Locality |
|--------|-------|--------|---------------|
| Lepidopteran Biodiversity of Ethiopia | Lophostethus negus | Jordan, 1926 | SW Abyssinia [Ethiopia], Kambatta |
| | Macropoliana chrismonika | Eitschberger & Melichar, 2016 | Ethiopia W, 12 km E of Bonga |
| | Macropoliana haileselassiei | Eitschberger & Melichar, 2016 | Sidamo Province, 20 km S of Angere Maryam |
| | Macropoliana kingstoni | Eitschberger, 2016 | Oromia Region, 25 km E of Bonga/Mera |
| | Macropoliana stroehlei | Eitschberger, 2016 | Near Dorze |
| | Nephele xylina | Rothschild & Jordan, 1910 | Abyssinia [Ethiopia] |
| | Platyphloe dorsti | Rougeot, 1977 | Kêbèr-Mengist [Kibre Mengist] |
| | Praedona melichari | Haxaire, 2011 | Sidamo Province, near Bitata |
| | Pseudoclanis bianchii | (Oberthür, 1883) | Scioa [Shoa] |
| | Rufocalus numoae rotisiavi | Haxaire & Melichar, 2008 | Gamo Gofa Province, Dagabule National Park |
| | Temnora arida | Melichar & Řezáč & Ilčíková, 2016 | Dorze, Guge Mts |
| | Arniocera cyanoxantha | Mabille, 1893 | Abyssinia [Ethiopia] |
| | Arniocera guttulosa | Jordan, 1915 | Harar |
| | Lamprochrysa amata | (Druce, 1910) | Diré Daouá [Dire Dawa] |
| | Afrocelestis minuta | Gozmány, 1965 | Gamu-Gofa, Konso |
| | Ateliotum convicta | Meyrick, 1932 | Jem Jem Forest |
| | Ceratophaga luridula | Meyrick, 1932 | Mt. Chillálo, moorland |
| | Ceratophaga nepholotarna | Meyrick, 1932 | Jem-Jem Forest |
| | Criticomena spinulosa | Gozmány, 1965 | Gamu-Gofa, Konso |
| | Cryptisphysis stenovalva | Gozmány, 1965 | Gamu-Gofa, Konso |
| | Dryadula glycinona | Meyrick, 1932 | Jem-Jem Forest |
| | Ectabola pgiynina | Gozmány, 1965 | Marako |
| | Edoa teristica | Gozmány, 1965 | Harrar [Harar] |
| | Hapisaena gypsopea | Gozmány, 1965 | Gamu-Gofa, Konso |
| | Hapisaena pachypsaltis | Gozmány, 1965 | Kaffa, Ghimira |
| | Hapisaena richteri | Gozmány, 1965 | Ethiopia SW, Gamu-Gofa, Konso |
| | Leprozana zelotica | Meyrick, 1932 | Jem-Jem Forest |
| | Monops addenda | Gozmány, 1965 | Kaffa, Gembi [Gimbi] |
| | Monops leopoldina | Gozmány, 1965 | Kaffa, Abaro |
| | Monops triplocopa | Meyrick, 1932 | Jem-Jem Forest, 45 miles W. of Addis-Ababa, |
| | Perisomastix lucifer | Gozmány, 1965 | Muger Valley |
| | Scalmatica separata | Gozmány, 1965 | Konso, Gamu-Gofa |
| | Silosca mariae | Gozmány, 1965 | Djijer Valley |
| | Tinissa spaniata | Meyrick, 1932 | Jem-Jem Forest, 45 miles from Addis Ababa, |
| | Acleris baleina | Razowski & Trematerra, 2010 | Bale Mountains, Sanetti Plateau |
| | Acleris harenna | Razowski & Trematerra, 2010 | Bale Mountains, Harenna Forest, Karcha Camp |
| | Anglys colacii | Razowski & Trematerra, 2012 | Wellega Zone, Diddessa River |
| | Bubonoxena alatheta | Razowski & Trematerra, 2010 | Bale Mountains, Harenna Forest, Karcha Camp |
| | Chrystoneura palladinii | Razowski & Trematerra, 2010 | Bale Mountains, Harenna Forest |
| | Cocozera carolae | Razowski & Trematerra, 2010 | Bale Mountains, Harenna Forest |
|   | Family          | Taxon                        | Author                                      | Type Locality                  |
|---|----------------|------------------------------|----------------------------------------------|--------------------------------|
| 880| Tortricidae     | Coccothera triorbis         | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 881| Coniostola      | separata                    | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 882| Cosmetra        | anepenthes                  | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 883| Cosmetra        | latiloba                    | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 884| Cydia           | calliglypta                 | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 885| Cydia           | dinshoi                     | Razowski & Trematerra, 2010                  | Bale Mountains, Dinsho Lodge    |
| 886| Cydia           | latheticia                  | Razowski & Trematerra, 2010                  | Bale Mountains, Dinsho Lodge    |
| 887| Cydia           | tytthaspis                  | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 888| Ecopsis         | aegidia                     | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 889| Ecopsis         | brunnepoatica               | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 890| Ecopsis         | maschalista                 | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 891| Ecopsis         | subincana                   | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 892| Endothenia      | albopect                    | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 893| Endothenia      | ethiopica                   | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 894| Epichoristodes  | spilonoma                   | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 895| Euocosma        | vulpecularis                | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 896| Euocosmocydia   | zegisana                    | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 897| Grapholitha     | insperata                   | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 898| Gypsonoma       | giorgiae                    | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 899| Lozotaenia      | karchana                    | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 900| Lozotaenia      | sciarretae                  | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 901| Megapherytis    | oromiae                     | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 902| Megapherytis    | subae                       | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 903| Megalota        | lagaria                     | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 904| Metameia        | physetopa                   | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 905| Multiquesta     | aequisitica                 | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 906| Olethreutodes   | didessae                    | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 907| Olethreutodes   | polymorpha                  | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 908| Parabactra      | addissalema                 | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 909| Paraneecopsis   | addis                        | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 910| Phtheochroa     | lonnvei                     | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 911| Plutochroa      | xanthula                    | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 912| Procrica        | dinshona                    | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 913| Procrica        | ophiogrupta                 | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 914| Procrica        | parsiisi                    | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 915| Russograptis    | albulatora                  | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 916| Thaumactygapha  | amarantha                   | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 917| Thaumactygapha  | spinai                      | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 918| Tortrix         | diametrica                  | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
| 919| Trachybyrhis    | chionochlaena               | Razowski & Trematerra, 2010                  | Bale Mountains, Harenna Forest  |
Kenya, which for several aspects can be considered similar to Ethiopia, but probably it has been better investigated. So far, from Kenya approximately 4,815 lepidopteran taxa were reported, belonging to 63 families (Sáfián et al. 2009; De Prins and De Prins 2019). The currently known number of species in Kenya is almost twice that of Ethiopia, and 15 families are not recorded at all in the latter country. Is it really due to difference in faunal richness between the two countries or because of the different level of investigation? A better idea can come from the differences observed within the single families. When considering most groups of the ‘Microlepidoptera’, very few investigations were made in Ethiopia and the difference in species numbers between the two countries is huge. Considering only the most species-rich families of Microlepidoptera, the percentage of species present in Ethiopia, compared to the species numbers in Kenya, is 10% for Scythrididae, 13% for Gelechiidae, 17% for Thyrididae, 31% for Tortricidae, 34% for Pyralidae, 45% for Crambidae, 46% of Pterophoridae, up to 76% for Tineidae. However, if we look at the ‘larger moths’ (Macroheterocera) and butterflies, which are better investigated in both countries, the difference is decreasing from 40% for Saturniidae, 41% for Geometridae, 50% for Lycaenidae, 53% for Sphingidae, 55% for Erebidae up to 77% for Papilionidae, 79% for Noctuidae, 91% for Nymphalidae, peaking to 132% in Pieridae, where Ethiopia shows a higher number of species than Kenya.

Although the two countries certainly exhibit faunistic differences, due to biogeographic or climatic factors, it seems clear that the Ethiopian fauna is seriously understudied in many groups. By analysing comprehensive revisions of single genera or families accompanied by major collection campaigns in Ethiopia, we can have an idea of the potential biodiversity the country inhabits.

The geometrid genus *Prasinocima* Warren, 1897 was subject of an extensive review focused on Ethiopian species, based on an investigation carried out in 100 collection localities in the country for more than 15 years, which included an integrative taxonomic analysis based on morphology and DNA barcodes (Hausmann et al. 2016). As a result of this contribution, the species number was raised from eight previously known Ethiopian species to 40, of which 19 were new to science. After the publication, another seven new species for the Ethiopian fauna were described. Authors of the same article estimated the number of Ethiopian geometrids to exceed 700 species once the
unidentified material in their hands is examined, which may suggest a more realistic total species number in excess of 1,000 for the whole country.

Another contribution came from the revision that Hacker carried out on the subfamily Nolinae (Nolidae; Hacker et al. 2012; Hacker 2014), where many of the published data concerned sub-Saharan Africa. For Ethiopia, only three species were previously reported. After Hacker’s monograph, the number was raised to 61 species, with 27 newly described taxa from Ethiopia. For Kenya, he raised the figure from 12 to 73, a number not far from that of Ethiopia.

Although these are two examples of taxonomically particularly difficult groups, we can assume similar multiplicators for the so called ‘Microlepidoptera’ resulting in an estimate for the entire order of Lepidoptera in Ethiopia which may exceed 10,000 species, of which a number of species new for science. This estimate is based on, and in concordance with the usual ratio of geometrid species number versus lepidopteran species number of roughly 1:10, and on the usual ratio of the Rhopalocera (400+ species in Ethiopia) versus lepidopteran species number of roughly 1:20, as it results from large museum material (e.g. ZSM) and from various fauna inventories (e.g. Bavaria: Haslberger and Segerer 2016; Europe: Karsholt and Razowski 1996; North America: Hodges et al. 1983). For the moth fauna of Africa, 38,988 species group names of them are listed by Afromoths (2019), of which 5510 (14%) are geometrids. The total number, however, does not include Rhopalocera names, with 4405 species (Williams 2018) and Microlepidoptera taxonomy is underrepresented, hence also here the “10%-rule” for the Geometridae ratio is seems to apply, at least roughly.

Data from DNA barcoding

In the framework of the international Barcode of Life initiative, DNA barcodes (658bp 5’ COI gene fragment, cf. Hebert et al. 2003) have been assembled for Ethiopian Lepidoptera since 2006 with the aim to establish a national DNA reference library for integrated taxonomic studies. So far, 3160 DNA barcodes have been generated from Ethiopian Lepidoptera (including many Ethiopian type specimens), belonging to 1012 genetic clusters (Barcode Index Numbers, ‘BINs’) which are a good proxy for real species numbers (Ratnasingham and Hebert 2013; Hausmann et al. 2013). Most DNA barcodes could be assembled in the Geometridae (2290 barcodes, 571 BINs), Noctuidae (314 barcodes, 165 BINs) and Erebidae (246 barcodes, 143 BINs). Species coverage is particularly good in the smaller families such as the Saturniidae (121 barcodes, 36 BINs) and Sphingidae (70 barcodes, 24 BINs), while it is still being very poor in the ‘Microlepidoptera’. All images and most metadata and molecular data are accessible in the public database BOLD (Ratnasingham and Hebert 2007).
Actual constraints and future perspectives of research on Lepidoptera Diversity of Ethiopia

Butterflies and moths are a major component of biodiversity playing a crucial role in the ecosystem as primary consumers, essential part of food-chains and pollinators. However, humans are exerting unprecedented pressures on all of the earth’s ecosystems, and such pressures may affect all species (Sanchez-Bayo and Wyckhuyes 2019). Nature conservation strategies have focused most of their attention on the “charismatic megafauna”, i.e., on mammals, birds, and other vertebrates. The vast majority of invertebrate species – although accounting for more than 80% of the animal species - are too poorly known to allow an assessment of how they are affected by human activities, and what might be done to mitigate the damage that humans cause. In most cases, the best way that can be done is to conserve their habitats so that most inhabiting species will continue to thrive.

The greatest threats to butterflies and moths are habitat fragmentation and destruction, intensification of agricultural practice with over-use of pesticides and herbicides; climate change mainly affecting endemic species adapted to mountainous habitats, whereas scientific collecting is absolutely negligible (Hausmann 2001; Sanchez-Bayo and Wyckhuyes 2019). In general, human activity is enormously threatening the global diversity of life on the planet. Rough estimates suggest that we are currently undergoing not only unprecedented, but also accelerating rates of species extinction (UNEP 2006; Sanchez-Bayo and Wyckhuyes 2019).

In the same manner, Ethiopia is experiencing major biodiversity loss, mainly related to extensive destruction of habitats, deforestation, land degradation, intensive agricultural expansion, climate change, excessive pesticide and herbicide use, introduction of exotic plant species, among others (EBI 2015; Tesfu et al. 2018). The loss of primary or native forest areas, due to clearcutting and conversion into agroforests, farmland or settlements, are currently the major threat to the Ethiopian biodiversity in general and Lepidoptera in particular.

Despite Ethiopia being known for its rich heritage of biological diversity and many diverse ecosystems, the conservation of its habitats have received scant attention. The system of protected areas so far established includes 21 national parks, four sanctuaries, eight wildlife reserves, 20 controlled hunting areas, six open hunting areas, six community conservation areas and 58 national forest priority areas (Young 2012), covering 14% of the country (EBI 2015). However, most of its biodiversity, including Lepidoptera, is still unexplored because of significant lack of national research capacity. Hence, in parallel to conservation programs and sustainable utilisation of biological resources, efforts for the preparation of a comprehensive bio-inventory should receive highest priority. Such an instrument must be considered an essential baseline for policy makers, planners, donors and researchers working on biodiversity conservation in Ethiopia.

In order to upsurge biodiversity knowledge, capacity building in the area at various levels is needed. Lack of well organised natural history museums, specialists, and scien-
Scientific societies providing support and fostering citizen science, international research networks and projects are among the identified gaps. Currently, most of the type specimens and reference collections are deposited outside the country of origin. In this context, the Nagoya Protocol (UNSG 2010), although intending to strengthen nations to conserve their genetic resources, to some extent could lead to the opposite effect by hampering international collaboration. Joint protocols and agreements between national actors (research institutes, governing agencies, universities, NGO’s) and international research bodies should be promoted in a collaborative way, favoring shared, non-commercial biodiversity research. Close collaboration with museums and universities possessing reference collections and skills, designing and organising projects are required to teach and train a generation of highly competent scientists and managers so that collections of Ethiopian insects could be built and properly managed. In absence of these minimum requirements, establishing a national entomological museum/collection could be ineffective in promoting the study and conservation of local biodiversity resources.

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