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## A checklist of global distribution of Liturgusidae and Thespidae (Mantodea: Dictyoptera)

**Shveta Patel, Garima Singh and Rajendra Singh**

### Abstract

The praying mantiss are a group of over 2500 predatory insects (Order Mantodea: Superorder Dictyoptera) distributed in tropical and subtropical habitats of the world, from the rainforest to the desert ground. Currently, the order Mantodea comprises over 20 families, out of which the global distribution of 2 families: Liturgusidae and Thespidae is provided in this compilation. The family Liturgusidae includes a broad assemblage of genera distributed on five continents, all members being characterized as ecomorphic specialists on tree trunks or branches. The family consists of 19 genera and 92 species distributed in Neotropical Central and South America, Tropical Africa and Australasia. The family Thespidae is the most speciose (41 genera, 224 species) and ecologically diversified lineage of Neotropical praying mantiss comprising 6 subfamilies: Haaniinae (2 genera, 10 species), Hoplocoryphinae (3 genera, 41 species), Miobantiinae (3 genera, 19 species), Oligonicinae (16 genera, 71 species), Pseudomiopteriginae (7 genera, 28 species) and Thespininae (10 genera, 44 species).

**Keywords:** Mantodea, Liturgusidae, Thespidae, bark mantises, world distribution, praying mantis, checklist

### Introduction

The praying mantises are a group of over 2500 predatory insects (Order Mantodea: Superorder Dictyoptera) distributed in tropical and subtropical habitats of the world, from the rainforest to the desert ground<sup>[1]</sup>. The word *mantis* comes from the Greek *mantikos*, for soothsayer or prophet. Indeed, these insects do look spiritual and mysterious, especially when their forelegs are clasped together as if they are in prayer. The mantids are largely arboreal but some apterous forms are found on ground. They are solitary, exclusively carnivorous insects. They capture prey such as flies, grasshoppers, leafhoppers, caterpillars, butterflies etc. with their well-developed raptorial forelegs. Some large South American species may even attack small birds like humming birds and other small vertebrates<sup>[2]</sup>. Mantids do not actively pursue prey, but wait motionless on vegetation for passing prey. They monitor the position of passing prey by turning their heads as prey passes and strike out with their forelegs when prey are in range. Some species of mantids, especially in tropical regions, mimic flowers and leaves<sup>[3]</sup>. Mantids will run or fly and may make short jumps when disturbed. Some adopt a threat posture when disturbed, raising their sometimes brightly coloured wings and striking out with their forelegs. If grasped by the mesothoracic or metathoracic legs, they may escape by autoamputating the imprisoned leg.

Since all mantids are predatory, they play a very important role in insect control plan of nature. They are the only predator which feed even at night on moths (most moths are nocturnal) and the only predator fast enough to catch mosquitoes and flies. However, they do not possess key attributes of biocontrol agents<sup>[4]</sup> to be employed successfully in biological control programme because they are neither species specific nor more fecund but are general predator and consume both harmful and beneficial insects. Moreover, mantids are purchased by growers to keep pest population down in kitchen gardens in Europe and Neotropical countries (see <http://gardeninsects.com/prayingMantis.asp>; <http://www.livemantis.com>). Most of the praying mantiss are quite large, colourful and more visible than most beneficial insects, they are fun to watch, and children are fascinated to see a praying mantis grasping its prey.

Mantids were formerly placed along with stick insects (now order Phasmatodea), cockroaches (now order Blattodea) and rock crawlers (now order Grylloblattodea) in the order Orthoptera<sup>[5]</sup>. Later on, it was placed with the cockroaches and termites (now order Blattodea) into the order Dictyoptera, in the suborder Mantodea<sup>[5]</sup>. Recently, the ordinal rank of Dictyoptera was elevated to Superorder including cockroaches and termites (now Order Blattodea), and mantids (now Order Mantodea)<sup>[1, 6-7]</sup>.

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The suprageneric taxonomy of Mantodea was revised considerably in the recent years on the basis of molecular data [3, 8-11]. Most of the distributional records are scattered in literature. The checklists of Mantodea of different countries/continents/ecozones are published in recent past by several authors, but familywise distribution pattern of the world is not compiled so far. Recently, Patel and Singh [12-15] provided the checklist of following 12 families of Mantodea : Acanthopidae (14 genera, 96 species/subspecies), Amorphoscelidae (15 genera, 95 species/subspecies), Chaeteessidae (1 genus, 6 species), Empusidae (11 genera, 54 species), Eremiaphilidae (2 genera, 73 species), Galinthiidae (4 genera, 24 species), Hymenopodidae (34 genera, 238 species), Iridopterygidae (47 genera, 136 species), Mantidae (188 genera, 1261 species), Mantoididae (2 genera, 12 species), Metallyticidae (1 genus, 5 species), and Sibyllidae (3 genera, 17 species/subspecies); and all these families account for 2012 species of mantids belonging to 322 genera. In the present compilation, world distribution of 2 families: Liturgusidae (genera and species) and Thespidae (genera and species) are presented.

The family Liturgusidae includes a broad assemblage of genera distributed on five continents [16-41], all members being characterized as ecomorphic specialists on tree trunks or branches. Informally called “bark mantises”, the group exhibits: heavy camouflage mottling that includes browns, black, and other earth tone colours matching tree bark or lichen substrates; dorsoventral flattening for a lower profile against a flat surface; and a ventral prothoracic femoral pit to accommodate for the distal posteroventral prothoracic tibial spine [9, 38-41]. These genera are assigned to this family on the basis of strong ecomorphic similarities but Svenson and Whiting [8] on the basis of molecular data established that the family is polyphyletic. Currently, the family consists of 19 genera: *Ciulfina* Giglio-Tos, 1915; *Corticomantis* Svenson, 2014; *Dactylopteryx* Karsch, 1892; *Fuga* Svenson, 2014; *Gonatista* Saussure, 1869; *Gonatistella* Giglio-Tos, 1915; *Hagiomantis* Serville, 1839; *Humbertiella* Saussure, 1869; *Liturgusa* Saussure, 1869; *Liturgusella* Giglio-Tos, 1915; *Majanga* Wood-Mason, 1891; *Mellierella* Giglio-Tos, 1915; *Pseudogousa* Tinkham, 1937; *Scolodera* Milledge, 1989; *Stenomantis* Saussure, 1871; *Theopompa* Stal, 1877; *Theopompella* Giglio-Tos, 1917; *Velox* Svenson, 2014; and *Zouza* Rehn, 1911.

*Ciulfina* Giglio-Tos, 1915 is one of the more intriguing genera of praying mantiss that are not sexually cannibalistic [42] and do not produce airborne sex pheromones [43], and, therefore, represent patterns of reproductive behaviour that vary greatly from other well-studied mantid genera [44]. These mantids are cryptic cursorial predators that live on tree trunks in a variety

of habitats throughout northern Australia. They seem to be alike morphologically, hence are distinguished on the basis of male genitalia [45]. *Corticomantis* Svenson, 2014, recently described genus is monotypic with wide body, exhibits striking, contrasting coloration including dark brown, black and varying shades of green that resembles a bark-lichen surface [41]. *Dactylopteryx* Karsch, 1892 is an Afrotropical genus and only 3 species are assigned to it. *Fuga* Svenson, 2014 is also a newly described genus from Brazil, its overall coloration varies with a mottled or camouflage pattern that incorporates black, brown, pale tan, white or grey, and sometimes shades of green. All species are dorsoventrally flattened with disproportionately long legs in comparison to body length [41]. Five species of the genus *Gonatista* Saussure, 1869 distributed in Caribbean area and Florida-USA is not related to other Neotropical Liturgusidae and its systematic placement remains unresolved [16]. The monotypic *Gonatistella* Giglio-Tos, 1915 is also non-Neotropical genus distributed only in Australia [41]. *Hagiomantis* Serville, 1839 is a Neotropical genus, the species are large in size with a dark dorsal habitus and the coloration of the forewings is with high contrast light and dark mottling. *Humbertiella* Saussure, 1869 is an Indomalayan genus, its 6 species are found in India. The type genus *Liturgusa* Saussure, 1869 of the family occurs only in Central and South America and represents the most diverse genus of Neotropical Liturgusini [41]. Little known monotypic genus *Liturgusella* Giglio-Tos, 1915 and *Majanga* Wood-Mason, 1891, both are reported only from Madagascar. *Mellierella* Giglio-Tos, 1915 having only two species, out of which one *Mellierella trifasciata* (de Haan, 1842) (considered valid [46, 47] is considered to be synonym of *Rivetinula fraterna* (Saussure 1871) by Ehrmann [38]. Monotypic genera *Pseudogousa* Tinkham, 1937 inhabits only in China while *Scolodera* Milledge, 1989 and *Stenomantis* Saussure, 1871 are Australasian in distribution. The species of *Theopompa* Stal, 1877 are Indomalayan in distribution. *Theopompella* Giglio-Tos, 1917 contain 9 species and all are Afrotropical in distribution. *Velox* Svenson, 2014 described from southeast Brazil is monotypic and one of the larger Neotropical Liturgusini. Its coloration is heavily mottled and has asymmetrical wing coloration, one wing being much darker [41]. *Zouza* Rehn, 1911 is also monotypic but distributed in Afrotropical region. Recently, Sathe and Patil [48] described *Humbertiella mulberae* as a new species from India but not included in the present list because the species was neither described in detail nor illustrated and one cannot identify on the basis of description, therefore, it seems to be *nomen dubium*. The distribution map of Liturgusidae is illustrated in Fig. 1.

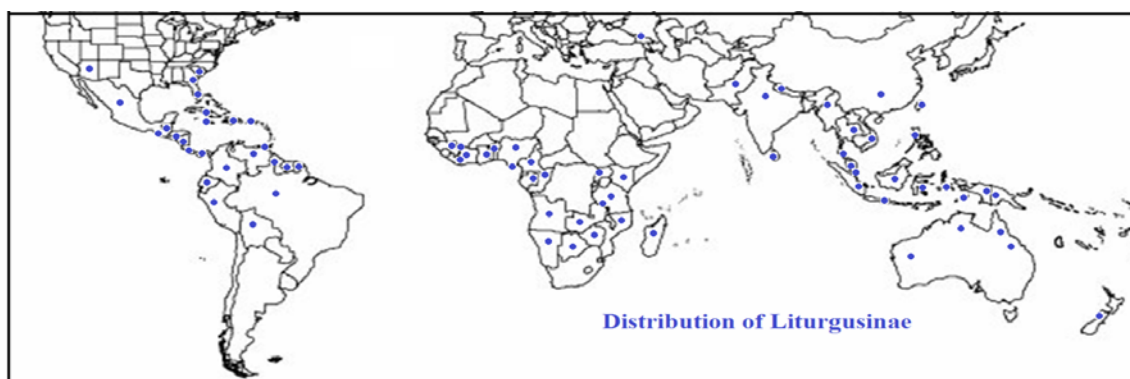
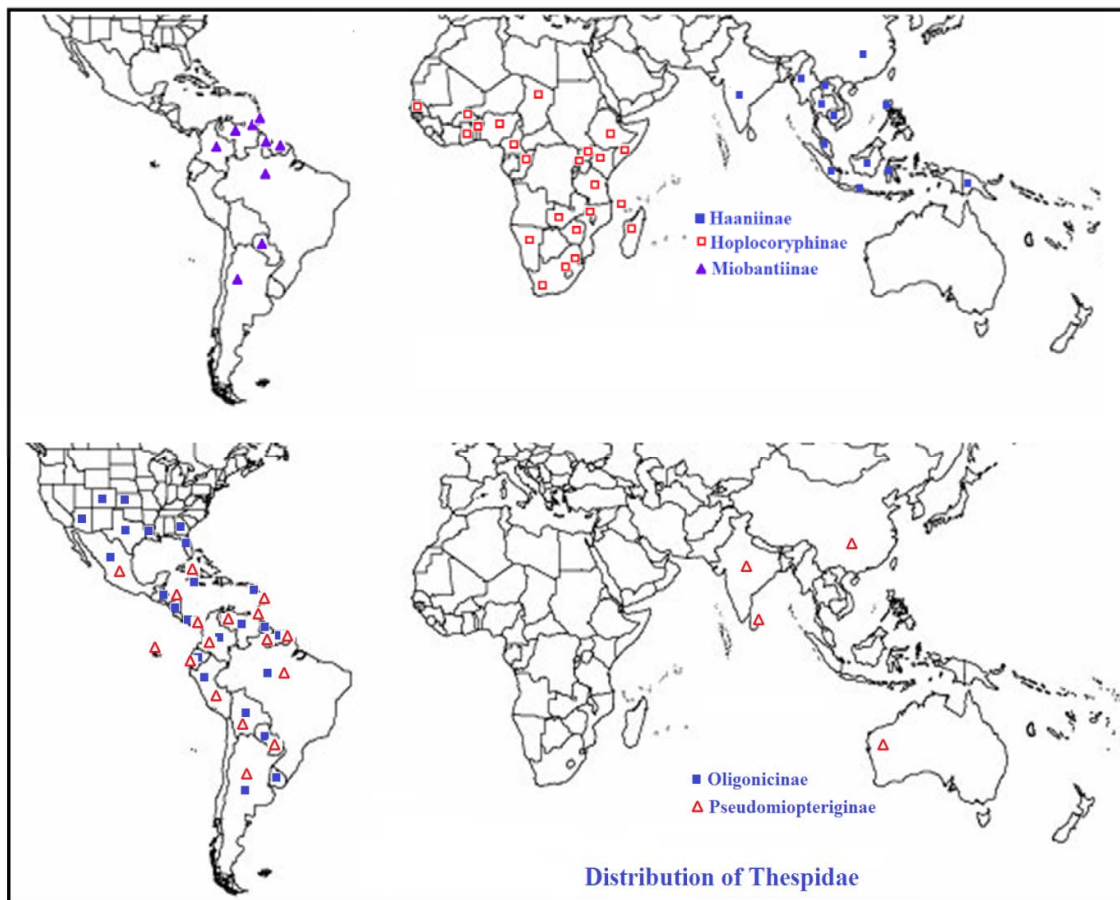


Fig 1: World distribution of the family Liturgusidae.

Thespidae is the most speciose (41 genera, 224 species) and ecologically diversified lineage of Neotropical praying mantiss. Many species seem to be microhabitat specialists including grass, undergrowth, open ground, tree bark and epiphytic vegetation, many exhibiting specialized and often remarkable cryptic adaptations, e.g. *Pseudopogonogaster* Beier, 1942, *Thesprotiella* Giglio-Tos, 1915, *Pogonogaster* Rehn, 1918 (lichen), *Eumusonia* Giglio-Tos, 1916 (grass) and *Anamiopteryx* Giglio-Tos, 1915 (rough bark)<sup>[49]</sup>. The same female can produce egg cases of varying length and volume (which correlates with the number of eggs contained), but shape and overall morphology is otherwise well conserved<sup>[11]</sup>. Thespidids live in many ecological conditions, from dry to humid environments. They are distributed across the entire Neotropic and adjacent areas in the southern Nearctic Region and are also commonly found on islands (e.g. Galapagos, Antilles) even at 3500 m a.s.l. They vary greatly both in body size and shapes, from short

and compact (e.g., *Pseudopogonogaster* Beier, 1942, *Pseudomiopteryx* Saussure, 1870 and *Eumiopteryx* Giglio-Tos, 1916), to long and slender (e.g., *Thesprotiella* Giglio-Tos, 1915 and *Oligonyx* Saussure, 1869). There is distinct sexual dimorphism in several species, where males are smaller and slimmer than females, the latter often exhibiting more elaborate camouflage<sup>[11]</sup>. The body size varies from 9 mm (smallest mantid, e.g. *Diabantia* Giglio-Tos, 1915) to 66 mm (e.g., *Macromusonia* Hebard, 1922). The body colour ranges from in tone of brown and grey to black, some species have both brown and green morphs; species of *Pseudopogonogaster* Beier, 1942 are even polychromatic<sup>[48]</sup>. Rivera and Svenson<sup>[11]</sup> nicely describe the morphology and natural history of the family Thespidae. The family is widely distributed in Neotropical ecozone of Central and South America, Africa, and Southeast Asia<sup>[10, 18, 22, 23, 29, 32, 35, 38, 49-75]</sup>. The distribution map of Thespidae is illustrated in Fig. 2.



**Fig 2:** World distribution of the subfamilies of Thespidae.

In the present compilation, global distribution of 2 families of Mantodea: Liturgusidae and Thespidae is provided. The work will help to solve some needs pertaining to studies on world mantids of these families, such as synonymic handling and distributions, as well as the lack of a complete and up-to-date listing of the species. In preparing of this checklist, recent world literatures (published up to November, 2016) were scrutinized for synonymy of the species along with the information available at two websites ([http://](http://mantodea.speciesfile.org)

[mantodea.speciesfile.org](http://mantodea.speciesfile.org) and <http://www.gbif.org/species>) accessed on 18 November, 2016.

#### **Outline Classification and Distribution Pattern**

Due to continuous changes in the taxon nomenclature, variable number of genera was assigned to these families in past<sup>[38]</sup>. The following table displays the outline classification and distribution pattern of the families, Liturgusidae and Thespidae.

**Table 1:** Outline classification of the families Liturgusidae and Thespidae and number of genera and species assigned to them and their global distribution.

| Family       | Subfamily            | Tribe               | Genera | Species | Distribution  |
|--------------|----------------------|---------------------|--------|---------|---|
| Liturgusidae | Liturgusinae         | Liturgusini         | 19     | 92      | Neotropical Central and South America, Tropical Africa, Australasia |
| Thespidae    | Haaniinae            | -                   | 2      | 10      | Southeast Asia  |
|              | Hoplocory-phinae     | -                   | 3      | 41      | Tropical Africa   |
|              | Miobantiinae         | Miobantiini         | 3      | 19      | Neotropical Central and South America                               |
|              | Oligonicinae         | Oligonicini         | 16     | 71      | Neotropical Central and South America                               |
|              | Pseudomio-pteriginae | Pseudomio-pterigini | 7      | 28      | Neotropical Central and South America, China                        |
|              | Thespiinae           | Parathespiini       | 10     | 44      | Neotropical Central and South America, Australasia,                 |
|              |                      | Total               | 60     | 305     |   |

### Global Checklist

Following is the checklist of the global distribution of the families: Liturgusidae and Thespidae. Synonymy of the taxa were avoided and for that literature published in recent past may be consulted for synonymy [10, 11, 24, 38, 47, 76-83].

### Family-1: Liturgusidae

#### Subfamily-1: Liturgusinae

#### Tribe-1: Liturgusini

#### 1. Genus: *Ciulfina* Giglio-Tos, 1915

- Ciulfina annecharlotteae* Holwell, 2014 [North Australia]
- Ciulfina baldersoni* Holwell, Ginn & Herberstein, 2007 [North Australia]
- Ciulfina biseriata* (Westwood, 1889) [Northwest Australia]
- Ciulfina herbersteinae* Holwell, 2014 [North Australia]
- Ciulfina ianrichardi* Holwell, 2014 [North Australia]
- Ciulfina klassi* Holwell, Ginn & Herberstein, 2007 [Australia, Queensland]
- Ciulfina liturgusa* Giglio-Tos, 1915 [North Australia]
- Ciulfina rentzi* Holwell, Ginn & Herberstein, 2007 [North Australia]
- Ciulfina terrymariceae* Holwell, 2014 [North Australia]

#### 2. Genus: *Corticomantis* Svenson, 2014

- Corticomantis atricoxata* (Beier, 1931) [Costa Rica]

#### 3. Genus: *Dactylopteryx* Karsch, 1892

- Dactylopteryx flexuosa* Karsch, 1892 [Cameroon, Congo, Gabon, Ghana, Ivory Coast]
- Dactylopteryx intermedia* Beier, 1963 [Cameroon]
- Dactylopteryx orientalis* (Werner, 1906) [Mozambique, Tanzania]

#### 4. Genus: *Fuga* Svenson, 2014

- Fuga annulipes* (Serville, 1839) [Brazil, Costa Rica, French Guiana, Panama, Venezuela]
- Fuga fluminensis* (Toledo Piza, 1889) [Brazil]
- Fuga grimaldii* Svenson, 2014 [Brazil]

#### 5. Genus: *Gonatista* Saussure, 1869

- Gonatista grisea* (Fabricius, 1793) [Cuba, Georgia, Jamaica, Puerto Rico, USA-Florida & South Carolina]
- Gonatista jaiba* Lombardo & Perez-Gelabert, 2004 [Dominican Republic, Hispaniola]
- Gonatista major* Caudell, 1912 [Dominican Republic, Hispaniola, Puerto Rico]
- Gonatista phryganoides* (Serville, 1839) [Dominican Republic, USA-Arizona & Florida]
- Gonatista reticulata* (Thunberg, 1815) [Cuba, Dominican Republic, Hispaniola, Puerto Rico]

#### 6. Genus: *Gonatistella* Giglio-Tos, 1915

- Gonatistella nigropicta* (Westwood, 1889) [Australia]

#### 7. Genus: *Hagiomantis* Serville, 1839

- Hagiomantis mesopoda* (Westwood, 1889) [Brazil, Colombia, French Guiana]
- Hagiomantis ornata* (Stoll, 1813) [Bolivia, Brazil, French Guiana, Surinam]
- Hagiomantis pallida* Beier, 1942 [Brazil]
- Hagiomantis superba* (Gerstaecker, 1889) [Brazil, Peru]
- Hagiomantis surinamensis* (Saussure, 1872) [Brazil, French Guiana, Peru, Surinam]

#### 8. Genus: *Humbertiella* Saussure, 1869

- Humbertiella affinis* Giglio-Tos, 1917 [India, Pakistan, Sri Lanka]
- Humbertiella assimidata* Wood-Mason, 1891 [?]
- Humbertiella brunneri* Kirby, 1904 [Indonesia]
- Humbertiella ceylonica* Saussure, 1869 [India, Myanmar, Nepal, Sri Lanka, Thailand]
- Humbertiella indica* Saussure, 1869 [India, Myanmar, Pakistan, Nepal, Sri Lanka]
- Humbertiella laosana* Beier, 1930 [Vietnam]
- Humbertiella milligratulata* Yang in Huang, Yin, Zeng, Lin & Gu, 2002 [China]
- Humbertiella modesta* Laidlaw, 1937 [India]
- Humbertiella nada* Zhang, 1986 [China]
- Humbertiella nigrospinosa* Sjostedt, 1930 [India]
- Humbertiella ocularis* Saussure, 1872 [Borneo, Malaysia, New Guinea, New Zealand, Singapore, Sunda Islands]
- Humbertiella similis* Giglio-Tos, 1917 [India, Nepal, Sri Lanka]
- Humbertiella sindhica* Soomro, Soomro & Wagan, 2001 [Pakistan]
- Humbertiella taprobanarum* Wood-Mason, 1891 [Sri Lanka]
- Humbertiella yunnanensis* Wang & Bi, 1995 [China]

#### 9. Genus: *Liturgusa* Saussure, 1869

- Liturgusa actiosa* Rehn, 1951 [Panama]
- Liturgusa algorei* Svenson, 2014 [Peru, Ecuador]
- Liturgusa bororum* Svenson, 2014 [Brazil, Peru]
- Liturgusa cameroni* Svenson, 2014 [Guyana, Venezuela]
- Liturgusa cayennensis* (Saussure, 1869) [Brazil, Colombia, Ecuador, French Guiana, Guyana, Guatemala, Mexico, Panama, Surinam, Trinidad & Tobago, Venezuela]
- Liturgusa charpentieri* Giglio-Tos, 1927 [Brazil, Colombia, Costa Rica, Ecuador]
- Liturgusa cura* Svenson, 2014 [Venezuela]
- Liturgusa cursor* Rehn, 1951 [Costa Rica, Nicaragua, Panama]
- Liturgusa dominica* Svenson, 2014 [Dominica]
- Liturgusa fossetti* Svenson, 2014 [Costa Rica, Panama, Nicaragua]
- Liturgusa guyanensis* La Greca, 1939 [Brazil, Guyana,

- Surinam]
54. *Liturgusa kirtlandi* Svenson, 2014 [Bolivia]
55. *Liturgusa krattorum* Svenson, 2014 [Colombia, Ecuador, Peru]
56. *Liturgusa lichenalis* Gerstaecker, 1889 [Colombia, Peru, Ecuador, Venezuela]
57. *Liturgusa manausensis* Svenson, 2014 [Brazil]
58. *Liturgusa maya* (Saussure & Zehntner, 1894) [Brazil, Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, Surinam, Venezuela,]
59. *Liturgusa maroni* Svenson, 2014 [French Guiana]
60. *Liturgusa milleri* Svenson, 2014 [French Guiana]
61. *Liturgusa neblina* Svenson, 2014 [Venezuela]
62. *Liturgusa nubeculosa* Gerstaecker, 1889 [Brazil, Bolivia, Colombia, Ecuador, Peru, Venezuela]
63. *Liturgusa purus* Svenson, 2014 [Brazil]
64. *Liturgusa stiewei* Svenson, 2014 [Colombia]
65. *Liturgusa tessae* Svenson, 2014 [Bolivia, Brazil, Peru]
66. *Liturgusa trinidadensis* Svenson, 2014 [Trinidad]
67. *Liturgusa zoeae* Svenson, 2014 [Guatemala, Honduras, Panama, Belize]
- 10. Genus: *Liturgusella* Giglio-Tos, 1915**
68. *Liturgusella malagassa* (Saussure & Zehntner, 1895) [Madagascar]
- 11. Genus: *Majanga* Wood-Mason, 1891**
69. *Majanga basilaris* (Westwood, 1889) [Madagascar]
70. *Majanga spinosa* Giglio-Tos, 1915 [Madagascar]
71. *Majanga tricolor* (Saussure & Zehntner, 1895) [Madagascar]
- 12. Genus: *Mellierella* Giglio-Tos, 1915**
72. *Mellierella biori* Giglio-Tos, 1915 [Indonesia, Papua New Guinea]
73. *Mellierella trifasciata* (de Haan, 1842) (?)
- 13. Genus: *Pseudogousa* Tinkham, 1937**
74. *Pseudogousa sinensis* Tinkham, 1937 [China]
- 14. Genus: *Scolodera* Milledge, 1989**
75. *Scolodera pardalotus* Milledge, 1989 [Queensland-Australia]
- 15. Genus: *Stenomantis* Saussure, 1871**
76. *Stenomantis novaeguineae* (de Haan, 1842) [Aru Islands, Australia, Guinea, Kei Islands-Indonesia, Solomon Islands, Waigu Islands]
- 16. Genus: *Theopompa* Stal, 1877**
77. *Theopompa borneana* Giglio-Tos, 1917 [Sarawak-Borneo, Malaysia]
78. *Theopompa burmeisteri* (de Haan, 1842) [Borneo, Java, Sulawesi]
79. *Theopompa ophthalmica* (Olivier, 1792) [Ambon, India, Sulawesi, Sunda Island, Taiwan, Vietnam]
80. *Theopompa servillei* (de Haan, 1842) [Borneo, India, Indonesia, Myanmar, Penninsular Malaysia, Sunda Island, Thailand]
81. *Theopompa tosta* Stal, 1877 [Borneo, New Guinea, Malaysia, New Guinea, Philippines, Sumatra]
- 17. Genus: *Theopompella* Giglio-Tos, 1917**
82. *Theopompella aurivillii* (Sjostedt, 1900) [Angola, Bioko, Cameroon, Congo, Gabon, Kenya, Malawi, Togo]
83. *Theopompella chopardi* Roy, 1963 [Ghana, Guinea, Ivory Coast, Liberia]
84. *Theopompella congica* Rehn, 1949 [Congo]
85. *Theopompella elegans* La Greca & Lombardo, 1993 [Congo, Nigeria]
86. *Theopompella fusca* Giglio-Tos, 1917 [Cameroon, Congo, Guinea, Ivory Coast, Ghana, Guinea, Rwanda, Tanzania, Zambia, Zimbabwe]
87. *Theopompella heterochroa* (Gerstaecker, 1883) [Cameroon, Congo, Gabon, Kenya, Nigeria]
88. *Theopompella orientalis* Giglio-Tos, 1917 [Tanzania]
89. *Theopompella pallida* Giglio-Tos, 1916 [Cameroon, Congo, Gabon, Mount Nimba]
90. *Theopompella westwoodi* (Kirby, 1904) [Cameroon, Ghana, Guinea, Ivory Coast, Tanzania, Togo]
- 18. Genus: *Velox* Svenson, 2014**
91. *Velox wielandi* Svenson, 2014 [Brazil]
- 19. Zouza Rehn, 1911**
92. *Zouza radiosa* (Giglio-Tos, 1907) [Botswana, Mozambique, Namibia, Zambia, Zimbabwe]
- Family-2: Thespidae**
- Subfamily-1: Haaniinae**
- 20. Genus: *Astape* Stal, 1877**
93. *Astape denticollis* Stal, 1877 [China, India, Java, Laos]
- 21. Genus: *Haania* Saussure, 1871**
94. *Haania aspera* (Werner, 1922) [New Guinea, Philippines]
95. *Haania borneana* Beier, 1952 [Borneo, Malaysia, Philippines]
96. *Haania confusa* Kirby, 1904 [Borneo, Java, Malaysia, Sumatra]
97. *Haania dispar* (Werner, 1922) [?]
98. *Haania doroshenkoi* Anisytukin & Gorochoy, 2004 [Cambodia]
99. *Haania lobiceps* (de Haan, 1842) [Borneo, Java, Sumatra, Malaysia, Myanmar, Thailand]
100. *Haania philippina* Giglio-Tos, 1915 [Philippines]
101. *Haania simplex* Beier, 1952 [Sulawesi]
102. *Haania vitalisi* Chopard, 1920 [China, India, Laos]
- Subfamily-2: Hoplocoryphinae**
- 22. Genus: *Apterocorypha* Roy, 1966**
103. *Apterocorypha atra* (Giglio-Tos, 1916) [Congo]
104. *Apterocorypha aurita* (Saussure & Zehntner, 1895) [Madagascar]
105. *Apterocorypha bispina* Saussure & Zehntner, 1895 [Madagascar]
106. *Apterocorypha somalica* Lombardo, 1985 [Somalia]
- 23. Genus: *Hoplocorypha* Stal, 1871**
107. *Hoplocorypha acuta* Giglio-Tos, 1916 [Madagascar, Tanzania]
108. *Hoplocorypha bicornis* Deeleman-Reinhold, 1957 [Transvaal]
109. *Hoplocorypha boromensis* Brancsik, 1895 [Zambia]
110. *Hoplocorypha bottegi* Saussure, 1895 [Ethiopia, Somalia, Tanzania]
111. *Hoplocorypha boviniformis* Rehn, 1912 [Angola]
112. *Hoplocorypha brevicollis* Beier, 1931 [Orange Free State]
113. *Hoplocorypha cacomana* Giglio-Tos, 1916 [Congo, Tanzania]



114. *Hoplocorypha carli* Giglio-Tos, 1916 [Rwanda]  
 115. *Hoplocorypha congica* Giglio-Tos, 1916 [Angola, Congo]  
 116. *Hoplocorypha dentata* Giglio-Tos, 1916 [Kenya, Tanzania, Zimbabwe]  
 117. *Hoplocorypha distinguenda* Beier, 1930 [Nigeria]  
 118. *Hoplocorypha foliata* Giglio-Tos, 1916 [Tanzania]  
 119. *Hoplocorypha fumosa* Giglio-Tos, 1916 [Malawi, Zimbabwe]  
 120. *Hoplocorypha galeata* (Saussure, 1870) [Ethiopia, Kenya, Tanzania, Zanzibar]  
 121. *Hoplocorypha garuana* Giglio-Tos, 1916 [Angola, Cameroon, Namibia, Tanzania, Togo]  
 122. *Hoplocorypha hamulifera* Beier, 1954 [Congo]  
 123. *Hoplocorypha lacualis* Giglio-Tos, 1916 [Congo, Somalia, Tanzania]  
 124. *Hoplocorypha lobata* Roy, 1969 [Senegal]  
 125. *Hoplocorypha macra* (Stal, 1856) [Angola, Cape Province, Kenya, Namibia, Natal, Tanzania, Transvaal, Uganda, Zambia]  
 126. *Hoplocorypha mellea* Giglio-Tos, 1916 [Ethiopia, Kenya, Tanzania]  
 127. *Hoplocorypha nana* Sjostedt, 1909 [Namibia, Uganda, Zuzuland]  
 128. *Hoplocorypha narocana* Giglio-Tos, 1916 [Chad, Ethiopia, Kenya, Tanzania, Zambia]  
 129. *Hoplocorypha nigerica* Beier, 1930 [Burkana Faso, Ghana, Nigeria]  
 130. *Hoplocorypha nigra* Giglio-Tos, 1916 [Congo]  
 131. *Hoplocorypha perplexa* Rehn, 1912 [Angola, Congo, Namibia, Tanzania, Zimbabwe]  
 132. *Hoplocorypha picea* Giglio-Tos, 1916 [Kenya]  
 133. *Hoplocorypha punctata* Giglio-Tos, 1916 [Tanzania]  
 134. *Hoplocorypha rapax* Saussure, 1881 [Cameroon, Kenya, Tanzania, Somalia]  
 135. *Hoplocorypha salfi* La Greca, 1939 [Ethiopia, Somalia]  
 136. *Hoplocorypha saussurii* Giglio-Tos, 1916 [Kenya, Namibia, Tanzania]  
 137. *Hoplocorypha sordida* Giglio-Tos, 1916 [Ethiopia, Kenya, Tanzania]  
 138. *Hoplocorypha striata* Beier, 1930 [Namibia]  
 139. *Hoplocorypha turneri* Beier, 1930 [Namibia]  
 140. *Hoplocorypha ugandana* Beier, 1930 [Uganda]  
 141. *Hoplocorypha vittata* Giglio-Tos, 1916 [Malawi, Tanzania]  
 142. *Hoplocorypha wittei* Beier, 1954 [Congo]

**24. Genus: Hoplocoryphella Giglio-Tos, 1916**

143. *Hoplocoryphella grandis* (Brancsik, 1895) [Madagascar, Tanzania, Transvaal, Zimbabwe]

**Subfamily-3: Miobantiinae****Tribe-1: Miobantiini****25. Genus: Chloromiopteryx Giglio-Tos, 1915**

144. *Chloromiopteryx mirim* (Terra, 1982) [Brazil]  
 145. *Chloromiopteryx modesta* Toledo Piza, 1968 [Brazil]  
 146. *Chloromiopteryx plurilobata* Mello-Leitao, 1937 [Brazil]  
 147. *Chloromiopteryx thalassina* (Burmeister, 1838) [Brazil, Colombia]

**26. Genus: Miobantia Giglio-Tos, 1917**

148. *Miobantia aptera* Giglio-Tos, 1917 [Brazil, Paraguay]  
 149. *Miobantia arcitissima* Scherrer, 2014 [Brazil]

**150. Miobantia ciliata** (Stal, 1860) [Brazil]

151. *Miobantia fuscata* (Giglio-Tos, 1915) [Brazil]

152. *Miobantia immanis* Scherrer, 2014 [Brazil]

153. *Miobantia nebulosa* (Giglio-Tos, 1915) [Brazil]

154. *Miobantia nordestina* Scherrer, 2014 [Brazil]

155. *Miobantia phryganea* (Saussure, 1869) [Brazil]

156. *Miobantia rustica* (Fabricius, 1781) [Argentina, Brazil]

157. *Miobantia sulista* Scherrer, 2014 [Brazil, Paraguay]

**27. Genus: Promiopteryx Giglio-Tos, 1915**

158. *Promiopteryx fallax* Giglio-Tos, 1915 [Brazil, Colombia, Venezuela]

159. *Promiopteryx granadensis* (Saussure, 1870) [Brazil, Colombia, French Guiana, Guyana, Lesser Antilles, Trinidad & Tobago]

160. *Promiopteryx punctata* Giglio-Tos, 1917 [Brazil, Paraguay]

161. *Promiopteryx simplex* Giglio-Tos, 1915 [Brazil, Trinidad & Tobago, Venezuela]

162. *Promiopteryx stigmatica* (Burmeister, 1838) [Brazil, Colombia]

**Subfamily-4: Oligonicinae****Tribe: Oligonicini****28. Genus: Bactromantis Kirby, 1904**

163. *Bactromantis mexicana* (Saussure & Zehntner, 1894) [Guatemala, Mexico]

164. *Bactromantis virga* (Scudder, 1896) [Mexico, USA-Arizona, Florida, Kansas, Texas]

**29. Genus: Bantia Stal, 1877**

165. *Bantia chopardi* (Giglio-Tos, 1915) [Brazil, Colombia]

166. *Bantia fusca* Chopard, 1911 [Brazil, Ecuador, French Guiana]

167. *Bantia marmorata* Saussure & Zehntner, 1894 [Brazil]

168. *Bantia metzi* Beier, 1935 [Brazil]

169. *Bantia michaelisi* Beier, 1935 [Brazil]

170. *Bantia nana* (Toledo Piza, 1969) [Brazil]

171. *Bantia pygmaea* (Saussure, 1872) [Brazil]

172. *Bantia simoni* (Chopard, 1916) [Venezuela]

173. *Bantia werneri* Chopard, 1913 [Brazil, Peru]

174. *Bantia yotocoensis* Salazar, 2004 [Colombia]

**30. Genus: Bantiella Giglio-Tos, 1915**

175. *Bantiella columbina* Giglio-Tos, 1915 [Brazil, Colombia, Surinam, Venezuela]

176. *Bantiella fusca* Giglio-Tos, 1915 [French Guiana, Trinidad & Tobago]

177. *Bantiella hyalina* Beier, 1942 [Brazil]

178. *Bantiella pallida* Giglio-Tos, 1915 [Colombia, Venezuela]

179. *Bantiella trinitatis* Giglio-Tos, 1915 [Trinidad & Tobago]

**31. Genus: Carrikerella Hebard, 1921**

180. *Carrikerella ceratophora* Hebard, 1922 [Colombia, Costa Rica, Ecuador]

181. *Carrikerella empusa* Rehn, 1935 [Costa Rica]

**32. Genus: Diabantia Giglio-Tos, 1915**

182. *Diabantia minima* Giglio-Tos, 1915 [Brazil, Colombia]

183. *Diabantia perparva* (Toledo Piza, 1973) [Brazil]

**33. Genus: Liguanea Rehn & Hebard, 1938**

184. *Liguanea pediodromia* Rehn & Hebard, 1938 [Jamaica]

**34. Genus: Mantellias Westwood, 1889**

185. *Mantellias pubicornis* Westwood, 1889 [Brazil]

**35. Genus: *Mantillica* Westwood, 1889**

186. *Mantillica beieri* Kaltenbach, 1957 [Argentina]  
 187. *Mantillica nigricans* Westwood, 1889 [Brazil]

**36. Genus: *Oligonicella* Giglio-Tos, 1915**

188. *Oligonicella agudeloii* Salazar & Ariza, 2005 [Colombia]  
 189. *Oligonicella bolliana* (Saussure & Zehntner, 1894) [Mexico, USA-Texas]  
 190. *Oligonicella brunneri* (Saussure, 1871) [Colombia]  
 191. *Oligonicella punctulata* (Saussure & Zehntner, 1894) [Costa Rica, Mexico]  
 192. *Oligonicella scudleri* (Saussure, 1870) [Mexico, USA-Florida, Louisiana, Texas]  
 193. *Oligonicella striolata* (Saussure & Zehntner, 1894) [Guatemala]  
 194. *Oligonicella tessellata* (Saussure & Zehntner, 1894) [Guatemala, Mexico]

**37. Genus: *Oligonyx* Saussure, 1869**

195. *Oligonyx bicornis* Saussure, 1869 [Mexico]  
 196. *Oligonyx bidens* (Saussure & Zehntner, 1894) [Costa Rica, Guatemala, Honduras]  
 197. *Oligonyx dohrnianus* (Saussure & Zehntner, 1894) [Costa Rica, Guatemala, Panama]  
 198. *Oligonyx insularis* Bonfils, 1967 [Dominica, Guadeloupe, Martinique]  
 199. *Oligonyx maya* (Saussure & Zehntner, 1894) [Mexico, USA-Florida]

**38. Genus: *Pogonogaster* Rehn, 1918**

200. *Pogonogaster latens* Hebard, 1919 [Colombia]  
 201. *Pogonogaster tristani* Rehn, 1918 [Costa Rica]

**39. Genus: *Pseudomusonia* Werner, 1909**

202. *Pseudomusonia carlottae* (Rehn, 1904) [Costa Rica]  
 203. *Pseudomusonia fera* (Saussure & Zehntner, 1894) [Costa Rica, Panama, Venezuela]  
 204. *Pseudomusonia lineativentris* (Stal, 1877) [Colombia, Costa Rica, Ecuador, Mexico, Panama]  
 205. *Pseudomusonia maculosa* (Chopard, 1911) [French Guiana]  
 206. *Pseudomusonia rapax* (Saussure & Zehntner, 1894) [Costa Rica, Venezuela]

**40. Genus: *Pseudopogonogaster* Beier, 1942**

207. *Pseudopogonogaster hebardei* (Terra, 1982) [Brazil, Ecuador]  
 208. *Pseudopogonogaster iguaquensis* Carrejo & Salazar, 2002 [Colombia]  
 209. *Pseudopogonogaster kanjaris* Rivera & Yagui, 2011 [Peru]  
 210. *Pseudopogonogaster marulandae* (Salazar, 2002) [Colombia]  
 211. *Pseudopogonogaster mirabilis* Beier, 1942 [Ecuador]  
 212. *Pseudopogonogaster muscosa* Salazar, 2000 [Colombia]

**41. Genus: *Thesprotia* Stal, 1877**

213. *Thesprotia brasiliensis* Chopard, 1916 [Brazil]  
 214. *Thesprotia brevis* Giglio-Tos, 1915 [Argentina, Colombia, Paraguay]  
 215. *Thesprotia caribea* Rehn & Hebard, 1938 [Anguilla-Peru, Jamaica]  
 216. *Thesprotia filum* (Lichtenstein, 1796) [Brazil, French Guiana, Surinam, Trinidad & Tobago]  
 217. *Thesprotia fuscipennis* Saussure & Zehntner, 1894

[Brazil]

218. *Thesprotia gigas* Giglio-Tos, 1915 [Brazil]  
 219. *Thesprotia graminis* (Scudder, 1878) [USA-Florida, Georgia]  
 220. *Thesprotia infumata* (Serville, 1839) [Argentina, Bolivia, Brazil, Paraguay]  
 221. *Thesprotia insolita* Rehn, 1935 [Costa Rica]  
 222. *Thesprotia macilenta* Saussure & Zehntner, 1894 [Bolivia, Brazil, Colombia, Costa Rica, Paraguay]  
 223. *Thesprotia maculata* Giglio-Tos, 1915 [Bolivia, Brazil]  
 224. *Thesprotia pellucida* Giglio-Tos, 1915 [Brazil, Colombia]  
 225. *Thesprotia simplex* Giglio-Tos, 1915 [Brazil]  
 226. *Thesprotia subhyalina* (Saussure, 1870) [Brazil, Trinidad & Tobago]

**42. Genus: *Thesprotiella* Giglio-Tos, 1915**

227. *Thesprotiella bicorniculata* Beier, 1942 [Brazil]  
 228. *Thesprotiella festae* (Giglio-Tos, 1915) [Ecuador]  
 229. *Thesprotiella fronticornis* Chopard, 1916 [Ecuador]  
 230. *Thesprotiella peruana* Beier, 1935 [Peru]

**43. Genus: *Thrinaconyx* Saussure, 1892**

231. *Thrinaconyx fumosus* Saussure & Zehntner, 1894 [Bolivia, Brazil, Colombia, Costa Rica, Ecuador, Panama, USA-Colorado, Venezuela]  
 232. *Thrinaconyx kirschianus* Saussure & Zehntner, 1894 [Colombia, Costa Rica, Panama]  
 233. *Thrinaconyx sialidea* (Westwood, 1889) [Brazil]

**Subfamily-5: Pseudomiopteriginae****Tribe-1: Pseudomiopterigini****44. Genus: *Anamiopteryx* Giglio-Tos, 1915**

234. *Anamiopteryx borellii* Giglio-Tos, 1915 [Argentina, Bolivia, Brazil, Ecuador, Uruguay]  
 235. *Anamiopteryx grandis* Beier, 1935 [Brazil]  
 236. *Anamiopteryx tuberculata* (Rehn, 1920) [Brazil]  
 237. *Anamiopteryx magna* (Jantsch, 1991) [Brazil]

**45. Genus: *Eumiopteryx* Giglio-Tos, 1915**

238. *Eumiopteryx bicentenaria* (Toledo Piza, 1967) [Brazil]  
 239. *Eumiopteryx laticollis* Giglio-Tos, 1915 [Bolivia, Brazil, Paraguay]  
 240. *Eumiopteryx magna* Jantsch, 1991 [Brazil]  
 241. *Eumiopteryx terrai* (Jantsch, 1994) [Brazil]

**46. Genus: *Leptomiopteryx* Chopard, 1911**

242. *Leptomiopteryx argentina* Beier, 1930 [Argentina, Brazil, French Guiana]  
 243. *Leptomiopteryx dispar* Chopard, 1911 [Argentina, Brazil, French Guiana]

**47. Genus: *Palaeothespis* Tinkham, 1937**

244. *Palaeothespis leigongshanensis* Ge & Chen, 2008 [China]  
 245. *Palaeothespis oreophilus* Tinkham, 1937 [China]  
 246. *Palaeothespis pallidus* Zhang, 1987 [China]  
 247. *Palaeothespis stictus* Zhou & Shen, 1992 [China]

**48. Genus: *Pizaia* Terra, 1982**

248. *Pizaia seabrai* (Toledo Piza, 1961) [Brazil]

**49. Genus: *Pseudomiopteryx* Saussure, 1870**

249. *Pseudomiopteryx amazonensis* Toledo Piza, 1968 [Brazil]

250. *Pseudomiopteryx bogotensis* Saussure, 1870 [Colombia, Ecuador, Venezuela]  
 251. *Pseudomiopteryx columbica* Giglio-Tos, 1915 [Colombia, Venezuela]  
 252. *Pseudomiopteryx decipiens* Giglio-Tos, 1915 [Colombia, Panama, Venezuela]  
 253. *Pseudomiopteryx festae* (Giglio-Tos, 1898) [Colombia, Costa Rica, Ecuador, Panama, Peru]  
 254. *Pseudomiopteryx guyanensis* Chopard, 1911 [Brazil, French Guiana, Peru, Surinam, Venezuela]  
 255. *Pseudomiopteryx infuscata* Saussure & Zehntner, 1894 [Bolivia, Brazil, Costa Rica, Guatemala, Mexico, Nicaragua, Panama, Venezuela]  
 256. *Pseudomiopteryx maculata* Beier, 1942 [Brazil, Costa Rica, Ecuador, Venezuela]  
 257. *Pseudomiopteryx meridana* Giglio-Tos, 1915 [Brazil, Colombia, Venezuela]  
 258. *Pseudomiopteryx spinifrons* Saussure, 1870 [Brazil, French Guiana, Venezuela]

**50. Genus: *Sinomiopteryx* Tinkham, 1937**

259. *Sinomiopteryx brevifrons* Wang & Bi, 1991 [China]  
 260. *Sinomiopteryx grahami* Tinkham, 1937 [China]  
 261. *Sinomiopteryx guangxiensis* Wang & Bi, 1991 [China]

**Subfamily-6: Thespiinae**

**Tribe-1: Parathespiini**

**51. Genus: *Eumusonia* Giglio-Tos, 1916**

262. *Eumusonia intermedia* Toledo Piza, 1973 [Brazil]  
 263. *Eumusonia livida* (Serville, 1839) [Argentina, Bolivia, Brazil, Paraguay]  
 264. *Eumusonia viridis* Giglio-Tos, 1916 [Argentina, Brazil, Paraguay]

**52. Genus: *Galapagia* Scudder, 1893**

265. *Galapagia amazonica* Terra, 1982 [Brazil]  
 266. *Galapagia peruana* Terra, 1995 [Peru]  
 267. *Galapagia solitaria* Scudder, 1893 [Ecuador, Galapagos Islands, Peru]

**53. Genus: *Macromusonia* Hebard, 1922**

268. *Macromusonia conspersa* (Saussure, 1870) [Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru]  
 269. *Macromusonia major* (Saussure & Zehntner, 1894) [Brazil, Colombia, Ecuador, French Guiana, Peru, Surinam, Venezuela]

**54. Genus: *Musonia* Stal, 1877**

270. *Musonia boliviana* Beier, 1930 [Bolivia]  
 271. *Musonia chocoensis* Salazar, 2002 [Colombia]  
 272. *Musonia costalis* Rehn, 1920 [Brazil]  
 273. *Musonia fuscescens* Chopard, 1911 [French Guiana]  
 274. *Musonia lineata* (Chopard, 1911) [French Guiana]  
 275. *Musonia maculata* Beier, 1942 [Brazil]  
 276. *Musonia seclusa* (Rehn, 1913) [Argentina]  
 277. *Musonia sexdentata* (Beier, 1942) [Brazil, Ecuador, Peru]  
 278. *Musonia surinama* (Saussure, 1869) [Argentina, Barbados, Colombia, Costa Rica, Ecuador, French Guiana, Guyana, Nicaragua, Panama, Surinam, Trinidad & Tobago, Venezuela]

**55. Genus: *Musoniella* Giglio-Tos, 1916**

279. *Musoniella affinis* Toledo Piza, 1961 [Brazil, Ecuador]  
 280. *Musoniella argentina* (Saussure, 1870) [Argentina,

- Brazil, Paraguay, Ecuador]  
 281. *Musoniella brasiliensis* Giglio-Tos, 1916 [Brazil, Ecuador]  
 282. *Musoniella chopardi* Giglio-Tos, 1916 [Brazil, Paraguay, Ecuador]  
 283. *Musoniella fragilis* (Toledo Piza, 1965) [Brazil, Ecuador]  
 284. *Musoniella iparanga* Rehn, 1918 [Brazil, Ecuador]  
 285. *Musoniella laevithorax* (Chopard, 1916) [Brazil, Paraguay, Ecuador]  
 286. *Musoniella longicauda* Toledo Piza, 1969 [Brazil, Ecuador]  
 287. *Musoniella margheritae* Battiston & Luca Picciau, 2008 [Ecuador]  
 288. *Musoniella parva* Beier, 1935 [Paraguay, Ecuador]  
 289. *Musoniella precaria* Toledo Piza, 1983 [Brazil, Ecuador]

**56. Genus: *Musoniola* Giglio-Tos, 1917**

290. *Musoniola conservatrix* Terra, 1982 [Venezuela]  
 291. *Musoniola dohrniana* (Saussure & Zehntner, 1894) [Costa Rica, Guatemala]  
 292. *Musoniola plurilobata* Mello-Leitao, 1937 [Brazil]  
 293. *Musoniola venezuelana* Terra, 1982 [Venezuela]  
 294. *Musoniola vicina* Giglio-Tos, 1917 [Nicaragua]

**57. Genus: *Paramusonia* Rehn, 1904**

295. *Paramusonia cubensis* (Saussure, 1869) [Colombia, Costa Rica, Cuba, Hispaniola, Panama, Venezuela]

**58. Genus: *Parathespis* Saussure, 1869**

296. *Parathespis humbertiana* Saussure, 1869 [Barkuda Island, India, Sri Lanka]

**59. Genus: *Pseudothespis* Mukherjee, 1995**

297. *Pseudothespis meghalayensis* Mukherjee, 1995 [India]

**60. Genus: *Thespis* Serville, 1831**

298. *Thespis disparilis* Westwood, 1889 [Western Australia]  
 299. *Thespis dissimilis* Westwood, 1889 [India]  
 300. *Thespis exposita* Beier, 1963 [Argentina]  
 301. *Thespis major* (Giglio-Tos, 1916) [Colombia, Venezuela]  
 302. *Thespis media* (Giglio-Tos, 1916) [Peru, Trinidad & Tobago, Venezuela]  
 303. *Thespis metae* Hebard, 1922 [Colombia]  
 304. *Thespis pacifica* Salazar, 2002 [Colombia]  
 305. *Thespis parva* (Drury, 1773) [Brazil, Colombia, Paraguay, Venezuela]

**Conclusion**

The distribution pattern of two families of Mantodea: Liturgusidae and Thespidae demonstrated that most of the species belongs to Neotropical Central and South America, Tropical Africa, and Australasia. Out of 305 valid species of these families, only 13 belong to India.

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