

SYSTEMATICS, MORPHOLOGY AND PHYSIOLOGY

Ceraphronoidea, Platygastroidea and Proctotruipoidea from Brazil (Hymenoptera)

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Ceraphronoidea, Platygastroidea e Proctotruipoidea do Brasil (Hymenoptera)

RESUMO - As vespas do “complexo” Proctotruipoidea (Ceraphronoidea, Proctotruipoidea *strictu sensu* e Platygasteroidea) são um grupo grande e diverso de Hymenoptera parasítica, relativamente antigo, com fósseis a partir do período Jurássico. Todos os proctotrupóideos são parasitóides ou hiperparasitóides de outros artrópodes, atacando a maioria dos grupos de insetos terrestres bem como centípedes e aranhas. O presente estudo resume o conhecimento desse complexo no Brasil. Foi listado um total de 221 espécies, distribuídas nas famílias Ceraphronidae (1), Megaspilidae (1), Diapriidae (84), Monomachidae (9), Pelecinidae (2), Proctotrupidae (12), Platygastridae (20), Scelionidae (92). As vespas desse complexo foram revisadas taxonomicamente, discutindo-se também, os registros fósseis, atualização da distribuição geográfica e os hospedeiros associados.

PALAVRAS-CHAVE: Parasitóide, vespa, distribuição geográfica

ABSTRACT - The wasps of the “Proctotruipoidea complex” (Ceraphronoidea, Proctotruipoidea y Platygasteroidea) are a very large and diverse group of parasitic Hymenoptera. It is a relatively old group, with fossils from the Jurassic period. All of them are parasitoids or hiperparasitoids of other arthropods, attacking most groups of terrestrial insects as well as centipedes and spiders. The present study summarizes the knowledge of this complex in Brazil. A total of 221 species are listed; they are distributed in the families Ceraphronidae (1), Megaspilidae (1), Diapriidae (84), Monomachidae (9), Pelecinidae (2), Proctotrupidae (12), Platygastridae (20), Scelionidae (92). Taxonomy, fossil records, distribution and hosts are reviewed.

KEY WORDS: Parasitoid, wasp, geographical distribution

Wasps of the “proctotrupoid complex” (Ceraphronoidea, Platygastroidea and Proctotruipoidea *sensu strictu*) are a highly diversified group, with more than 700 genera and several thousands of species around the world, broadly distributed throughout Neotropical region. It is considered an ancient group, with fossils dated from the Jurassic. All their representatives behave as parasitoids of immature stages in several orders of insects, spiders and myriapodous. Due to their behavior they are considered potential agents of biological or integrated control of harmful insects. They have been successfully employed as pest control agents in several countries. Morphological, taxonomic and biological studies were made previously, specially those ones related to their specific associations with hosts.

The classification of the “proctotrupoid wasp complex” (Naumann & Masner 1985) has changed thoroughly according to different authors. Herein we follow Naumann’s classification (CSIRO 1991): the families Ceraphronidae and Megaspilidae for Ceraphronoidea; Austroniidae, Diapriidae, Heloridae, Monomachidae, Pelecinidae, Peradeniidae,

Proctotrupidae, Roproniidae and Vanhorniidae for Proctotruipoidea, and the families Platygastridae and Scelionidae for Platygastroidea.

In 1980, the paper “Himenópteros Brasileños de la Serie Parasitica, incluyendo Betyloidea” was published by Dr. Luis De Santis, who listed 173 taxa - species and subspecies - of the complex Proctotruipoidea for Brazil. Further studies have increased the number of species with descriptions of new taxa and/or new country records and new host parasitoids associations. The present contribution is an update, compilation of Dr. De Santis work, that attempt to cover the time period from the publication of his catalog. As a result, we have registered a total of 221 parasitoids species, two belonging to Ceraphronoidea, 112 to Platygastroidea and 107 to Proctotruipoidea, and 62 host taxa.

Organization of the Catalog. For each taxon starting from genera, information on the distribution in Brazil is provided, including the states where they occur; host associations, and the references of the most important publications on

taxonomy, bionomics and use of the taxon as biological control agents, particularly in Brazil.

The categories have been listed in alphabetical order; the species have been arranged in genera, subfamilies and families. Other categories such as tribes and subgenera, have not been considered since they are not satisfactorily established.

The generic and specific names are updated with respect to De Santis (1980), taking into account the catalogs of Johnson (1992) for the families Diapriidae, Monomachidae, Proctotrupidae and Scelionidae, and Vlug (1995) for Platygastridae. For the representatives of Pelecinidae we have followed Johnson & Musetti (1999), and for those belonging to Ceraphronidae and Megaspilidae, Dessart & Cancemi (1986).

Table 1 indicates the number of species recorded for each state, with the purpose that researchers and specialists on “proctotrupoid complex” can get a better idea on the geographical areas that are well explored and sampled in Brazil.

Bibliography includes gather publications up to year 2000, inclusive. Papers previous to 1980 and listed in De Santis’ catalog are not included in the present contribution.

CERAPHRONOIDEA

Bibliographic reference: Dessart & Cancemi 1986: 307-372

CERAPHRONIDAE

Ceraphron Jurine, 1807

Bibliographic reference: Dessart 1981: 1-23

- *sylviae* Dessart, 1981. **Brazil (unknown locality)**

Brazilian reference: Dessart 1981: 15

MEGASPILIDAE

Megaspilinae

Dendrocerus Ratzeburg, 1852

- *sylviae* Dessart, 1986. **Pará**

Brazilian reference: Dessart & Cancemi 1986: 328

Table 1. Number of species by family and state. BR: Brasil (unknown locality); AL: Alagoas; AM: Amazonas; BA: Bahia; DF: Distrito Federal; ES: Espírito Santo; GO: Goiás; MG: Minas Gerais; MT: Mato Grosso; PA: Pará; PB: Paraíba; PE: Pernambuco; PR: Paraná; RJ: Rio de Janeiro; RS: Rio Grande do Sul; SC: Santa Catarina; SP: São Paulo.

	BR	AL	AM	BA	DF	ES	GO	MG	MT	PA	PB	PE	PR	RJ	RS	SC	SP
Ceraphronidae	1																
Megaspilidae															1		
Diapriidae	2		2		1	5	11		1	35	3	1	8	5		15	5
Monomachidae	5			1	1		2		1								2
Pelecinidae		1	1	1			1	2	1	1		1		1	1	1	1
Proctotrupidae						1						1	3	6		6	4
Platygastridae	8					7	1		2					1		1	2
Scelionidae	4	1	4	5	4	2	2	5	4	34	2	13	7	12	4	6	13

- *hexatoma* Kieffer, 1921. **Santa Catarina**

Host: *Solenopsis saevissima* (Hymenoptera: Formicidae)

Coeccopria Masner, 1969

- *bella* Masner, 1969. **Santa Catarina**

- *plaumanni* Masner, 1969. **Santa Catarina**

Host: *Camponotus rufipes* (Hymenoptera: Formicidae)
Brazilian reference: Loiácono 1981: 240

- *pygmea* Masner, 1969. **Santa Catarina**

Host: *Camponotus rufipes* (Hymenoptera: Formicidae)
Brazilian reference: Loiácono 1981: 240

Coptera Say, 1836

- *breviceps* (Kieffer), 1910. **Pará**

Diapria Latreille, 1796

- *brasiliiana* (Brèthes, 1927). **Espírito Santo**

- *paraensis* Spinola, 1851. **Pará**

Doliopria Kieffer, 1910

- *collegii* Ferrière, 1929. **Paraná, Santa Catarina**

Hosts: *Eciton burchelli*, *E. quadriglume* (Hymenoptera: Formicidae)

- *flavipes* Kieffer, 1910. **Santa Catarina**

Host: *Eciton burchelli* (Hymenoptera: Formicidae)

Euplacopria Ferrière, 1929

- *mutilata* Ferrière, 1929. **Paraná**

Hosts: *Neivamyrmex legionis*, *N. pseudops* (Hymenoptera: Formicidae)

Gymnopria Loiácono, 1987

Bibliographic reference: Loiácono & Margaríá 2000: 187-198

- *clavata* Loiácono, 2000. **Santa Catarina**

Brazilian reference: Loiácono & Margaríá 2000: 189-190

- *coriacea* Loiácono, 2000. **Santa Catarina**

Brazilian reference: Loiácono & Margaríá 2000: 191-192

- *distinguenda* Loiácono, 2000. **Espírito Santo**

Brazilian reference: Loiácono & Margaríá 2000: 193

- *elongata* Loiácono, 2000. **Santa Catarina**

Brazilian reference: Loiácono & Margaríá 2000: 193

- *masneri* Loiácono, 2000. **Santa Catarina**

Brazilian reference: Loiácono & Margaríá 2000: 194-197

- *minima* Loiácono, 2000. **Santa Catarina**

Brazilian reference: Loiácono & Margaríá 2000: 197

- *pilosa* Loiácono, 2000. **Goiás**

Brazilian reference: Loiácono & Margaríá 2000: 197-198

Hoplopria Ashmead, 1893

- *bicarinata* Kieffer, 1910. **Pará**

- *carinigera* Kieffer, 1910. **Pará**

- *dentata* Kieffer, 1910. **Pará**

- *dorsalis* Kieffer, 1910. **Pará**

- *grandis* Brues, 1915. **Amazonas, Santa Catarina**

- *inermis* Kieffer, 1910. **Pará**

- *obliqua* Kieffer, 1910. **Pará**

- *rufosignata* Kieffer, 1910. **Pará**

- *trimaculata* Kieffer, 1910. **Pará**

- *variicornis* Kieffer, 1910. **Pará**

Labidopria Wasmann, 1925

- *longicornis* Wasmann, 1925. **Espírito Santo, Goiás, Paraná, Mato Grosso**

Host: *Labidus praedator* (Hymenoptera: Formicidae)

Megoplastopia Ashmead, 1903

- *brasiliensis* Ashmead, 1903. **Brazil (unknown locality)**

Mimopria Holmgren, 1908

Bibliographic reference: Masner 1976b: 123-126

- *barbata* Borgmeier, 1939. **Goiás**

Host: *Nomamyrmex esenbeckii* (Hymenoptera: Formicidae)

- *campbellorum* Masner, 1976. **Pará**

Host: *Eciton hamatum* (Hymenoptera: Formicidae)

Brazilian references: Masner 1976b: 124 126; Kistner & Davis 1989: 217-238

- *comes* Borgmeier, 1939. **Goiás, Pernambuco, São Paulo**

Hosts: *Nomamyrmex hartigi*, *N. esenbeckii*, *Labidus coecus* (Hymenoptera: Formicidae)

- *ecitophila* Holmgren, 1908. **Amazonas, Pará**

Host: *Eciton hamatum* (Hymenoptera: Formicidae)

Brazilian references: Masner 1976b: 126; Kistner & Davis 1989: 217-238

- *horni* (Brèthes), 1927. **Espírito Santo**

- *pentatoma* Borgmeier, 1939. **Goiás**

Host: *Neivamyrmex goeldii* (Hymenoptera: Formicidae)

- *splendens* Borgmeier, 1939. **Goiás**

Host: *Neivamyrmex goeldii* (Hymenoptera: Formicidae)

Neivapria Borgmeier, 1939

- *penicillata* Borgmeier, 1939. **Goiás**

Host: *Neivamyrmex minensis* (Hymenoptera: Formicidae)

Notoxoides Ashmead, 1903

- *brasiliensis* Ashmead, 1903. **Brazil (unknown locality)**

- *pedissequus* (Borgmeier, 1939). **Goiás**

Host: *Neivamyrmex pseudops* (Hymenoptera: Formicidae)

- *pronotalis* (Borgmeier, 1939). **Goiás**

Host: *Eciton dulcius* (Hymenoptera: Formicidae)

Oxypria Kieffer, 1908

- *carinata* Kieffer, 1910. **Pará**

- *collegiales* Ferrière, 1929. **Espírito Santo, Paraná**

Host: *Eciton quadriglume* (Hymenoptera: Formicidae)
 - *nigriceps* (Ashmead, 1894). **São Paulo**

Paramesius Westwood, 1832

- *brasiliensis* Ferrière, 1929. **Santa Catarina**

Host: *Eciton burchelli* (Hymenoptera: Formicidae)

Philolestoides Ferrière, 1929

- *wasmanni* Ferrière, 1929. **Paraná**

Host: *Neivamyrmex legionis* (Hymenoptera: Formicidae)

Psilus Panzer, 1801

- *brasiliensis* (Kieffer, 1910). **Pará**

- *debilis* (Brues, 1915). **Paraíba**

- *hexacantha* (Kieffer, 1910). **Pará**

- *microstoma* (Kieffer, 1910). **Pará**

- *puncticeps* (Kieffer, 1910). **Pará**

- *sulcaticeps* (Kieffer, 1910). **Pará**

- *tricarinatus* (Kieffer, 1910). **Pará**

Spilomicrus Westwood, 1832

- *fuscipennis* Kieffer, 1910. **Pará**

Szelenyiopria Fabritius, 1974

- *reichenspergeri* (Ferrière, 1929). **Paraná**

Hosts: *Eciton quadriglume*, *Neivamyrmex legionis* (Hymenoptera: Formicidae)

Szelenyisca Masner, 1974

- *miricornis* Masner, 1974. **Rio de Janeiro**

Brazilian reference: Masner 1974: 110

Trichopria Ashmead, 1893

- *anastrephae* Costa Lima, 1940. **Rio de Janeiro**

Hosts: *Anastrepha* spp., *A. serpentina* (Diptera: Tephritidae)

- *brasiliensis* (Kieffer, 1910). **Pará**

- *brevicauda* (Kieffer, 1910). **Pará**

- *catarinensis* Ferrière, 1929. **Santa Catarina**

Host: *Eciton burchelli* (Hymenoptera: Formicidae)

- *cubensis* Fouts, 1926. **Rio de Janeiro, São Paulo**

Hosts: *Lidella minense*, *Paratheresia brasiliensis* (Diptera: Tachinidae), *Parthenoleskia parkeri*

- *dentaticornis* (Kieffer, 1910). **Pará**

- *excisa* (Kieffer, 1910). **Pará**

- *grenadensis* Ashmead, 1895. **Distrito Federal**

Host: *Hermetia illucens* (Diptera: Stratiomyidae)

- *lamellifera* Ogloblin, 1934. **Rio de Janeiro**

Host: *Tylidae* sp. near to *Glyphodera* sp. (Diptera: Tylidae)

- *longicauda* (Kieffer, 1910). **Pará**

- *paraensis* (Kieffer, 1910). **Pará**

Xanthopria Brues, 1915

- *nitida* Brues, 1915. **Paraíba**

- *opaca* Brues, 1915. **Paraíba**

Xyalopria Kieffer, 1907

- *depressa* Kieffer, 1910. **Pará**

- *fuscipennis* Kieffer, 1910. **Pará**

- *nigriceps*. Kieffer, 1907. **Rio de Janeiro**

- *nigricornis* Kieffer, 1910. **Pará**

- *ruficornis* Kieffer, 1910. **Pará**

- *rufipes* Kieffer, 1910. **Pará**

Ismarinae

Ismarus Haliday, 1835

Revision: Masner 1976a: 1243-1266

- *neotropicus* Masner, 1976. **São Paulo**

Brazilian reference: Masner 1976a: 1247, 1249, 1260

Hosts: Hymenoptera: Dryinidae (hiperparasitoids)

- *varicornis* Masner, 1976. **São Paulo**

Brazilian reference: Masner 1976a: 1248, 1265

Hosts: Hymenoptera: Dryinidae (hiperparasitoids)

MONOMACHIDAE

Monomachus Klug, 1841

- *bicolor* Szépligeti, 1903. **Espírito Santo**

- *eurycephalus* Schletterer, 1890. **Brazil (unknown locality)**

- *fuscator* (Perty, 1833). **São Paulo**

- *glaberrimus* Scheletterer, 1890. **Brazil (unknown locality)**

- *klugi* Westwood, 1841. **Brazil (unknown locality)**

- *megacephalus* Schletterer, 1890. **Brazil (unknown locality)**

- *segmentator* Westwood, 1841. **Amazonas, Bahia, São Paulo**

- *variegatus* Scheletterer, 1890. **Brazil (unknown locality)**

Tetraconus Szépligeti, 1903

- *mocsaryi* Szépligeti, 1903. **Espírito Santo**

PELECINIDAE

Pelecinus Latreille, 1800

Revision: Johnson & Musetti 1999: 1513-1541

- *dichrous* Perty, 1833. **Minas Gerais**

Brazilian reference: Johnson & Musetti 1999: 1538-1539

- *polyturator* (Drury, 1773). **Alagoas, Amazonas, Bahia, Goiás, Minas Gerais, Mato Grosso, Pará, Pernambuco, Rio de Janeiro, Rio Grande do Sul, Santa Catarina, São Paulo.**

Hosts: *Phyllophaga anxia*, *P. drakei*, *P. futilus*, *P. rugosa* (Coleoptera: Scarabeidae, Melolonthinae), *Podichnus agenor* (Coleoptera: Scarabeidae, Dynastinae)

Brazilian reference: Johnson & Musetti 1999: 1535-1538

PROCTOTRUPIDAE

Revision: Townes & Townes 1981: 1-541

Proctotrupinae

Exallonyx Kieffer, 1904

- *brunescens* Townes, 1981. **Paraná, Rio de Janeiro**

Brazilian reference: Townes & Townes 1981: 338

- *durus* Townes, 1981. **Paraná, Santa Catarina**

Brazilian reference: Townes & Townes 1981: 318

- *enomus* Townes, 1981. **Paraná**

Brazilian reference: Townes & Townes 1981: 318

- *evanescens* Townes, 1981. **Santa Catarina**

Brazilian reference: Townes & Townes 1981: 345

- *intensus* Townes, 1981. **Santa Catarina**

Brazilian reference: Townes & Townes 1981: 347

- *leptocerus* Townes, 1981. **Rio de Janeiro**

Brazilian reference: Townes & Townes 1981: 303

- *mydobius* Townes, 1981. **Rio de Janeiro, São Paulo, Santa Catarina**

Brazilian reference: Townes & Townes 1981: 247

- *seabrai* Townes, 1981. **Rio de Janeiro, São Paulo, Santa Catarina**

Brazilian reference: Townes & Townes 1981: 286

- *trialbus* Townes, 1981. **Santa Catarina**

Brazilian reference: Townes & Townes 1981: 348

Protoprocto Sharkey, 1990

Bibliographic reference: Darling & Sharkey 1990: 123-153

- *asodes* Sharkey, 1990 (fossil). **Pernambuco, Bahia**
(Santana Formation, Cretaceus)

Brazilian reference: Darling & Sharkey 1990: 133

Sminthoserpheus Townes, 1980

- *alvarengai* Townes, 1981. **Rio de Janeiro, São Paulo**

Brazilian reference: Townes & Townes 1981: 58

- *sparsus* Townes, 1981. **Rio de Janeiro, São Paulo**

Brazilian reference: Townes & Townes 1981: 58

PLATYGASTROIDEA

PLATYGASTRIDAE

Sceliotrachelinae

Allotropa Foerster, 1856

- *scutellata* Muesebeck, 1954. **São Paulo**

Host: *Pseudococcus* sp. (Hemiptera: Pseudococcidae) on *Moquiera tomentosa* (Rosaceae)

Brazilian reference: Vlug 1995: 12, 91

Platygasterinae

Euxestonotus Fouts, 1925

Bibliographic reference: Buhl 1998: 241-255

- *japetus* Jul, 1998. **Bahia**

Brazilian reference: Buhl 1998: 245

- *titan* Buhl, 1998. **Mato Grosso**

Brazilian reference: Buhl 1998: 245

Iphitrachelus Haliday, 1835

Bibliographic reference: Masner 1976c: 1065-1068

- *foutsii* Jackson, 1966. **Esírito Santo, Rio de Janeiro**

Brazilian reference: Masner 1976c: 1065

- *lar* Haliday, 1835. **Mato Grosso, Santa Catarina**

Brazilian reference: Masner 1976c: 1067

Leptacis Foerster, 1856

- *asclepius* (Walker, 1839). **Bahia**

Brazilian reference: Vlug 1995: 36

- *bisecta* (Brues, 1910). **Brazil (unknown locality)**

Host: on galls

Brazilian reference: Vlug 1995: 36

- *brasiliensis* (Brues, 1910). **Brazil (unknown locality)**

Brazilian reference: Vlug 1995: 36, 98

Host: *Justicia* sp. galls (Acanthaceae)

- *excavata* (Brues, 1910). **Brazil (unknown locality)**

Brazilian reference: Vlug 1995: 36, 99

Host: Cecidomyiidae gall in *Chuquiaragua tomentosa* (Asteraceae)

Parabaeus Kieffer, 1910

- *lenkoi* De Santis, 1960. **São Paulo**

Platygaster Latreille, 1809

- *automenes* Walker, 1839. **Bahia**

Brazilian reference: Vlug 1995: 48

- *caninifrons* (Brues, 1910). **Brazil (unknown locality)**

Brazilian reference: Vlug 1995: 49, 102

Host: *Ficus* sp. galls (Moraceae)

- *oronatus* (Brues, 1910). **Brazil (unknown locality)**

Brazilian reference: Vlug 1995: 51, 103

Host: *Asphondilia* sp. (Diptera, Cecydomyiidae) on *Mikania guaco* (Compositae)

- *latescens* (Brues, 1910). **Brazil (unknown locality)**

Brazilian reference: Vlug 1995: 56

- *mediocris* (Brues, 1910). **Brazil (unknown locality)**

Brazilian reference: Vlug 1995: 58, 107

Hosts: *Bruggmannia brasiliensis* (Diptera: Cecydomyiidae) and *Psychotria* sp. galls (Rubiaceae)

- *zethus* Walker: 1839. **Bahia**

Brazilian reference: Vlug 1995: 68

Synopeas Foerster: 1856

- *athenaeus* (Walker: 1839). **Bahia**

Brazilian reference: Vlug 1995: 76

- *thersippus* (Walker: 1839). **Bahia**
Brazilian reference: Vlug 1995: 82
- *xenarchus* (Walker: 1839). **Bahia**
Brazilian reference: Vlug 1995: 83

Trichacis Foerster: 1856

- *meridionalis* (Brues: 1910). **Brazil (unknown locality)**
Brazilian reference: Vlug 1995: 85: 115
Hosts: *Acnistus* sp. galls, *Cestrum* sp. (Solanaceae)

SCELIONIDAE Teleasinae

Trimorus Foerster, 1856

- *fortis* (Brues, 1915). **Paraíba**

Telenominae

Eumicrosoma Gahan, 1913

- *platytoracis* (Szabó, 1957). **São Paulo**

Phanuopsis Girault, 1916

Bibliographic reference: Johnson 1987b: 660-663

- *semiflaviventris* Girault, 1916. **Pernambuco, São Paulo**
Hosts: *Antiteuchus tripterus*, *A. piceus* (Hemiptera: Pentatomidae)
Brazilian references: Johnson 1987b: 662; Loíácono 1995: 75

Telenomus Haliday, 1833

Bibliographic reference: Johnson 1981

- *alecto* (Crawford, 1914). **Alagoas, Pernambuco, Rio de Janeiro, São Paulo**
Hosts: *Diatraea saccharalis*, *D. flavidipennella* (Lepidoptera: Crambidae)
- *amazonicus* Cameron, 1891. **Amazonas**
Host: Hemiptera
- *angulatus* Johnson, 1981. **Santa Catarina**
Brazilian reference: Johnson 1981: 77
- *californicus* Ashmead, 1893. **Rio de Janeiro**
Host: *Eupastranaia fenestrata* (Lepidoptera: Pyralidae)
Brazilian reference: Macedo & Monteiro 1991: 699-700
- *connectans* Ashmead, 1895. **Bahia**
Host: *Erinnyis ello* (Lepidoptera: Sphingidae)
Brazilian reference: Abreu & Sgrillo 1989: 137-143
- *cyanophylax* Polaszek, 1997. **Paraná**
Hosts: *Anticarsia gemmatalis*, *Pseudaleitia sequax* eggs (Lepidoptera: Noctuidae)
Brazilian references: Polaszek & Foerster 1997: 178; Foerster & Avanci-Marion 1999: 545-548
- *dilophonotae* Cameron, 1913. **Bahia**
Host: *Erinnyis ello* (Lepidoptera: Sphingidae)
Brazilian reference: Abreu & Sgrillo 1989: 137-143

- *edessa* Brèthes, 1916. **Pernambuco**
Host: *Edessa rufomarginata* (Hemiptera: Pentatomidae)
- *fariai* Costa Lima, 1927. **Goiás**
Hosts: *Pastrongylus megistus*, *Triatoma infestans* (Hemiptera: Reduviidae)
Brazilian reference: Schofield 1980: 761-769
- *melanogaster* Cameron, 1891. **Amazonas**
Host: Hemiptera
- *mormideae* Costa Lima, 1935. **Paraná, Rio Grande do Sul**
Hosts: *Oebalus poecilus*, *O. ypsilonlongriseus*, *Piezodorus guildinii*, *Nezara viridula* (Hemiptera: Pentatomidae)
Brazilian references: De Santis & Vidal Sarmiento 1979: 149; Moreira & Becker 1986: 291-308
- *nigrocoxalis* Ashmead, 1894. **São Paulo**
Host: *Brassolis sophorae* (Lepidoptera: Brassolidae)
- *pachycoris* (Costa Lima, 1928). **Rio de Janeiro, São Paulo**
Host: *Pachycoris torridus* (Hemiptera: Scutelleridae)
Brazilian reference: Gabriel *et al.* 1988: 17-20
- *podisi* Ashmead, 1893. **Distrito Federal, Minas Gerais, Paraná, Pernambuco, São Paulo**
Hosts: *Euchistus heros*, *Nezara viridula*, *Piezodorus guildinii*, *Podisus nigrispinus* (Hemiptera: Pentatomidae)
Brazilian references: Johnson 1984; Cividanes *et al.* 1995: 131-137; Torres *et al.* 1996/1997: 233-240, 1997: 445-453; Aljanabi *et al.* 1998: 413-420; Pacheco-Deoclecio & Correa-Ferreira 1998: 585-591
- *polymorphus* Costa Lima, 1943. **Paraná, Rio de Janeiro**
Host: *Heza insignis* (Hemiptera: Reduviidae)
- *schrottkyi* Brèthes, 1916. **Brazil (unknown locality)**
Host: *Edessa rufomarginata* (Hemiptera: Pentatomidae)
- *sphingis* (Ashmead, 1887). **Bahia**
Host: *Phlegethonius carolina paphus* (Lepidoptera: Sphingidae)

Trissolcus Ashmead, 1893

Bibliographic reference: Johnson, 1987a

- *basalis* (Wollaston, 1858). **Distrito Federal, Paraná**
Host: *Nezara viridula* (Hemiptera: Pentatomidae)
Brazilian references: Loíácono 1980 [1981]: 176; Correa-Ferreira 1986: 189-199; Foerster & de Queiroz 1990: 221-232; Correa-Ferreira & Moscardi 1996: 1-7; Medeiros *et al.* 1997
- *brochymenae* (Ashmead, 1881). **Minas Gerais, São Paulo**
Host: *Podisus nigrispinus* (Hemiptera: Pentatomidae)
Brazilian references: Cividanes *et al.* 1995: 131-137; Torres *et al.* 1996/1997: 233-240
- *conversus* Johnson, 1987. **Santa Catarina**
Brazilian reference: Johnson 1987a: 291
- *dasyi* Johnson, 1987. **Espírito Santo, Pernambuco, Santa Catarina**
Brazilian reference: Johnson 1987a: 299
- *decumbens* Johnson, 1987. **Rio de Janeiro**
Host: *Dinocoris melanoleucus* (Hemiptera: Pentatomidae)
Brazilian reference: Johnson 1987a: 291
- *leviventris* (Cameron, 1913). **Rio de Janeiro, Santa Catarina**
Host: *Edessa rufomarginata* (Hemiptera: Pentatomidae)

- *limbatus* Johnson, 1987. **Bahia, São Paulo**
Brazilian reference: Johnson 1987a: 289
- *mormideae* (Costa Lima, 1935). **Paraná, Rio Grande do Sul**
Hosts: *Oebalus poecilus*, *O. ypsilongriseus* (Hemiptera: Pentatomidae)
Brazilian reference: Foerster & de Queiroz 1990: 221-232
- *scuticarinatus* (Costa Lima, 1937). **Paraná, Minas Gerais**
Hosts: *Thyanta perditor*, *Piezodorus guildinii*, *Podisus nigrispinus* (Hemiptera: Pentatomidae)
Brazilian references: Panizzi & Herzog 1984: 646-650; Correa-Ferreira 1986: 189-199; Torres *et al.* 1996: 463-471
- *teretis* Johnson, 1987. **Distrito Federal, São Paulo**
Brazilian references: Johnson 1987a: 301; Medeiros *et al.* 1998: 1431-1434
Hosts: *Euchistus heros*, *Thyanta perditor* (Hemiptera: Pentatomidae)
- *urichi* Crawford, 1913. **Distrito Federal, São Paulo**
Hosts: *Acrosternum aseadum*, *Euchistus heros* (Hemiptera: Pentatomidae)
Brazilian references: Johnson 1987a: 294; Medeiros *et al.* 1998: 1431-1435

Scelioninae

Acanthoscelio Ashmead, 1893

- *americanus* Ashmead, 1893. **Mato Grosso**

Baryconus Foerster, 1856

- *brevitarsis* (Kieffer, 1910). **Pará**
- *depressus* (Kieffer, 1910). **Pará**
- *ramosus* (Kieffer, 1910). **Pará**
- *rufidorsum* (Kieffer, 1904). **Rio de Janeiro**
- *rugosus* (Kieffer, 1910). **Pará**
- *tuberculatus* (Kieffer, 1910). **Pará**

Calliscelio Ashmead, 1893

- *bisulcatus* (Kieffer, 1910). **Pará**

Chromoteleia Ashmead, 1893

- *connectens* Kieffer, 1910. **Pará**
- *fuscicornis* Kieffer, 1910. **Pará**
- *longitarsis* Kieffer, 1910. **Pará**

Cremastobaeus Ashmead, 1893

- *horvathi* (Szabó, 1966). **Pernambuco**

Gryon Haliday, 1833

Bibliographic reference: Masner 1979: 791-805

- *barbiellinii* (Costa Lima, 1940). **São Paulo**
Host: *Diactor bilineatus* (Hemiptera: Coreidae)
- *brasiliense* (Costa Lima, 1928). **Rio de Janeiro**
Host: Unidentified Coreidae (Hemiptera)

- *culturatum* Masner, 1979. **Rio de Janeiro, Pernambuco, Mato Grosso, Minas Gerais**
Brazilian reference: Masner 1979: 799
- *dicaeum* (Walker, 1839). **Pará**
- *discolor* Mineo et Szabó, 1978. **São Paulo**
Brazilian reference: Mineo & Szabó 1978: 94
- *gallardoi* (Brèthes, 1913). **Rio Grande do Sul**
Host: *Corecoris lativentris* (Hemiptera: Coreidae)
Brazilian references: Loíacono 1980: 173; Becker & Prato 1982: 269-281
- *hercules* Masner, 1979. **Pará, Pernambuco**
Brazilian reference: Masner 1979: 801
- *scutellatum* Masner, 1979. **Pará, Pernambuco**
Brazilian reference: Masner 1979: 803
- *sinop* Masner, 1979. **Mato Grosso, São Paulo**
Brazilian reference: Masner 1979: 802
- *titan* Masner, 1979. **Rio de Janeiro**.
Brazilian reference: Masner 1979: 801

Idris Foerster, 1856

- *ovivorus* (Fouts, 1966). **Brazil (unknown locality)**.
Host: *Ctenus rubibarbis* (Araneae: Ctenidae)

Leptoteleia Kieffer, 1908

Bibliographic reference: Masner 1978: 353-380

- *alexandrae* Masner, 1978. **Rio Grande do Sul**
Brazilian reference: Masner 1978: 363
- *annarum* Masner, 1978. **Amazonas**
Brazilian reference: Masner 1978: 364
- *marcelae* Masner, 1978. **Espírito Santo, Pernambuco, Rio de Janeiro, Santa Catarina**
Brazilian reference: Masner 1978: 366
- *marketae* Masner, 1978. **Mato Grosso**
Brazilian reference: Masner 1978: 371
- *miladae* Masner, 1978. **Pernambuco**
Brazilian reference: Masner 1978: 368
- *verae* Masner, 1978. **Rio de Janeiro**
Brazilian reference: Masner 1978: 368

Macroteleia Westwood, 1835

- *carinata* Ashmead, 1894. **Pará**
- *herbigrada* Brues, 1915. **Paraíba**
- *paraensis* Kieffer, 1910. **Pará**
- *punctulata* Kieffer, 1909. **Pará**

Odontacolus Kieffer, 1910

- *macroceps* Szabó, 1966. **Pernambuco**

Opisthacantha Ashmead, 1893

- *nigriceps* (Kieffer, 1904). **Brazil (unknown locality)**
- *nigriclavis* (Kieffer, 1910). **Pará**

Parascelio Dodd, 1920

- *molnari* (Szabó, 1966). **Amazonas, Pernambuco**
- *ruber* (Szabó, 1966). **Pernambuco**

Paridris Kieffer, 1908

- *opacus* (Kieffer, 1910). **Pará**

Probaryconus Kieffer, 1908

- *striatigena* (Kieffer, 1910). **Pará**

Pseudoheptascelio Szabó, 1966

- *muesebecki* Szabó, 1966. **Pará**

Psilanteris Kieffer, 1916

- *nitidula* Szabó, 1966. **São Paulo**

Scelio Latreille, 1805

- *auronitens* Kieffer, 1910. **Pará**
- *aurosparsus* Kieffer, 1910. **Pará**
- *brasiliensis* Kieffer, 1910. **Pará**
- *ernstii* Riley 1886. **Brazil (unknown locality)**
- *festivus* Kieffer, 1910. **Pará**
- *flavocinctus* Kieffer, 1910. **Pará**
- *lugens* Kieffer, 1910. **Pará**
- *paraensis* Kieffer, 1910. **Pará**
- *splendidus* Kieffer, 1910. **Pará**

Sceliomorpha Ashmead, 1893

- *bakeri* Kieffer, 1910. **Pará**
- *carinata* Kieffer, 1910. **Pará**
- *deplanata* Kieffer, 1910. **Pará**
- *longicornis* Ashmead, 1893. **Pará**
- *quadridentis* Kieffer, 1910. **Pará**
- *rufithorax* Kieffer, 1910. **Pará**

Thoronella Masner, 1972

- *elegans* Masner, 1972. **Santa Catarina**

Thoronidea Masner & Hugger, 1979

Bibliographic reference: Johnson 2000: 301-305

- *cerradensis* Johnson, 2000. **Goiás**
Brazilian reference: Johnson 2000: 302

Triteleia Kieffer, 1906

- *longiventris* (Kieffer, 1910). **Pará**
- *pallipes* (Brues, 1915). **Pará**

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Literature Cited

- Abreu, J.M. de & R.B. Sgrillo.** 1989. Parasitismo de ovos de *Erinnyis ello* (Lepidoptera: Sphingidae) por *Telenomus dilophonotae* e *T. connectans* (Hymenoptera: Scelionidae) em seringais da Bahia, Brasil. Rev. Agrotrop. 1: 137-143.
- Aljanabi, S.M., M.S. Loíácono, R.T. Lourenço, M. Borges & M.S. Tigano.** 1998. RAPD analysis revealing polymorphism in egg parasitoids of soybean stink bugs (Hemiptera; Pentatomidae). An. Soc. Entomol. Brasil 28: 413-420.
- Becker, M. & M.D. Prato.** 1982. Natality and natural mortality of *Spartocera lativentris* Stål, 1870 (Hemiptera: Coreidae) in the egg stage. An. Soc. Entomol. Brasil 11: 269-281.
- Buhl, P.N.** 1998. Key to world species of *Euxestonotus* Fouts (Hym., Platygastridae). Entomol. Mon. Mag. 134: 241-255.
- Cividanes, F.J., M.L.F. Athayde & E.T. Sabugosa.** 1995. Observações on o parasitismo em ovos de *Piezodorus guildinii* (West.). Rev. Agric. 70: 131-137.
- Correa-Ferreira, B.S.** 1986. Ocorrência natural do complexo de parasitóides de ovos de percevejos da soja no Paraná. An. Soc. Entomol. Brasil 15: 189-199.
- Correa-Ferreira, B.S. & F. Moscardi.** 1996. Biological control of soybean stink bugs by inoculative releases of *Trissolcus basalis*. Entomol. Exp. Appl. 79: 1-7.
- CSIRO.** 1991. The Insects of Australia. A textbook for students and research workers. Melbourne University Press, 2 ed., vol. I and II, 1137p.
- Darling, D.C. & M.J. Sharkey.** 1990. Insects from the Santana Formation Lower Cretaceous of Brazil. (Hymenoptera). Bull. Amer. Mus. Nat. Hist. 195: 123-153.
- De Santis, L.** 1980. Catálogo de los Himenópteros brasileños de la Serie Parasítica incluyendo Bethyloidea. Editora da Universidade Federal do Paraná, Curitiba, 395p.
- De Santis, L. & J.A. Vidal Sarmiento.** 1979. Tres especies interesantes de escleriónidos de la República Argentina y de Chile (Hymenoptera; Proctotrupoidea). Idesia 5: 147-150.

- Dessart, P. 1981.** Definition de quelques sous-genres de *Ceraphron* Jurine, 1807 (Hymenoptera. Ceraphronoidea, Ceraphronidae). Bull. Inst. R. Sci. Nat. Belg. Entomol. 53: 1-23.
- Dessart, P. & P. Cancemi. 1986.** Tableau dichotomique des genres de Ceraphronoidea (Hymenoptera) avec commentaires et nouvelles espèces. Frust. Entomol. 7-8: 307-372.
- Foerster, L.A. & J.M. de Queiroz. 1990.** Incidência natural de parasitismo em ovos de pentatomídeos da soja no centro-sul do Paraná. An. Soc. Entomol. Brasil 19: 221-232.
- Foerster, L.A. & R.F. Avanci-Marion. 1999.** Egg parasitoids of *Anticarsia gemmatalis* Hubner (Lepidoptera: Noctuidae) in soybeans. An. Soc. Entomol. Brasil 28: 545-548.
- Gabriel, D., G. Calcagnolo, R.S. Tancini, N. Dias-Neto, A. Petinelli Jr. & J.B.M. Araujo. 1988.** Estudo com o percevejo *Pachycoris torridus* (Scopoli, 1772) (Hemiptera: Scutelleridae) e seu inimigo natural *Pseudotelenomus pachycoris* Lima, 1928 (Hymenoptera: Scelionidae) em cultura do pinhão paraguaio *Jatropha* spp. Biológico 54: 17-20.
- Johnson, N.F. 1981.** The new world species of the *Telenomus nigricornis* group (Hymenoptera: Scelionidae). Ann. Entomol. Soc. Am. 74: 73-78.
- Johnson, N.F. 1984.** Systematic of nearctic *Telenomus*. Bull. Ohio Biol. Surv. 6: 1-113.
- Johnson, N.F. 1987a.** Systematics of New world *Trissolcus*, a genus of Pentatomidae egg-parasites (Hymenoptera: Scelionidae): neotropical species of *flavipes* group. J. Nat. Hist. 21: 285-304.
- Johnson, N.F. 1987b.** The neotropical Telenominae genus *Phanuropsis* Girault (Hymenoptera: Scelionidae). Ann. Entomol. Soc. Am. 80: 660-663.
- Johnson, N.F. 1992.** Catalog of world species of Proctotrupoidea, exclusive of Platygastriidae (Hymenoptera). Mem. Amer. Entomol. Inst. 51: 1-825.
- Johnson, N.F. 2000.** A new species and revision of the concept of the genus *Thoronidea* (Hymenoptera, Platygastroidea: Scelionidae). Can. Entomol. 132: 301-305.
- Johnson, N.F. & L. Musetti. 1999.** Revision of the proctotrupoid genus *Pelecinus* Latreille (Hymenoptera: Pelecinidae). J. Nat. Hist. 33: 1513-1543.
- Kistner, D.H. & L.S. Davis. 1989.** New species of *Notoxopria* and their behavior, with notes on *Mimopria* (Hymenoptera: Diapriidae). Sociobiology 16: 217-238.
- Loiácono, M.S. 1980 [1981].** Nota sobre tres esceliónidos parasitoides de hemípteros de la República Argentina y Brasil (Hymenoptera, Proctotruipoidea). Rev. Soc. Entomol. Argent. 39: 173-178.
- Loiácono, M.S. 1981.** Notas sobre Diapriinae neotropicales (Hymenoptera, Diapriidae). Rev. Soc. Entomol. Argent. 40: 237-241.
- Loiácono, M.S. 1995.** Sobre *Phanuropsis semiflaviventris* (Hymenoptera, Scelionidae), parasitoide de posturas de Pentatómidos. Rev. Soc. Entomol. Argent. 54: 75-76.
- Loiácono, M.S. & C.B. Margaría. 2000.** Systematic and cladistic analysis of the myrmecophilic genus *Gymnopria* Loiácono (Hymenoptera: Diapriidae). Insect Syst. Evol. 31: 187-200.
- Macedo, V. & R.F. Monteiro. 1991.** Notes on the biology and behavior of *Eupastranaia fenestrata* Menetries (Lepidoptera: Pyralidae: Midilinae). J. New York Entomol. Soc. 99: 699-700.
- Masner, L. 1974.** *Szelenyisca* n. gen., a new genus of neotropical Diapriidae (Hymenoptera, Proctotruipoidea). Folia Entomol. Hung. 27: 109-111.
- Masner, L. 1976a.** A revision of the Ismarinae of the new world (Hymenoptera, Proctotruipoidea, Diapriidae). Can. Entomol. 108: 1243-1266.
- Masner, L. 1976b.** Notes on the ectophilous diapriid genus *Mimopria* Holmgren (Hymenoptera: Proctotruipoidea, Diapriidae). Can. Entomol. 108: 123-126.
- Masner, L. 1976c.** The nearctic species of *Iphitrachelus* Walker (Hymenoptera, Proctotruipoidea, Platygastriidae), with a key to world species. Can. Entomol. 108: 1065-1068.
- Masner, L. 1978.** A revision of the new world species of *Leptoteleia* Kieffer (Hymenoptera: Scelionidae), egg parasites of crickets. Can. Entomol. 110: 353-380.
- Masner, L. 1979.** The *varicornis*-group of *Gryon* Haliday (Hymenoptera: Scelionidae). Can. Entomol. 111: 791-805.
- Medeiros, M.A., F.V.G. Schmidt, M.S. Loiácono, F.V. Carvalho & M. Borges. 1997.** Parasitism and predation of *Euchistus heros* (Fabr.) (Heteroptera: Pentatomidae) eggs in Federal District, Brazil. An. Soc. Entomol. Brasil 26: 397-401.
- Medeiros, M.A., M.S. Loiácono, M. Borges & F.V.G. Schmidt. 1998.** Natural incidence of parasitoids in eggs of Pentatomidae found in soybean in Planaltina, DF, Brazil. Pesq. Agropec. Bras. 33: 1431-1435.
- Mineo, G. & J.B. Szabó. 1978.** Two new scelionids: *Gryon*

- tico* and *Gryon discolor* (Hym. Proctotrupoidea). Boll. Lab. Entomol. Agr. "F. Silvestri" 35: 94-98.
- Moreira, G.R.P. & M. Becker. 1986.** Mortalidade de *Nezara viridula* (Linnaeus, 1758) (Heteroptera: Pentatomidae) no estágio de ovo na cultura da soja: 2. Parasitóides. An. Soc. Entomol. Brasil 15: 291-308.
- Naumann I. & L. Masner. 1985.** Parasitic wasps of the proctotrupoid complex: a new family from Australia and a key to world families (Hymenoptera: Proctotrupoidea *sensu lato*). Aust. J. Zool. 33: 761-783.
- Pacheco, J.P.D. & B.S. Correa-Ferreira. 1998.** Reproductive potential and longevity of the parasitoid *Telenomus podisi* Ashmead in eggs of different stinkbug species. An. Soc. Entomol. Brasil 27: 585-591.
- Panizzi, A.R. & D.C Herzog. 1984.** Biology of *Thyanta perditor* (Hemiptera: Pentatomidae). Ann. Entomol. Soc. Am. 77: 646-650.
- Polaszek, A. & L.A. Foerster. 1997.** *Telenomus cyamophylax* (Hymenoptera: Scelionidae) attacking eggs of the velvetbean caterpillar, *Anticarsia gemmatalis* Hübner (Lepidoptera, Noctuidae). An. Soc. Entomol. Brasil 26: 177-181.
- Schofield, C.J. 1980.** Density regulations of domestic populations of *Triatoma infestans* in Brazil. Trans. Roy. Soc. Trop. Med. Hyg. 74: 761-769.
- Torres, J.B., D. Pratissoli & J.C. Zanuncio. 1997.** Termal requirements and development of the egg parasitoids *Telenomus podisi* Ashmead and *Trissolcus brochymenae* (Ashmead) on the predator stinkbug *Podisus nigrispinus* (Dallas). An. Soc. Entomol. Brasil 26: 445-453.
- Torres, J.B., J.C. Zanuncio, M.C. Picanço & A.C. Oliveira. 1996/1997.** Population parameters of three parasitoids (Hymenoptera: Scelionidae, Encyrtidae) hosted by the predator *Posidus nigrispinus* (Hemiptera: Pentatomidae). Rev. Biol. Trop. 44-45: 233-240.
- Torres, J.B., P.R. Cecon & W.L. Gasperazzo. 1996.** Mortality of *Podisus nigrispinus* (Dallas) by egg parasitoids in areas of eucalyptus [eucalyptus]. An. Soc. Entomol. Brasil 25: 463-471.
- Townes, H. & M. Townes. 1981.** A revision of the Serphidae (Hymenoptera). Mem. Amer. Entomol. Inst. 32: 1-541.
- Vlug, H.J. 1995.** Hymenopterum catalogus (nova editio). Catalogue of Platygastridae (Platygastroidea) of the world. Pars 19. C. van Achterberg (ed.), SBP Academic Publishing bv, Amsterdam, 168p.

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