Biodiversity Data Journal 14: e215045
doi: 10.3897/BDJ.14.e215045

Taxonomy & Inventories

# Synopsis of the African species of *Acropimpla* Townes, 1960 (Hymenoptera, Ichneumonidae), with new faunistic records and descriptions of males

Emil M. Österman‡, Tapani Hopkins‡, Kari M. Kaunisto‡, Yves Braet§, Ilari E. Sääksjärvi‡

‡ Department of Biodiversity Sciences, University of Turku, Turku, Finland
§ Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium

Corresponding author: Emil M. Österman (emil.m.osterman@gmail.com)

Academic editor: Francisco Javier Peris Felipo

Received: 09 Sep 2026 | Accepted: 02 Oct 2026 | Published: 07 Oct 2026

Citation: Österman EM, Hopkins T, Kaunisto KM, Braet Y, Sääksjärvi IE (2026) Synopsis of the African species of *Acropimpla* Townes, 1960 (Hymenoptera, Ichneumonidae), with new faunistic records and descriptions of males. Biodiversity Data Journal 14: e215045. https://doi.org/10.3897/BDJ.14.e215045

## Abstract

### Background

*Acropimpla* is a nearly cosmopolitan genus of Darwin wasps (Hymenoptera, Ichneumonidae, Pimplinae), with three known species from Africa. However, all the current African records are from east Africa and no males are known. We report the specimens we collected by Malaise trapping in Uganda and Côte d'Ivoire and summarise the known information about the African species.

### New information

We describe the males of *A. alboscutellaris* (Szépligeti, 1908) and *A. lutea* Varga, 2026, which resemble the females, but are smaller and have darker metasomal tergites. Furthermore, the male of *A. alboscutellaris* has an unintercepted nervellus, which is

© Österman E et al. This is an open access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

intercepted in the female. We present two new country-level records of *A. alboscutellaris* from Uganda and Côte d'Ivoire, the latter of which constitutes the first genus-level record in west Africa. The Ugandan data on *A. lutea* suggests that it is a dry-season-dominant forest species.

## Keywords

biodiversity, Côte d'Ivoire, distribution, Malaise trap, morphological variation, Pimplinae, taxonomy, Uganda

## Introduction

*Acropimpla* Townes, 1960 is a moderately large genus within the tribe Ephialtini of the subfamily Pimplinae of Darwin wasps (Hymenoptera, Ichneumonidae) which includes 48 described species (Yu et al. 2016, Khalaim and Lopez-Ortega 2022, Khalaim and Ruíz-Cancino 2022, Varga 2026). The genus has a nearly cosmopolitan distribution (Yu et al. 2016), being, as far as is known, absent only from the Antarctic and Neotropical Regions and it is most species-rich in the Oriental Region (Baltazar 1966, Gupta and Tikar 1976, Liu et al. 2010, Varga and Reshchikov 2015). Species of *Acropimpla* are known as idiobiont parasitoids mainly of immature Lepidoptera, especially Tortricidae and Pyralidae (Yu et al. 2016).

Three species of *Acropimpla* are known from Africa (Szépligeti 1908, Seyrig 1932, Varga 2026), for which no males are known and which lack distributional records outside east Africa and Madagascar. Interestingly, all of these species have an open areolet (i.e. lack the fore-wing vein 3rs-m), which is highly rare in their non-African congeners, suggesting the African species may have inherited the open areolet from their last common ancestor.

In this article, we summarise known information about the African species of *Acropimpla* and, based on an extensive one-year sampling in Uganda (reported by Hopkins et al. (2019a), Hopkins et al. (2019b), Österman et al. (2026a)) and samples from Côte d'Ivoire, present as new information the descriptions of the males of two species, two country-level records of one species and ecological data of one species.

## Materials and methods

We collected the mainland specimens studied here during two sampling campaigns: an extensive campaign in Uganda (east Africa) and a smaller in Côte d'Ivoire (west Africa). The Ugandan material includes samples collected with 34 Malaise traps that operated for one year (2014–2015) in Kibale National Park. The traps were placed in habitats that varied across a successional gradient from primary forest and swampy primary forest, through disturbed forest and clearcut former plantation, to farmland. The sampling effort totalled 382.4 trap months, of which 22.6 trap months were damaged samples or otherwise provided, at most, a partial catch of ichneumonids. The study area and

sampling campaign are described in greater detail by Hopkins et al. (2019a) and Hopkins et al. 2019b. The material from Côte d'Ivoire includes samples collected with one Malaise trap running for one and a half years (April 2018–November 2019) in highland forest on Mont Tonkoui (18.7 trap months). For the Malagasy material included here, we examined only images of the holotype.

We photographed the specimens using a Sony Alpha 7R V camera body mounted on a macro rail, which enabled us to control and incrementally move the camera between shots. Photos were captured using an extension tube, a relay lens and Mitutoyo Plan Apo objectives with 2.5× and 5× magnifications. We captured multiple images at successive focal depths and combined them using the software Helicon Focus v. 7.7.5 (by Helicon Soft Ltd) to produce composite layer images with extended depth of field. We carried out final image adjustments in Adobe Photoshop CC to ensure accurate representation of the specimen's morphological features. Morphological terminology follows Broad et al. (2018) and the taxonomic history is derived from Townes and Townes (1973).

### Repositories

**MNHN** Muséum national d'Histoire naturelle, Paris, France (Antoine Guiguet).

**ZMUT** Zoological Museum, University of Turku, Turku, Finland (Ilari Sääksjärvi).

## Data resources

The complete data of the 56 examined specimens from Uganda and one examined specimen from Côte d'Ivoire is in the Zenodo repository (Österman et al. 2026b). The repository also has the basic (summary) data of the examined specimens, an image of the hind-wing of our male *Acropimpla alboscutellaris* (ZMUT.11680) and copies of the images of *Acropimpla* in this article (for ease of download).

## Taxon treatments

### *Acropimpla* Townes, 1960

#### Nomenclature

*Selenaspis* Roman, 1910: 191 (homonym of *Selenaspis* Bleeker, 1858 - Chordata, Ariidae)

Type: *Hemipimpla alboscutellaris* Szépligeti, 1908 (orig. des.)

*Acropimpla* Townes, 1960: 159 (nomen novum for *Selenaspis* Roman, 1910)

Type: *Charitopimpla leucostoma* Cameron, 1907 (orig. des.)

### Diagnosis

Clypeus more or less flat, apically notched; mandible usually with light-coloured area; eyes not strongly notched opposite antennal sockets; occipital carina medially dipped or weakly arched downwards, sometimes absent at mid-line; propodeum short and arched; fore-wing vein 3rs-m present or absent, when present, areolet receiving 2m-cu at or slightly basad of its distal corner; nervellus intercepted below middle (but rarely at middle or unintercepted); first metasomal tergite short and wide; second tergite with oblique grooves cutting off basolateral corners; ovipositor laterally compressed, dorsal valve concave (but rarely straight) distad of nodus, apex of ventral valve with oblique teeth (diagnosis adapted from Pham et al. (2011) and Varga (2026)).

## *Acropimpla alboscutellaris* (Szépligeti, 1908)

### Nomenclature

*Hemipimpla alboscutellaris* Szépligeti, 1908: 83 (orig. des.)

*Selenaspis alboscutellaris*; Roman 1910: 191 (comb. nov.)

*Hemipimpla*? *alboscutellaris*; Schulz 1911: 28 (incertae sedis)

*Hemipimpla*? *alboscutellaris*; Morley 1914: 108 (incertae sedis)

*Acropimpla alboscutellaris*; Townes & Townes 1960: 159 (comb. nov.)

### Materials

a. country: Côte d'Ivoire; locality: Mont Tonkoui; samplingProtocol: Malaise trap; eventDate: 30 Sep-7 Oct 2018; habitat: highland forest; individualCount: 1 ; sex: female; recordedBy: Y. Braet & A. Gué; institutionCode: ZMUT; occurrenceID: 0B2125AF-60F8-553F-B546-CE3AD732AB17; digitalSpecimenID: ZMUT.49881

b. country: Uganda; locality: Kibale National Park, Kanyawara; samplingProtocol: Malaise trap; eventDate: 29 Jan–13 Feb 2015; habitat: forest; individualCount: 2; sex: 1 female, 1 male; recordedBy: T. Hopkins; institutionCode: ZMUT; occurrenceID: 8A4032F3-D586-5D0C-8988-16506B05C0E2; digitalSpecimenID: ZMUT.3153, ZMUT.11680

### Description

The male (Figs 1, 2, 3) is similar to the female (Fig. 4), except for the following: antenna with 18 flagellomeres (20–22 in females); nervellus unintercepted (detailed image in Österman et al. (2026b)); intercepted below the middle in female); face with faint vertical black stripe (stronger in female); metasomal tergites with extensive black areas, especially on basal and apical tergites (fully orange in female, except for occasional black bands along the apical margins). The male is also significantly smaller: fore-wing length about 4.4 mm vs. 6.0 mm in examined females.

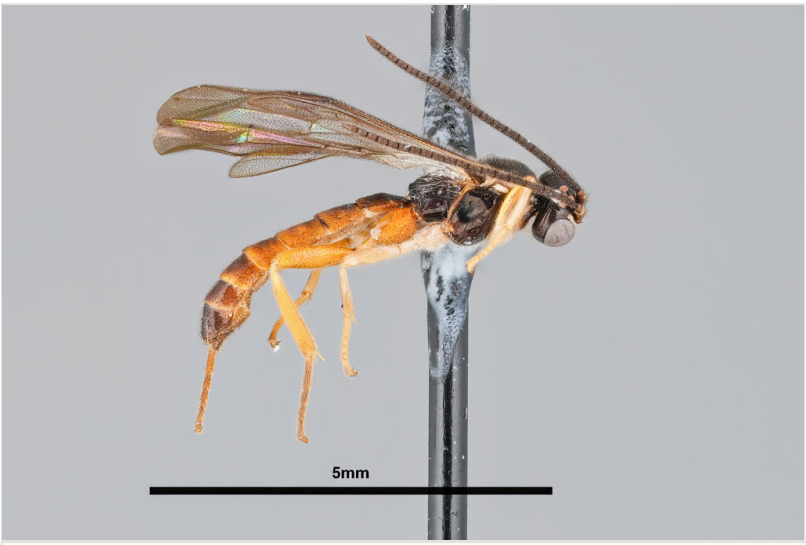


Figure 1.

*Acropimpla alboscutellaris*, male from Uganda (ZMUT.11680), habitus in lateral view.

Figure 2.

*Acropimpla alboscutellaris*, male from Uganda (ZMUT.11680), habitus in dorsolateral view.

## Diagnosis

This species can be separated from the other known African species of the genus by any of the following: nervellus intercepted below middle in female; mesosoma (excluding legs) black with white markings.

Figure 3.

*Acropimpla alboscutellaris*, male from Uganda (ZMUT.11680), face in frontal view.

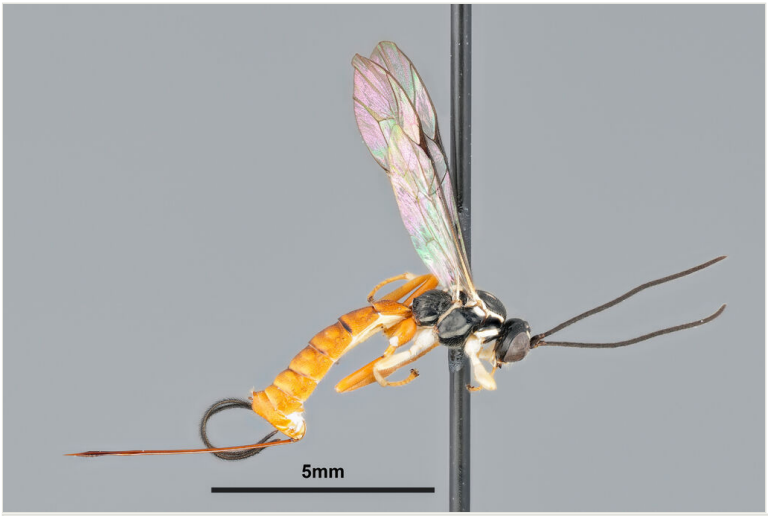


Figure 4.

*Acropimpla alboscutellaris*, female from Côte d'Ivoire (ZMUT.49881), habitus in lateral view.

## Distribution

Kenya (Varga 2026); Tanzania (Szépligeti 1908). **New**: Côte d'Ivoire; Uganda.

## Biology

No host records are known.

### Notes

The female from Côte d'Ivoire shows minimal variation compared to the Ugandan female and the holotype, but it differs in having a black band along the apical margin of tergites 2–4 (very faint on tergites 3 and 4). Variation in the occurrence of apical black bands on the tergites and black areas on male tergites is common in Pimplinae (see, for example, Österman et al. (2026c)). The intraspecific difference (between males and females) in the interception of the nervellus is not common in our experience. This may occur because males, due to their often smaller size, usually have weaker characters than females and the females have the distal abscissa of CU quite thin. However, the male of *A. lutea* has an intercepted nervellus despite the similarly weak distal abscissa of CU in the female. Hence, it is possible that larger male specimens have an intercepted nervellus, but this remains to be confirmed.

## *Acropimpla lucifugus* (Seyrig, 1932)

### Nomenclature

*Selenaspis lucifugus* Seyrig, 1932: 38 (orig. des.)

*Acropimpla lucifuga*; Townes & Townes 1960: 160 (comb. nov.)

### Material

*Holotype:*

a. country: Madagascar; locality: Vatondrangy; eventTime: Dec 1929; habitat: mountain forest; individualCount: 1; sex: female; recordedBy: A. Seyrig; institutionCode: MNHN; occurrenceID: 1619695D-49A4-548E-A03C-478B4AD39BC4; digitalSpecimenID: EY9433

### Diagnosis

This species (Figs 5, 6, 7) can be separated from the other known African species of the genus by any of the following: nervellus unintercepted in female; face entirely black; mesosoma (excluding legs) burgundy red with black and white markings.

### Distribution

Madagascar (Seyrig 1932).

### Biology

No host records are known.

Figure 5.

*Acropimpla lucifugus*, holotype female (EY9433), habitus in lateral view. Credit: RECOLNAT (ANR-11-INBS-0004) - Christophe Hervé - 2014. © Muséum national d'Histoire naturelle, Paris.

Figure 6.

*Acropimpla lucifugus*, holotype female (EY9433), habitus in dorsolateral view. Credit: RECOLNAT (ANR-11-INBS-0004) - Christophe Hervé - 2014. © Muséum national d'Histoire naturelle, Paris.

## Notes

This is, to our knowledge, the only species of the genus whose female has an unintercepted nervellus. The male is not known, but should also have the same character state.

Figure 7.

*Acropimpla lucifugus*, holotype female (EY9433), face in frontal view. Credit: RECOLNAT (ANR-11-INBS-0004) - Christophe Hervé - 2014. © Muséum national d'Histoire naturelle, Paris.

## *Acropimpla lutea* Varga, 2026

### Material

a. county: Uganda; locality: Kibale National Park, Kanyawara; samplingProtocol: Malaise trap; eventDate: 9 Sep 2014-26 Aug 2015; habitat: forest; individualCount: 56; sex: 54 females, 1 male, 1 unknown; recordedBy: T. Hopkins; institutionCode: ZMUT; occurrenceID: 6D057F12-13DB-510E-81E0-E671704BCE95; digitalSpecimenID: ZMUT.1620, ZMUT.2110, ZMUT.2278, ZMUT.2831, ZMUT.2846, ZMUT.2902, ZMUT.3390, ZMUT.3426, ZMUT.3440, ZMUT.3588, ZMUT.4309, ZMUT.4330, ZMUT.5337, ZMUT.5341, ZMUT.6026, ZMUT.6028, ZMUT.8954, ZMUT.10768, ZMUT.10772, ZMUT.11914, ZMUT.12029, ZMUT.14978, ZMUT.15840, ZMUT.16247, ZMUT.16797, ZMUT.16949, ZMUT.17516, ZMUT.17673, ZMUT.18000, ZMUT.18052, ZMUT.18074, ZMUT.18236, ZMUT.19396, ZMUT.19872, ZMUT.19972, ZMUT.20273, ZMUT.20365, ZMUT.20376, ZMUT.20377, ZMUT.20792, ZMUT.20805, ZMUT.20876, ZMUT.25117, ZMUT.25649, ZMUT.25669, ZMUT.25805, ZMUT.26173, ZMUT.26712, ZMUT.26787, ZMUT.26928, ZMUT.27233, ZMUT.27653, ZMUT.28386, ZMUT.28565, ZMUT.28655, ZMUT.29054

### Description

The male (Figs 8, 9, 10) is similar to the female (Fig. 11), except for the following: antenna with 16 flagellomeres (18–19 in females); propodeum with weak punctures (coarse in female); metasomal tergite 1 about 1.1 times as long as apically broad (0.8 in female); face whitish and head with mid-dorsal and posterior region black (face and usually also rest of head orange in females, but see notes below); metasomal tergites with extensive black areas, especially on basal and apical tergites (fully orange in female, except for occasional black bands along the apical margins). The

male is also significantly smaller: fore-wing length about 3.9 mm vs. 4.8–6.7 mm in examined females.

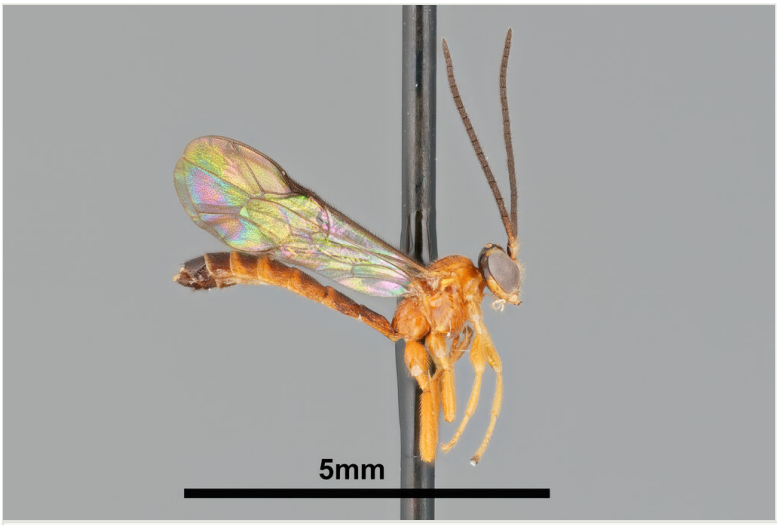


Figure 8.

*Acropimpla lutea*, male from Uganda (ZMUT.2846), habitus in lateral view.

Figure 9.

*Acropimpla lutea*, male from Uganda (ZMUT.2846), habitus in dorsolateral view.

**Diagnosis**

This species can be separated from the other known African species of the genus by any of the following: nervellus intercepted in the middle (or slightly above); mesosoma orange.

Figure 10.

*Acropimpla lutea*, male from Uganda (ZMUT.2846), face in frontal view.

Figure 11.

*Acropimpla lutea*, female from Uganda (ZMUT.20273), habitus in lateral view.

## Distribution

Uganda (Varga 2026).

## Ecology

In the Ugandan collecting in Kibale National Park, *A. lutea* was caught in much larger numbers
in Malaise traps during the two dry seasons December–February and June–August 2015. Noticeably more were caught in disturbed forest (forest which had been selectively logged 46 years before the collecting) than in the other forest types, with

none caught outside the forest in two farmland traps; it is, however, unclear if these differences between habitat types are significant.

#### Biology

No host records are known.

#### Notes

As for *A. alboscutellaris*, some females have variously developed black bands along the apical margins of tergites 2–4. Most of the smaller females have the mid-dorsal and posterior region of the head black (like the male), which are orange in the largest females with, at most, a tinge of black. Being darker is quite common in small specimens in Pimplinae species.

## Discussion

It is worth highlighting that the first male records of the known African mainland species of *Acropimpla* (*A. alboscutellaris* and *A. lutea*) presented here were collected with extensive site-specific sampling. This provides a reasonable chance of collecting both sexes of a species from the same place, making it easier to recognise the individuals of the previously unknown sex (usually males) as being conspecific with those of the known sex. Connecting the sexes of species is particularly problematic for those with a high level of sexual dimorphism, such as in some Cryptinae and Ichneumoninae genera, but Pimplinae species generally have low sexual dimorphism, as is also evident here.

Although the mainland species were collected in Uganda with an extensive sampling effort of about 382 trap months, only one male individual of each species was collected. For *A. alboscutellaris*, this may only mean that the species is uncommon in Kibale (where also only one female was collected), whereas the sex ratio of *A. lutea* in the samples is strongly skewed (54 females to 1 male, plus one whose sex has not been determined), for which the most likely explanation is male swarming behaviour (see discussion in Österman et al. (2026d)).

With respect to ichneumonids, western Africa appears to be much less sampled than central, eastern or southern Africa. The discovery of *A. alboscutellaris* from Côte d'Ivoire, being the first record of the genus from West Africa, suggests that many more taxa currently without records in the region can be common there. Ongoing sorting of our material from Côte d'Ivoire indicates that it contains further genera of Pimplinae and other subfamilies which are new records for western Africa.

The fact that the sampling in Uganda and Côte d'Ivoire collected both known mainland species, but no undescribed species (although *A. lutea* was described very recently; Varga (2026)) indicates that the species richness of the genus is not concentrated in Africa, but appears to be concentrated in the Oriental Region (see, for example, Gupta and Tikar (1976), Varga and Reshchikov (2015)).

## Acknowledgements

We thank Davide Dal Pos (University of Missouri, Columbia, MO) for sending us A. Seyrig's work on Malagasy pimplines. The collecting in Uganda was supported by Heikki Roininen, Isaiah Mwesige and the staff of the Makerere University Biological Field Station. Countless people helped process the Ugandan samples, including the staff of the Zoological Museum of the University of Turku, students of the university and school pupils from the Turku region. These contributions are gratefully acknowledged. The required research and export permits were issued by the Uganda National Council of Science and Technology (NS 504) and the Uganda Wildlife Authority. For the collecting in Côte d'Ivoire, we thank the Directeur de la Recherche du Ministère de l'Enseignement Supérieur et de la Recherche Scientifique, the Directeur de l'Office Ivoirien des Parcs et Réserves (OIPR) and the Directeur Général de la Société de Développement des Forêts (SODEFOR) for granting the permits for our research (119/MESRS/DGRI; 080/MESRS/DGRI/DR; 093/MESRS/DGRI/DR; 094/MESRS/DGRI/DR). We are indebted to Guetabamba Ribou, Directeur Technique de la Société Ivoirienne de Télédiffusion (IDT), who has always supported our research and wishes as much as we do for the protection of Tonkoui. Thanks to our drivers and guides who helped us during our journey on Mont Tonkoui. Thanks also to Philippe Moretto and the Association Catharsius for their help and field support.

The collecting, processing and publishing of the Ugandan material was supported by the Alfred Kordelin Foundation, the Entomological Society of Finland, the Finnish Cultural Foundation, Oskar Öflunds Stiftelse, Svensk-Österbottniska Samfundet and Waldemar von Frenckells stiftelse (grants to Tapani Hopkins). The Ministry of Education and Culture (Finland) and the Research Council of Finland funded Emil M. Österman's doctoral research through the Sustainability Transformations Doctoral Education Pilot while writing this article.

## References

- Baltazar CR (1966) A catalogue of Philippine Hymenoptera (with a bibliography, 1758-1963). Pacific Insects Monographs 8: 1-488. https://doi.org/10.5281/zenodo.23590
- Broad GR, Shaw MR, Fitton MG (2018) Ichneumonid wasps (Hymenoptera: Ichneumonidae): Their classification and biology. RES Handbooks for the Identification of British Insects, 7. Field Studies Council, Shrewsbury, 418 pp. https://doi.org/10.1079/9781800625471.0000
- Gupta VK, Tikar DT (1976) Ichneumonologia Orientalis or a monographic study of Ichneumonidae of the Oriental Region, Part I. The tribe Pimplini (Hymenoptera: Ichneumonidae: Pimplinae). Oriental Insects Monographs 1: 1-131.
- Hopkins T, Roininen H, Sääksjärvi IE (2019a) Extensive sampling reveals the phenology and habitat use of Afrotropical parasitoid wasps (Hymenoptera: Ichneumonidae: Rhyssinae). Royal Society Open Science 6 (8): 190913. https://doi.org/10.1098/rsos.190913

- Hopkins T, Roininen H, Sääksjärvi IE (2019b) Uganda Malaise trapping 2014–2015 background data. Zenodo. URL: https://doi.org/10.5281/zenodo.2225643
- Khalaim AI, Lopez-Ortega M (2022) A new species of *Acropimpla* Townes, 1960 (Hymenoptera: Ichneumonidae: Pimplinae) from Mexico. Russian Entomological Journal 31 (4): 407-410. https://doi.org/10.15298/rusentj.31.4.10
- Khalaim AI, Ruíz-Cancino E (2022) Darwin wasps of the subfamily Pimplinae (Hymenoptera: Ichneumonidae) of Mexico: *Ephialtes* genus-group. Zootaxa 5169 (3): 201-251. https://doi.org/10.11646/zootaxa.5169.3.1
- Liu JX, He JH, He XX (2010) *Acropimpla* Townes from China (Hymenoptera, Ichneumonidae, Pimplinae), with key to Chinese fauna and descriptions of two new species. Zootaxa 2394 (1): 23-40. https://doi.org/10.11646/zootaxa.2394.1.2
- Österman EM, Hopkins T, Sääksjärvi IE (2026a) Local species richness of parasitoid wasps (Ichneumonidae: Pimplinae) in Afrotropical forest: Conservation perspectives. Insect Conservation and Diversity 19 (1): 198-210. https://doi.org/10.1111/icad.70017
- Österman EM, Hopkins T, Kaunisto KM, Braet Y, Sääksjärvi IE (2026b) Data of "Synopsis of the African species of *Acropimpla* Townes, 1960 (Hymenoptera, Ichneumonidae), with new faunistic records and descriptions of males". Zenodo. URL: https://doi.org/10.5281/zenodo.22101162
- Österman EM, Hopkins T, Sääksjärvi IE, Kaunisto KM, van Noort S (2026c) On the genus *Sericopimpla* Kriechbaumer, 1895 (Ichneumonidae, Pimplinae) in the Afrotropics, with the description of a new species. ZooKeys 1268: 325-336. https://doi.org/10.3897/zookeys.1268.181918
- Österman EM, Hopkins T, Sääksjärvi IE, Kaunisto KM, van Noort S (2026d) Review of the genus *Xanthephialtes* Cameron (Hymenoptera, Ichneumonidae), with re-definition of the genus and description of a new species from Uganda. ZooKeys 1266: 41-53. https://doi.org/10.3897/zookeys.1266.175534
- Pham NT, Broad GR, Wägele WJ (2011) The genus *Acropimpla* Townes (Hymenoptera: Ichneumonidae: Pimplinae) in Vietnam, with descriptions of three new species. Zootaxa 2921 (1): 1-12. https://doi.org/10.11646/zootaxa.2921.1.1
- Seyrig A (1932) Les Ichneumonides de Madagascar I. Ichneumonidae Pimplinae. Mémoires de l'Académie Malgache 11: 1-183.
- Szépligeti G (1908) 8. Hymenoptera. 3. Braconidae und Ichneumonidae. In: Sjöstedt Y (Ed.) Wissenschaftliche Ergebnisse der schwedischen zoologischen Expedition nach dem Kilimandjaro, dem Meru und den umgebenden Massaisteppen Deutsch-Ostafrikas 1905–1906. Almqvist & Wiksells Boktryckeri-A.-B., Uppsala, 118 pp. URL: https://www.biodiversitylibrary.org/item/30721#page/1/mode/1up
- Townes HK, Townes MC (1973) A catalogue and reclassification of the Ethiopian Ichneumonidae. Memoirs of the American Entomological Institute 19: 1-41.
- Varga O, Reshchikov A (2015) First record of the genus *Acropimpla* Townes, 1960 (Hymenoptera: Ichneumonidae: Pimplinae) from Thailand, with descriptions of three new species. Zootaxa 4013 (4): 556-570. https://doi.org/10.11646/zootaxa.4013.4.6
- Varga O (2026) New records of the genus *Acropimpla* (Hymenoptera, Ichneumonidae, Pimplinae) from the Afrotropical Region. Zoodiversity 60 (2): 121-126. https://doi.org/10.15407/zoo2026.02.121
- Yu DSK, van Achterberg C, Horstmann K (2016) Taxapad 2016, Ichneumonoidea 2015. [database on flash-drive] Ottawa.