

Journal of Insect Biodiversity



ISSN: 2147-7612

RESEARCH ARTICLE

A new species of *Alastor* Lepeletier de Saint-Fargeau, 1841 (Hymenoptera: Vespidae: Eumeninae) from Pakistan

Marco Selis¹

¹Via dei Tarquini, 22 – 01100 Viterbo, Italy. E-mail: marcozetsu@hotmail.it

urn:lsid:zoobank.org/pub:77985026-4576-43E1-80D9-E4FF1C6D6059

urn:lsid:zoobank.org/author:7DF3FB08-2A22-4848-B0FC-AE790291EFA2

Abstract: A new species of the genus *Alastor* Lepeletier de Saint-Fargeau, 1841, namely *A. laticlypeus* **sp. nov.**, is described. This is the first record of *Alastor* from Pakistan. The new species shows characters intermediate between the subgenera *Alastor* s. str., *Megalastor* Blüthgen, 1951 and *Parastalor* Blüthgen, 1939, placing in doubt the validity of the subgeneric division of the genus.

Key words: Vespidae, Eumeninae, new species, *Alastor*, Pakistan.

Introduction

The genus *Alastor* was described by Lepeletier (1841) for two species and the type species *Alastor atropos* Lepeletier, 1841, was designated by Ashmead (1902). This large genus counts many species in the Ethiopian and Palaearctic Regions, with five Oriental species up to the present. It is divided into four subgenera, namely: *Alastor* s. str., *Alastorellus* Giordani Soika, 1991, *Megalastor* Blüthgen, 1951, and *Parastalor* Blüthgen, 1939.

The Oriental species, found all in the Indian subcontinent from Northwestern India to Sri Lanka, were treated mainly by van der Vecht (1981), who described two new species, and Girish Kumar & Carpenter (2015), who described another species and provided a key and a checklist of the Oriental species. Even though Pakistan is faunistically part of the Palaearctic region, it shares many faunal elements with the other countries of the Indian subcontinent, so it is probable that some of these species will be recorded from Pakistan too.

In this paper a new species, namely *A. laticlypeus* sp. nov., is described based on two male specimens collected by Daniele Baiocchi in Pakistan, and then given for study to the author by Eugenio Pacieri. The new species shows similarities with the other species from the Indian subcontinent and a species from Iran, but shows some morphological characters that do not allow its placement in any of the current subgenera, as it shows characters from *Alastor* s. str., *Megalastor* and *Parastalor*. This is also the first record of the genus from Pakistan.

Material and methods

The adult morphology and coloration were observed on pinned dried specimens under a Seben Incognita III stereoscopic microscope.

Abbreviations used are as follows: T= metasomal terga; S= metasomal sterna; F= flagellomeres; BL= body length, measured from anterior margin of head to apical margin of T II; WL= length of fore wing.

Measurements were taken using a digital vernier caliper (accuracy ± 0.02 mm). Terminology principally follows that of Yamane (1990).

Acronyms used are as follows:

MSNVE: Museo Civico di Storia Naturale, Venezia.

MSVI: Private collection of Marco Selis, Viterbo, Italy.

Results

Genus *Alastor* Lepeletier de Saint-Fargeau, 1841

Alastor Lepeletier de Saint-Fargeau, 1841: 668, genus (2 species). Type species: *Alastor atropos* Lepeletier de Saint-Fargeau, 1841, by subsequent designation (Ashmead 1902: 203–210).

Senior objective synonym of *Antalastor* de Saussure, 1856, and of *Eualastor* Dalla Torre, 1904; senior subjective synonym of *Belalastor* Atanassov, 1967, according to Gusenleitner (1970: 112).

Alastor laticlypeus sp. nov. (Figs. 1–5)

[urn:lsid:zoobank.org:act:A58B044F-DAEC-4EE8-9135-7EA9C842D906](https://doi.org/10.21203/rs.3.rs-1234567/v1)

Diagnosis: This new species can be distinguished from the other *Alastor* species by the combination of following characters: parastigma half as long as pterostigma, second recurrent vein interstitial between the second and the third submarginal cell (Fig. 4), apical margin of T I bulging, terga with erect bristles (Fig. 5), apical margin of clypeus deeply incised (Fig. 2) and tegulae smooth and shining (Fig. 3). It presents some similarities with *A. darius* Gusenleitner, 1986 from Iran, but differs as follows: punctation less coarse and dense, apical incision of clypeus wider and shallower, scutellum with yellow spots and yellow bands on metasomal terga less broad [see Gusenleitner (1986) for description of *A. darius*].

Material examined: Holotype: ♂ labelled “PAKISTAN (Punjab) / Salt Range 825m / SW of Munara / 32°39'43"N-72°30'23"E / 22.X.2011 D. Baiocchi leg.” (MSNVE). Paratypes: 1♂, same data as holotype (MSVI).

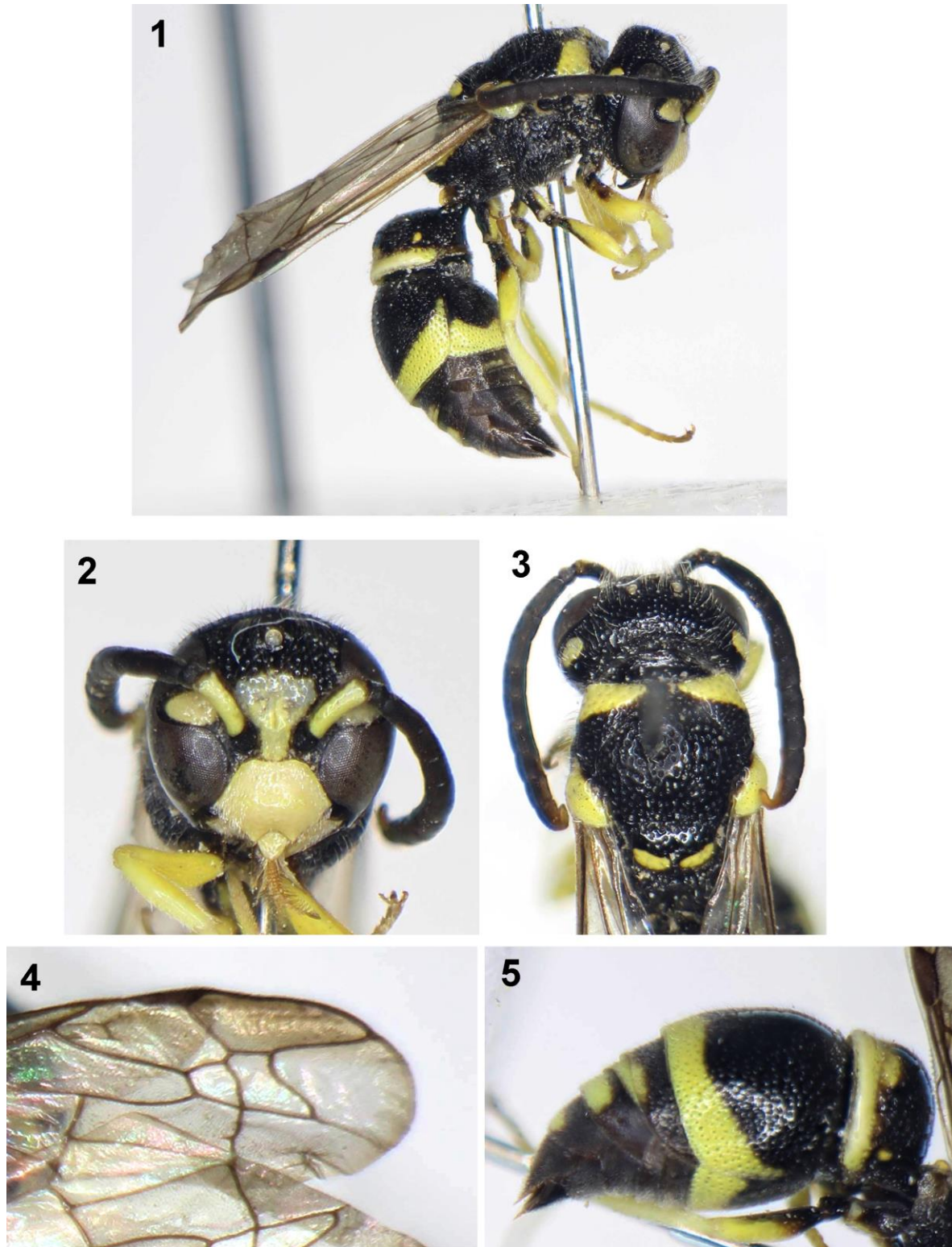
Description

Male. BL 5 mm; WL 4 mm.

Head as wide as long in frontal view (Fig. 2). Clypeus bulging medially in lateral view, apical margin with two acute teeth forming a deep incision, emargination 2.7× as wide as deep, distance between teeth slightly greater than distance between antennal toruli, clypeus 1.3× as wide as long. Distance from posterior ocellus to inner eye margin 0.5× as the distance between posterior ocellus from occipital margin; ocelli disposed as a flattened triangle, distance between posterior ocelli 2× as long as distance between anterior ocellus and posterior ocellus. Temples as wide as eye at bottom of ocular sinus; occipital carina absent in the dorsal half. Antennae elongate, all flagellomeres longer than broad; scape 2.5× as long as apically wide; F I 1.6× as long as apically wide; F IX weakly depressed ventrally; apical flagellomere finger-shaped and apically rounded, 2× as long as basally wide. Mesosoma in dorsal view slightly elongate, 1.3× as long as wide (Fig. 3). Pronotal carina absent medially, present only on humeri where it forms a squared margin. Mesoscutum 0.9× as long as wide between tegulae, weakly convex in lateral view. Scutellum flat anteriorly and weakly convex posteriorly, anterior margin crenate with a median depression, medially with an extremely shallow longitudinal furrow. Metanotum with an extremely short anterior horizontal face and a much longer posterior vertical one, separated by a sharp carina, posterior face weakly depressed. Tegulae broadly rounded laterally, with posterior lobe directed medially and rounded at apex, parategulae absent. Mesepisternum strongly convex, epicnemial carina absent. Propodeum oblique and broadly depressed on posterior face, lateral faces weakly depressed on margin with metaepisternum, lateral margins of posterior face with two teeth, the anterior one broad and weakly developed, the posterior one acute and curved upward. T I 2× as long as broad in dorsal view, anteriorly rounded, posterior margin developed in a cordon-like structure. T II weakly convex anteriorly in lateral view (Fig. 5).

Head and mesosoma with long and moderately dense silvery hairs, clypeus and T I-IV with short erect silvery bristles.

Clypeus shiny with moderately dense deep punctures, interspaces larger than points' diameter. Frons, vertex and genae with deep punctures, interspaces smooth and shiny and 1 to 3 times the points diameter; bottom of ocular sinuses smooth and impunctate. Dorsal face of pronotum with shallower and sparser punctures anteriorly, punctures becoming denser and deeper posteriorly, lateral faces with strong transverse striae. Mesoscutum with deep flat-bottomed punctures, sparser on the disc. Scutellum with few very sparse deep punctures. Metanotum with horizontal dorsal face very densely punctured, interspaces forming sharp irregular carinae; vertical posterior face entirely smooth and shiny. Mesepisternum with deep and sparse punctures in ventral half, dorsal half with dense and deep punctures forming strong reticulation. Metaepisternum strongly transversely striate. Postero-dorsal face of propodeum smooth with some scattered deep punctures, lateral faces with dense fine striae and some punctures near transition to posterior face. T I with anterior vertical face smooth and impunctate, posterior horizontal face with deep and dense punctures. T II with shallower deep punctures, interspaces at most as large as points' diameter. T III-VI with finer very dense punctures. T VII shiny with some small punctures. S I entirely deeply punctured. S II-VII punctured like respective terga, but punctures smaller.



Figures 1–5. *Alastor laticlypeus* sp. nov. holotype. **1**, habitus; **2**, frontal view of head; **3**, dorsal view of mesosoma; **4**, apical half of fore wing; **5**, lateral view of metasoma.

Color. Black; following parts yellow: clypeus, labrum, mandibles except apex, ocular sinuses, large triangular mark between and above antennal sockets, anterior face of scape,

oval spot behind dorsal lobe of eye, anterior half of dorsal face of pronotum, tegulae, medially interrupted posterior band on scutellum, oval lateral spots on dorsal faces of propodeum, apical inflated margin of T I with median expansion, small lateral spots on T I, large apical band expanded medially and laterally on T II, thin apical band on T III not reaching lateral sides, rectangle markings on median part of posterior margin of T IV-VI, large apical band expanded laterally and two times medially on S II, ill defined thin apical band on S III, legs except dorsal faces of coxae and basal part of median and hind femora; ventral face of F VII-IX and whole F X-XI orange-ferruginous.

Female. Unknown.

Distribution: Pakistan: Punjab.

Etymology: The specific name is in reference to the broad clypeus of this species.

Notes: According to the key provided by Gusenleitner (2013), the subgenera of *Alastor*, excluding the African subgenus *Alastorellus*, can be recognized as follows: *Parastalor* presents the second recurrent vein leading into the third submarginal cell, while the remaining subgenera present it leading into the second submarginal cell, *Alastor* s. str. and *Megalastor* are then recognized by differences in shape of apical margin of T I and pilosity of metasomal terga. The new species here described represent an intermediate form between all three Palearctic subgenera, as it has interstitial second recurrent vein as in *Parastalor*, apical margin of T I inflated as in *Alastor*, metasomal terga with erect bristles as in *Megalastor*. This combination of characters does not allow placement of this species in a subgenus, and probably shows that the subgeneric division of the genus *Alastor* is based on inconstant characters, as it was previously supposed by Gusenleitner (2006) about the subgenus *Parastalor*. Moreover, the South African genus *Astalar* von Schulthess, 1925 shows the second submarginal cell petiolate and is differentiated from *Alastor* only by the second recurrent vein interstitial, so it will probably be revealed to be a junior synonym of *Alastor*. A comprehensive revision of all species of *Alastor* and *Astalar* will probably bring about a radical change in the taxonomy of the “*Alastor*-complex”.

Acknowledgements

I am grateful to Eugenio Pacieri for allowing me to study his collection of Vespidae, in which the two specimens of the new species were found, and to James M. Carpenter for his suggestions and critical reading of the manuscript. I'm also grateful to Thi Phuong Lien Nguyen and the anonymous referees for their suggestions.

References

- Ashmead W. H. 1902. Classification of the fossorial, predacious and parasitic wasps, or the superfamily Vespoidea. *Canadian Entomologist* 34: 203–210. <http://dx.doi.org/10.4039/Ent34131-6>
- Girish Kumar P. & Carpenter J. M. 2015. Description of a new species of *Alastor* (*Alastor*) Lepeletier, 1841 (Hymenoptera: Vespidae: Eumeninae) from Telangana, India, with a key and a checklist of Oriental species. *Halteres* 6: 79–84.
- Gusenleitner J. 1970. Bemerkenswertes über Faltenwespen II (Diploptera, Hymenopt.). *Nachrichtenblatt der Bayerischen Entomologen* 18 (4–6): 112–116.

- Gusenleitner J. 1986.** Drei neue *Alastor*-Arten aus dem Iran (Hymenoptera, Eumenidae). *Entomofauna* 7 (2): 29–39.
- Gusenleitner J. 2006.** Über eine Aufsammlung von Faltenwespen in Niger (Hymenoptera: Vespidae). *Linzer biologische Beiträge* 38 (1): 653–662.
- Gusenleitner J. 2013.** Die Gattungen der Eumeninae im Nahen Osten, in Nordafrika und in Arabien (Hymenoptera: Vespidae: Eumeninae). *Linzer biologische Beiträge* 45 (1): 5–107.
- Lepelletier de Saint-Fargeau A. L. M. 1841.** *Histoire Naturelle des Insectes – Hyménoptères*. 2, Paris, Roret, 680 pp.
- van der Vecht J. 1981.** Studies on Indo-Australian Solitary wasps. *Proceedings of the Koninklijke nederlandse akademie van Wetenschappen C* 84 (4): 443–464.
- Yamane S. 1990.** A revision of the Japanese Eumenidae (Hymenoptera, Vespoidea). *Insecta Matsumurana N.S.* 43: 1–189.

Correspondence: Marco Selis, e-mail: marcozetsu@hotmail.it

Received: 30.06.2017 **Accepted:** 23.10.2017 **Published:** 01.11.2017

Cite paper: Selis M. 2017. A new species of *Alastor* Lepelletier de Saint-Fargeau, 1841 (Hymenoptera: Vespidae: Eumeninae) from Pakistan. *Journal of Insect Biodiversity* 5(18): 1–6.

<http://dx.doi.org/10.12976/jib/2017.5.18>

<http://www.insectbiodiversity.org>