

Linzer biol. Beitr.	55/1	287-295	August 2023
---------------------	------	---------	-------------

A catalogue of the families Chrysolampidae, Eupelmidae, Eurytomidae, Leucospidae, Ormyridae, Perilampidae, Torymidae and Trichogrammatidae (Hymenoptera, Chalcidoidea) of Eritrea

Michael MADL

A b s t r a c t : In Eritrea the family Chrysolampidae is represented by one species in the genus *Aperilampus* WALKER, 1871, the family Eupelmidae by three species in the genus *Eupelmus* DALMAN, 1820, the family Eurytomidae by five species in the genera *Eurytoma* ILLIGER, 1807 (four species) and *Sycophila* WESTWOOD, 1832 (one species), the family Leucospidae by two species in the genus *Leucospis* FABRICIUS, 1775, the family Ormyridae by one species in the genus *Ormyrus* WESTWOOD, 1832, the family Perilampidae by two species in the genus *Perilampus* LATREILLE, 1809, the family Torymidae by one species in the genus *Torymoides* WALKER, 1871 and the family Trichogrammatidae by one species in the genus *Pseudoligosita* GIRAULT, 1913.

K e y w o r d s : Chrysolampidae, Eupelmidae, Eurytomidae, Leucospidae, Ormyridae, Perilampidae, Torymidae, Trichogrammatidae, catalogue, Eritrea.

Introduction

I have rejected the idea of publishing a separate paper for each family of the Chalcidoidea, because of recent changes in the classification of the superfamily and the fact, that the fauna of Eritrea is poorly known. Several families have already been catalogued by the author (see References). In this paper all other families except Pteromalidae s.l. are treated.

Annotated catalogue

Synonyms or misidentifications are marked with an asterisk (*) and printing errors with an exclamation mark (!).

Family Chrysolampidae

The family Chrysolampidae contains two subfamilies, Chrysolampinae and Philodomininae, of which the latter is recorded from Eritrea. Philomidinae, which are parasitoids of ground nesting bees of the family Halictidae, are represented only by an unnamed species.

Subfamily Philomidinae

Aperilampus sp.

Aperilampus aurantiacus (BIRÓ (in litt.??)) var. *nigripes* (n.var.?): STRAND 1911: 9 (taxonomy, description, Eritrea without exact locality). Unavailable name.

Aperilampus aurantiacus var. *nigripes* STRAND, 1911: HERATY et al. 2019: 46 (taxonomy (image examined), Eritrea without exact locality).

D i s t r i b u t i o n : no exact locality.

Family Eupelmidae

Eupelmidae are parasitoids or hyperparasitoids of several insect orders and spiders. Some species are phytophagous. In Eritrea the family is poorly known. It is represented by three species of the subfamily Eupelminae.

Subfamily Eupelminae

***Eupelmus afer* SILVESTRI, 1914**

Eupelmus afer sp.n.: SILVESTRI 1914: 202 (description ♀ ♂, biology, Dedda, Nefasit), 203 (figs 6, 7.1, 2).

Eupelmus afer SILVESTRI, 1914: SILVESTRI 1915a: 286 (keys ♂, ♀), 290 (biology, Nefasit).

Eupelmus afer SILVESTRI, 1914: THOMPSON 1943: 27 (world host-parasitoid catalogue).

Eupelmus afer SILVESTRI, 1914: THOMPSON 1955: 318 (world host-parasitoid catalogue).

Eupelmus afer SILVESTRI, 1914: NARAYANAN & CHAWLA 1962: 458 (host-parasitoid catalogue), 471 (host-parasitoid catalogue).

Eupelmus afer SILVESTRI, 1914: STIBICK 2004: 39 (tab. 2: world catalogue parasites and predators of Tephritidae: Ethiopia = Eritrea).

Eupelmus afer SILVESTRI, 1919 (!): GIBSON 2011: 18-19 (taxonomy, not examined).

Eupelmus (Eupelmus) afer SILVESTRI, 1914: GIBSON & FUSU 2016: 313 (taxonomy, figs 129a-f, biology, Dedda, Nefasit).

H o s t : Diptera, Tephritidae: *Bactrocera oleae* (ROSSIUS, 1790) (SILVESTRI 1914, 1915a).

D i s t r i b u t i o n : Dedda, Nefasit.

Eupelmus afer is also known from South Africa.

***Eupelmus saissetiae* SILVESTRI, 1915**

Eupelmus saissetiae sp.n.: SILVESTRI 1915a: 258 (biology), 286 (keys ♂, ♀), 289 (description ♀ ♂, fig. 45, Nefasit).

Eupelmus saissetiae SILVESTRI, 1915: FULMEK 1943: 76 (world host-parasitoid catalogue).

Eupelmus saissetiae SILVESTRI, 1915: THOMPSON 1944a: 103 (world host-parasitoid catalogue).

Eupelmus saissetiae SILVESTRI, 1915: THOMPSON 1955: 321 (world parasitoid-host catalogue).

H o s t : Hemiptera, Coccidae: *Saissetia oleae* (OLIVIER, 1791) (SILVESTRI 1915a).

D i s t r i b u t i o n : Nefasit.

Eupelmus saissetiae is recorded only from Eritrea.

***Eupelmus spermophilus* SILVESTRI, 1915**

Eupelmus spermophilus sp.n.: SILVESTRI 1915a: 277 (biology), 286 (keys ♂, ♀), 287 (description ♀ ♂, figs 42, 43.1-5, biology, Nefasit), 288 (fig. 44).

Eupelmus spermophilus SILVESTRI, 1915: POWELL et al. 2019: 186 (taxonomy), 187 (taxonomy), 189 (taxonomy, biology, South Africa), 190 (figs 4A, B), 194 (fig. 8: taxonomy), 195 (taxonomy, biology, Eritrea (SILVESTRI 1915a)).

D i s t r i b u t i o n : Nefasit.

Eupelmus spermophilus, which is an olive seed feeder (CALECA et al. 2019: 125; POWELL et al. 2020: 441), is also known from South Africa.

Family Eurytomidae

Eurytomidae are partly phytophagous, of which some species are considered pests, e.g. in olive plantations. The entomophagous species are parasitoids or hyperparasitoids of insect larvae living in plant tissue, mainly of gall-inducing Hymenoptera and Diptera. Hitherto four species have been recorded from Eritrea.

Subfamily Eurytominae

Eurytoma elongatula SILVESTRI, 1915

Eurytoma elongatula sp.n.: SILVESTRI 1915b: 339 (description ♀ ♂, figs 2.1-5, biology, Nefasit).
Eurytoma elongata SILVESTRI, 1915: MASI 1940: 280 (catalogue Afrotropical region), 281 (biology).
Eurytoma elongatula SILVESTRI, 1915: GATES & DELVARE 2008: 11 (taxonomy, Nefasit, catalogue Afrotropical region as *Eurytoma elongata*), 22 (tab. 1: parasitoid-host catalogue Afrotropical region).

Distribution: Nefasit.

Eurytoma elongatula is known only from Eritrea.

Eurytoma oleae SILVESTRI, 1915

Eurytoma oleae sp.n.: SILVESTRI 1915a: 275 (description ♀ ♂, fig. 30, biology, Nefasit), 276 (figs 31.1-10), 277 (fig. 32).
Eurytoma oleae SILVESTRI, 1915: MASI 1940: 280 (catalogue Afrotropical region), 281 (biology).
Eurytoma oleae SILVESTRI, 1915: THOMPSON 1944: 103 (world host-parasitoid catalogue).
Eurytoma oleae SILVESTRI, 1915: THOMPSON 1955: 328 (world parasitoid-host catalogue).
Eurytoma oleae SILVESTRI, 1915: DOMENICHI 2002: 305 (taxonomy, Eritrea without exact locality).
Eurytoma oleae SILVESTRI, 1915: GATES & DELVARE 2008: 12 (taxonomy, biology, Nefasit, catalogue Afrotropical region), 23 (tab. 1: parasitoid-host catalogue Afrotropical region).

Distribution: Nefasit.

Eurytoma oleae, a phytophagous species on olives, is also recorded from South Africa.

Eurytoma spermophaga SILVESTRI, 1915

Eurytoma spermophaga sp.n.: SILVESTRI 1915b: 337 (description ♀ ♂, biology, Nefasit), 338 (figs 1.1-6).
Eurytoma spermophaga SILVESTRI, 1915: MASI 1940: 280 (catalogue Afrotropical region), 281 (biology).
Eurytoma spermophaga SILVESTRI, 1915: GATES & DELVARE 2008: 13 (taxonomy, Nefasit, catalogue Afrotropical region), 23 (tab. 1: parasitoid-host catalogue Afrotropical region).

Distribution: Nefasit.

Eurytoma spermophaga is known only from Eritrea.

Eurytoma varicolor SILVESTRI, 1915

Eurytoma varicolor sp.n.: SILVESTRI 1915a: 277 (biology), 278 (description ♀ ♂, fig. 33, biology, Nefasit), 279 (figs 34.1-6, 35).

Eurytoma varicolor SILVESTRI, 1915: MASI 1940: 280 (catalogue Afrotropical region), 281 (biology).

Eurytoma varicolor SILVESTRI, 1915: DOMENICHI 2002: 305 (taxonomy, Eritrea without exact locality).

Eurytoma varicolor SILVESTRI, 1915: GATES & DELVARE 2008: 14 (taxonomy, Nefasit, catalogue Afrotropical region), 23 (tab. 1: parasitoid-host catalogue Afrotropical region).

D i s t r i b u t i o n : Nefasit.

Eurytoma varicolor, which is probably a parasitoid of the phytophagous *Eupelmus spermophilus* SILVESTRI, 1915 (POWELL et al. 2020: 441-442), is also recorded from South Africa.

***Eurytoma* sp.**

Eurytoma sp.: DE LOTTO & NASTASI 1955: Publication not seen.

Eurytoma sp.: ABATE 1991: 9 (parasitoid-host catalogue Ethiopia: Eritrea, Ethiopia).

H o s t : Diptera, Agromyzidae: *Ophiomyia phaseoli* (TRYON, 1895) (DE LOTTO & NASTASI 1955).

***Sycophila aethiopica* (SILVESTRI, 1915)**

Decatoma aethiopica sp.n.: SILVESTRI 1915a: 277 (biology), 280 (fig. 36), 281 (description ♀ ♂, figs 37.1-6, biology, Nefasit), 282 (fig. 38, footnote: taxonomy).

Sycophila aethiopica (SILVESTRI, 1915): BOUČEK, WATSHAM & WIEBES 1981: 214 (taxonomy).

D i s t r i b u t i o n : Nefasit.

Sycophila aethiopica, which is a parasitoid of the phytophagous *Eupelmus spermophilus* SILVESTRI, 1915 (POWELL et al. 2020: 441), is also known from South Africa.

Family Leucospidae

Members of the family Leucospidae, which belong to the largest chalcid wasps, can be recognized by the enlarged and toothed hind femora, the wasp like colouration (black and yellow or red), and the heavily sclerotized body. The ovipositor of the females is curved upwards and forwards over the abdomen depending on his length. Leucospidae are parasitoids of Megachilidae. Host records of Vespidae (Eumeninae) and Sphecidae, which construct mud nests, should be checked carefully.

***Leucospis africana* CAMERON, 1907**

Leucospis africana CAMERON, 1907: BOUČEK 1974: 102 (key), 105 (figs 123-126), 106 (taxonomy, description ♂, biology, Adi Caie), 231 (host-parasitoid catalogue).

Leucospis africana CAMERON, 1907: MADL & SCHWARZ 2012: 1222 (catalogue Afrotropical region).

D i s t r i b u t i o n : Adi Caie.

Leucospis africana is recorded from the Afrotropical (Burundi, Central African Republic, Democratic Republic of the Congo, Eritrea, Ethiopia, Ghana, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, South Africa, Tanzania, Uganda, Zambia, Zimbabwe) and Palaearctic (Saudi Arabia) regions. None of the hosts (Megachilidae: *Megachile spinarum* COCKERELL, 1937 and *Serapista denticulata* (SMITH, 1854)) is known from Eritrea (MADL 2019).

***Leucospis tricolor* KIRBY, 1883**

Leucospis tricolor KIRBY, 1883: BOUČEK 1974: 106 (key), 109 (fig. 150), 111 (figs 151-153), 126 (taxonomy, biology, Ghinda), 231 (host-parasitoid catalogue).

Leucospis tricolor KIRBY, 1883: MADL & SCHWARZ 2012: 1227 (catalogue Afrotropical region), 1235 (fig. 3).

D i s t r i b u t i o n : Ghinda.

Leucospis tricolor is also recorded from the Central African Republic, Democratic Republic of the Congo, Ethiopia, Kenya, Mozambique, Nigeria, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Tanzania (mainland, Zanzibar), Uganda, Zambia and Zimbabwe. Four species of Megachilidae are known as hosts (*Pachyanthidium bicolor* (LEPELETIER DE SAINT-FARGEAU, 1841), *Pachyanthidium cordatum* (SMITH, 1854), *Pseudoanthidium truncatum* (SMITH, 1854) and *Serapista denticulata* (SMITH, 1854)), of which only *Pseudoanthidium truncatum* is recorded from Eritrea (MADL 2019: 1386).

Family Ormyridae

Ormyridae are parasitoids or hyperparasitoids of insects living in galls induced by Hymenoptera or Diptera. Until now, only one species has been recorded from Eritrea.

***Ormyrus striatus* CAMERON, 1907**

Ormyrus striatus CAMERON, 1907: SILVESTRI 1915a: 277 (biology), 283 (taxonomy, description ♀ ♂, fig. 39, biology, Dedda, Nefasit), 284 (figs 40.1-5), 285 (fig. 41).

Ormyrus striatus CAMERON, 1907: NEUENSCHWANDER 1982: 516 (fig. 6 as *Ormyrus* sp.), 517 (key).

Ormyrus striatus CAMERON, 1907: MARCHIORI 2022: 245 (parasitoid-host catalogue Afrotropical region), 246 (fig. 27).

D i s t r i b u t i o n : Dedda, Nefasit.

Ormyrus striatus is also known from South Africa.

Family Perilampidae

Perilampidae are hyperparasitoids or parasitoids of various insect orders, e.g. Lepidoptera, Hymenoptera and Coleoptera. They are parasitoids of wood boring beetles (Anobiidae, Platypodidae), but mainly hyperparasitoids of economic Lepidoptera via parasitic Diptera (Tachinidae) and Hymenoptera (Braconidae, Ichneumonidae).

***Perilampus horocos* (ARGAMAN, 1990)**

Afroperilampus horocos sp.n.: ARGAMAN 1990: 206 (fig. 49), 210 (key), 212 (fig. 85), 246 (description ♀ ♂, Keren (paratype ♀)).

Afroperilampus horocos ARGAMAN, 1990: ARGAMAN 1991: 9 (world catalogue: East Africa).

Perilampus horocos (ARGAMAN, 1990): DARLING 1996: 110-111 (taxonomy).

Perilampus horocos (ARGAMAN, 1990): KIMSEY & BROTHERS 2016: 164 (catalogue species described by Q. Argaman: only Tanzania: Arusha).

D i s t r i b u t i o n : Keren.

Perilampus horocos is also recorded from Tanzania.

***Perilampus nimrodus* (ARGAMAN, 1990)**

Lufarfar nimrodus sp.n.: ARGAMAN 1990: 232 (key).

Lufarfar nimrodus sp.n.: ARGAMAN 1991: 4 (description ♀, Assab), 13 (world catalogue: East Africa = Eritrea).

Perilampus nimrodus (ARGAMAN, 1990): DARLING 1996: 125 (taxonomy).

Perilampus nimrodus (ARGAMAN, 1990): KIMSEY & BROTHERS 2016: 165 (catalogue species described by Q. Argaman).

D i s t r i b u t i o n : Assab.

Perilampus nimrodus is known only from Eritrea.

Family T o r y m i d a e

Species of the large family Torymidae, which is represented by only one species in Eritrea, are parasitoids of several insect orders, e.g. Diptera, Hemiptera, Hymenoptera, Mantodea, Orthoptera.

Subfamily T o r y m i n a e***Torymoides* sp.**

Dimeromicrus sp.: DE LOTTO & NASTASI 1955: Publication not seen.

Dimeromicrus sp.: ABATE 1991: 21 (parasitoid-host catalogue Ethiopia: Ethiopia = Eritrea).

Family T r i c h o g r a m m a t i d a e

Trichogrammatidae are egg parasitoids of several insect orders, e.g. Lepidoptera, Hymenoptera, Diptera, Hemiptera, Orthoptera and are often used in biological control programs. The genus *Zorontogramma* SILVESTRI, 1915, which has been described as new from Eritrea, is considered a synonym of *Pseudologosita* GIRAULT, 1913.

Subfamily O l i g o s i t i n a e***Pseudologosita distincta* (SILVESTRI, 1915)**

Zorontogramma distinctum sp.n.: SILVESTRI 1915a: 327 (fig. 76), 328 (figs 77.1-8), 329 (typus generis, description ♀, biology, Nefasit).

Zorontogramma distinctum SILVESTRI, 1915: GAHAN & FAGAN 1923: 156 (world catalogue generotypes Chalcidoidea).

Oligosita (Zorontogramma) distincta (SILVESTRI, 1915): NOWICKI 1936: 116 (taxonomy).

Oligosita (Zorontogramma) distinctum (SILVESTRI, 1915): DOUTT & VIGGIANI 1968: 538 (figs 41E, F), 539 (taxonomy, world catalogue: Eritrea (SILVESTRI 1915a)).

Oligosita distinctum (SILVESTRI, 1915): YOUSUF & SHAFEE 1986: 59 (world catalogue).

Pseudologosita distincta (SILVESTRI, 1915): PINTO & VIGGIANI 2004: 288-289 (taxonomy).

D i s t r i b u t i o n : Nefasit.

Pseudologosita distincta is known from the Afrotropical (Eritrea) and Palaearctic (Hungary, Sweden) regions.

Acknowledgements

I would like to thank Manfred A. Jäch and Manuela Vizek (both Natural History Museum Vienna, Austria) for their support in compilation of the catalogue.

Zusammenfassung

Die Familie Chrysolampidae ist in Eritrea mit einer Art der Gattung *Aperilampus* WALKER, 1871 vertreten, die Familie Eupelmidae mit drei Arten der Gattung *Eupelmus* DALMAN, 1820, die Familie Eurytomidae mit fünf Arten der Gattungen *Eurytoma* ILLIGER, 1807 (vier Arten) und *Sycophila* WESTWOOD, 1832 (eine Art), die Familie Leucospidae mit zwei Arten der Gattung *Leucospis* FABRICIUS, 1775, die Familie Ormyridae mit einer Art der Gattung *Ormyrus* WESTWOOD, 1832, die Familie Perilampidae mit zwei Arten der Gattung *Perilampus* LATREILLE, 1809, die Familie Torymidae mit einer Art der Gattung *Torymoides* WALKER, 1871 und die Familie Trichogrammatidae mit einer Art der Gattung *Pseudoligosita* GIRAULT, 1913.

References

- ABATE T. (1991): Entomophagous Arthropods of Ethiopia: A Catalog. — Technical Manual 4, Institute of Agricultural Research, Addis Abbeba, Ethiopia, VI + 50 pp.
- ARGAMAN Q. (1990): A synopsis of *Perilampus* LATREILLE with descriptions of new genera and species (Hymenoptera: Perilampidae), I. — Acta Zoologica Hungarica **36**/3-4: 189-263.
- ARGAMAN Q. (1991): A synopsis of *Perilampus* LATREILLE with descriptions of new genera and species (Hymenoptera: Perilampidae), II. — Acta Zoologica Hungarica **37**/1-2: 1-19.
- BOUČEK Z. (1974): A Revision of the Leucospidae (Hymenoptera: Chalcidoidea) of the World. — Bulletin of the British Museum (Natural History), Entomology, Supplement **23**: 241 pp.
- BOUČEK Z., WATSHAM A. & J.T. WIEBES (1981): The fig wasp fauna of the receptacles of *Ficus thonningii* (Hymenoptera, Chalcidoidea). — Tijdschrift voor Entomologie **124**/5: 149-233, pls. 1-4.
- DARLING D.C. (1996): Generic Concepts in the Perilampidae (Hymenoptera: Chalcidoidea): An Assessment of Recently Proposed Genera. — Journal of Hymenoptera Research **5**: 100-130.
- DE LOTTO G. & V. NASTASI (1955): Gli insetti alle piante coltivate e spontanee dell'Eritrea. — Revue Agricoltura Tropica e Subtropica **49**: 53-59.
- DOMENICHI G. (2002): Species of genus *Eurytoma* (Hym. Chalcidoidea) in Mediterranean olive grove. — Bollettino di Zoologia Agraria e di Bachicoltura **34**/3: 303-319.
- DOUTT R.L. & G. VIGGIANI (1968): The Classification of the Trichogrammatidae (Hymenoptera: Chalcidoidea). — Proceedings of the California Academy of Sciences, fourth series, **35**/20: 477-586.
- FULMEK L. (1943): Wirtsindex der Aleyrodidae und Cocciden-Parasiten. — Entomologische Beihefte **10**, V, 1-100.
- GAHAN A.B. & M.M. FAGAN (1923): The type species of the genera of Chalcidoidea or chalcid-flies. — Bulletin of the United States National Museum **124**: 1-173.
- GATES M. & G. DELVARE (2008): A new species of *Eurytoma* (Hymenoptera: Eurytomidae) attacking *Quadrastichus* ssp (Hymenoptera: Eulophidae) galling *Erythrina* ssp. (Fabaceae), with a summary of African *Eurytoma* biology and species checklist. — Zootaxa **1751**: 1-24.
- GIBSON G.A.P. (2011): The species of *Eupelmus* (*Euplemus*) DALMAN and *Eupelmus* (*Episolidelia*) GIRAULT (Hymenoptera: Eupelmidae) in North America north of Mexico. — Zootaxa **2951**: 1-97.
- GIBSON G.A.P. & L. FUSU (2016): Revision of the Palearctic species of *Eupelmus* (*Eupelmus*) Dalman (Hymenoptera: Chalcidoidea: Eupelmidae). — Zootaxa **4081**: 1-331.
- HERATY J.M., DERAFFSHAN H.A. & M. GHAFOURI MOGHADDAM (2019): Review of the Philomidinae RUSCHKA (Hymenoptera: Chalcidoidea: Perilampidae), with description of three new species. — Arthropod Systematics & Phylogeny **77**/1: 39-56.

- HERTING B. (1978): A catalogue of parasites and predators of terrestrial arthropods. Section A. Host or prey/enemy. Volume 5. Neuroptera, Diptera, Siphonaptera. — Farnham Royal (Commonwealth Institute of Biological Control), IV+156 pp.
- KIMSEY L.S. & D.J. BROTHERS (2016): The life, publications and new taxa of Quabir Argaman (Carol Nagy). — *Journal of Hymenoptera Research* **50**: 141-178.
- MADL M. (2019): A catalogue of the Megachilidae (Hymenoptera, Apoidea) of Eritrea. — *Linzer biologische Beiträge* **51/2**: 1375-1389.
- MADL M. (2024a): A catalogue of the family Chalcididae (Hymenoptera, Chalcidoidea) of Eritrea. — *Linzer biologische Beiträge* **55/1**: 205-211.
- MADL M. (2024b): A catalogue of the family Agaonidae (Hymenoptera, Chalcidoidea) of Eritrea. — *Linzer biologische Beiträge* **55/1**: 213-218.
- MADL M. (2024c): A catalogue of the family Encyrtidae (Hymenoptera, Chalcidoidea) of Eritrea. — *Linzer biologische Beiträge* **55/1**: 219-239.
- MADL M. (2024d): A catalogue of the family Eulophidae (Hymenoptera, Chalcidoidea) of Eritrea. — *Linzer biologische Beiträge* **55/1**: 265-273.
- MADL M. (2024e): A catalogue of the family Aphelinidae and Azotidae (Hymenoptera, Chalcidoidea) of Eritrea. — *Linzer biologische Beiträge* **55/1**: 275-286.
- MADL M. & M. SCHWARZ (2012): Catalogue and faunistics of the family Leucospidae (Hymenoptera: Chalcidoidea) of the Ethiopian Region exluding Malagasy Subregion. — *Linzer biologische Beiträge* **44/2**: 1221-1235.
- MARCHIORI C.H. (2022): Family Ormiridae (Insecta: Hymenoptera) as ectoparasitoid idiobionts of gall inducing, fruit fly and hyperparasitoids of other hymenoptera parasitoids. — *International Journal of Humanities Social Science and Management* **2/4**: 233-248.
- MASI L. (1940): Descrizioni di Calcididi raccolti in Somalia dal Prof. G. Russo con note sulle specie congeneri. — *Bollettino del R. Laboratorio di Entomologia Agraria di Portici* **3**: 247-324.
- NARAYANAN E.S. & S.S. CHAWLA (1962): Parasites of fruit flies pests of the world with brief notes on their bionomics, habits and distribution. — *Beiträge zur Entomologie* **12/3-4**: 437-476.
- NOWICKI S. (1936): Descriptions of new Genera and Species of the Family Trichogrammatidae (Hym. Chalcidoidea) from the Palearctic Region, with notes – II. — *Zeitschrift für Angewandte Entomologie* **23/2**: 114-148.
- PINTO J.D. & G. VIGGIANI (2004): A Review of the Genera of Oligositini (Hymenoptera: Trichogrammatidae) with a Preliminary Hypothesis of Phylogenetic Relationships. — *Journal of Hymenoptera Research* **13/2**: 269-294.
- POWELL C., CALECA V., KNIPE M., RHODE C., ALLSOPP E. & B. VAN ASCH (2020): DNA-based identification of larvae offers insights into the elusive lifestyles of native olive seed wasps in South Africa. — *African Entomology* **28/2**: 433-446.
- POWELL C., CALECA V., SINNO M., STADEN M. VAN, NOORT S. VAN, RHODE C., ALLSOPP E. & B. VAN ASCH (2019): Barcoding of parasitoid wasps (Braconidae and Chalcidoidea) associated with wild and cultivated olives in the Western Cape of South Africa. — *Genome* **62/3**: 183-189.
- SILVESTRI F. (1914): Viaggio in Eritrea per cercare parassiti della mosca delle olive. — *Bollettino del Laboratorio di Zoologia Generale e Agraria della R. Scuola Superiore di Agricoltura in Portici* **9**: 186-226.
- SILVESTRI F. (1915a): Contributo alla conoscenza degli insetti dell' olivo dell' Eritrea e dell' Africa meridionale. — *Bollettino del Laboratorio di Zoologia Generale e Agraria della R. Scuola Superiore di Agricoltura in Portici* **9**: 240-334.
- SILVESTRI F. (1915b): Descrizione di nuovi Imenotteri Calcididi africani. — *Bollettino del Laboratorio di Zoologia Generale e Agraria della R. Scuola Superiore di Agricoltura in Portici* **9**: 337-377.

- STIBICK J.N.L. (2004): Natural Enemies of True Fruit Flies (Tephritidae). — Riverdale (United States Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine), 86 pp.
- STRAND E. (1911): Neue exotische Chalcididen der Gattungen *Phasganophora* WESTW., *Heptasmicra* ASHM., *Anacryptus* KBY., *Anthrocephalus* KBY., *Aperilampus* WLK. und *Chryseida* SPIN. — Fauna Exotica 1/2: 6-8; 3: 9-10.
- THOMPSON R.W. (1943): A Catalogue of the Parasites and Predators of Insect Pests. Section 1: Parasite Host Catalogue Part 2: Parasites of Dermaptera and Diptera. — Belleville (The Imperial Parasite Service), IV + 99 pp.
- THOMPSON W.R. (1944): A Catalogue of the Parasites and Predators of Insect Pests. Section 1. Host Parasite Catalogue. Part 3. Parasites of the Hemiptera. — Belleville (The Imperial Parasite Service), V + 149 pp.
- THOMPSON W.R. (1955): A Catalogue of the Parasites and Predators of Insect Pests. Section 2: Host Parasite Catalogue Part 3: Hosts of the Hymenoptera (Calliceratid to Evaniid). — Ottawa (The Commonwealth Institute of Biological Control): 191-332.
- YOUSUF M. & S.A. SHAFEE (1986): Checklist of species and bibliography of the world Trichogrammatidae. — Indian Journal of Systematic Entomology 3/2: 29-82.

Author's address: Michael MADL
Naturhistorisches Museum Wien
2. Zoologische Abteilung
Burgring 7
A-1010 Vienna, Austria
E-mail: michael.madl@nhm-wien.ac.at

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Linzer biologische Beiträge](#)

Jahr/Year: 2023

Band/Volume: [0055_1](#)

Autor(en)/Author(s): Madl Michael

Artikel/Article: [A catalogue of the families Chrysolampidae, Eupelmidae, Eurytomidae, Leucospidae, Ormyridae, Perilampidae, Torymidae and Trichogrammatidae \(Hymenoptera, Chalcidoidea\) of Eritrea 287-295](#)