Redescription of *Apanteles barcinonensis* MARSHALL, 1898

(Hymenoptera, Braconidae: Microgastrinae)

BY

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INTRODUCTION.

No essential contribution has been reported on *Apanteles barcinonensis* Marshall since its description in 1898. In my survey of the *Apanteles* Förster species of Europe I have indicated the uncertain taxonomical position of *A. rhamphus* and relegated it to two species-group, i.e. the *lacteus-* and the *vipio-*group (PAPP, 1981). Owing to the short and deficient description of *A. barcinonensis* Marshall, I have ranged it virtually in the doubtful species.

Recently I have received for study, on my request, the type-specimens of both *A. barcinonensis* and *A. rhamphus* from the Museo Nacional de Ciencias Naturales (M. N. C. N.), Entomología, Madrid. It was easy to establish upon examining them that the two names refer to the same species, i.e. they are the two sexes of a single species. Preference was given to *A. barcinonensis* because this name represents the female sex - the sex which manifests much more explicitly the specific features within the *Braconidae* in general.

*Apanteles barcinonensis* Marshall, 1898.

(Figs. 1-7.)


Figs. 1-9.—1-7: Apanteles barcinonensis Marshall: 1) head in frontal view; 2) head in lateral view; 3) distal part of right fore wing; 4) n. med.1, nervellus and n. anal. of right hind wing; 5) Cu of right hind wing; 6) tergites 1-3, ♂; 7) tergites 1-3, ♀. 8-9: A. vipio Reinhard: 8) spurs of hind tibia; 9) lower part of head with galea.
Description ♀.—Body 4 mm long. Head in dorsal view broader than long, temple strongly rounded, eye 1.5 times longer than temple, occiput excavated. Ocelli rather small and round, distance between fore and a hind ocelli about equal with diameter of an ocellus. Distance between hind two ocelli about twice as long as distance between fore and a hind ocelli. Hind imaginary tangent to fore ocellus just before hind pair of ocelli. POL = OOL. Eye in lateral view (fig. 2) twice higher than wide, temple almost evenly broad behind eye and half as wide as eye. Cheek (fig. 2) long, distinctly 1.5 times as long as basal width of mandible. Owing to long cheek head in frontal view elongated (in this respect this species is reminiscent of *A. lacteus* Nees), inner margin of eyes parallel (fig. 1). Face without clypeus subquadrate, one-fifth wider than high. Face and clypeus with extremely fine punctuation, otherwise head smooth and shiny. Antenna as long as body. First flagellar joint thrice longer than broad, further joints gradually shortening and very slightly attenuating so that penultimate joint just twice as long as broad.

Mesosoma in lateral view 1.4 times longer than high. Mesonotum somewhat wider between tegulae than long medially; head somewhat broader than mesonotum. Disc of mesonotum shiny and with very fine punctuation, along imaginary course of notaulix punctures somewhat crowded. Prescutellar furrow narrow, finely crenulated. Scutellum with rather disperse and very fine punctuation, shiny. Polished field of postaxile reaching up half to base of scutellum. Propodeum more or less transversely striate-rugose, sculpture laterally weakening, medio-longitudinal carina absent. Mesopleuron almost smooth, shiny.—Hind coxa clearly reaching hind end of second tergite. Hind femur 3.3 times as long as broad. Legs not thickened, usual in size. Tarsus one-fifth longer than hind tibia. Two spurs of hind tibia equal in length and as long as half basitarsus. In lateral view basitarsus of fore and hind legs six times as long as broad and twice as long as second tarsal joint.

Fore wing somewhat shorter than body. Pterostigma (fig. 3) almost thrice as long as wide, issuing radial vein distinctly distally from its middle; metacarp shorter than pterostigma, distance between distal end of metacarp and distal end of radial vein about as long as length of metacarp itself. r1 somewhat oblique to fore margin of pterostigma, i.e. r1 directed somewhat apex of wing, r1 and cuq1 about equal in length and forming a rather arched vein. D wider than high, d2 twice as long as d1; R reaching tip of wing (fig. 3). Nervellus of hind wing almost straight (fig. 4); Cu rather long, cu1 almost twice as long as n. bas. (fig. 5).

Metasoma as long as mesosoma. First tergite (fig. 6) 1.6 times longer than broad at base, with convex sides, i.e. broadening posteriorly and narrowing behind, broadest somewhat posteriorly from its middle. Second tergite transverse, thrice wider behind than long medially. Third tergite one-fourth longer than second tergite. Anterior half of first tergite smooth and shiny, its posterior half uneven to subrugulose-rugulose, subshiny; second tergite uneven and subshiny, further tergites polished. Ovipositor sheath in lateral view evenly broad, half as long as hind tibia.

Head, mesosoma and first tergite black; metasoma testaceous, second tergite entirely brownish, further tergites medially with brownish suffusion. Palpi brown. Antenna and tegula black. Legs blackish to black. Distal half of fore femur, entire fore tibia, middle and hind tibiae reddish yellow, middle femur apically somewhat rufuos, tibiae 2-3 apically blackish, fore tarsus brown, middle and hind tarsi blackish to black. Wings strongly brownish fumous. Pterostigma blackish brown, veins brownish pigmented.
Sex (♂ = *A. rhamphus* MARSHALL). Similar to female. In frontal view head somewhat less lengthened below. First tergite (fig. 7) 1.65 times longer than broad at base, with almost parallel sides and narrowing behind; second tergite thrice wider behind than long medially.

Host unknown.

Distribution: Spain.

Within the genus *Apanteles* Förster, 1862, *A. barcinonensis* MARSHALL represents a species-group closely related to and transitional towards lacteus-, vipio- and butalidis-group (PAPP, 1981) considering its elongated head, alar venation, form and outline of tergites 1-3 as well as strongly fumous wing.

*A. barcinonensis* MARSHALL seems to be nearest to three species as *A. assimilis* PAPP, *A. lacteus* (Nees) and *A. vipio* REINHARD.

Within the butalidis-group *A. assimilis* PAPP, 1976 (Mongolia) differs from *A. barcinonensis* MARSHALL in the features tabulated below:

*A. barcinonensis* MARSHALL.

1. Head in frontal view elongated, cheek 1.5 times as long as basal width of mandible (fig. 1).

2. Second tergite less transverse, thrice wider behind than long medially; third tergite one-fourth longer than second tergite (figs. 6-7). Hind half of first tergite uneven to subrugulose-rugulose, second tergites uneven, both tergites shiny.

3. Pterostigma issuing radial vein more distally from its middle (fig. 3). Nervellus almost straight, n. anal. nearly twice as long as nervellus (fig. 4).

4. Ovipositor sheath short, in lateral view as long as half hind tibia.

5. Wings strongly brownish fumous. Legs black, tibiae with reddish yellow pattern.

*A. assimilis* PAPP.

1. Head in frontal view only somewhat elongated, cheek at most as long as basal width of mandible (fig. 10).

2. Second tergite more transverse, four times wider behind than long medially; third tergite almost twice longer than second tergite (fig. 11). First tergite densely rugulose, second tergite rugulose, both tergites dull.

3. Pterostigma issuing radial vein less distally from its middle (fig. 12). Nervellus incurved, n. anal. and nervellus about equal in length (fig. 13).

4. Ovipositor sheath long, in lateral view as long as hind tibia (fig. 184, PAPP, 1981).

5. Wings feebly brownish fumous. Legs reddish yellow except black coxae and trochanters.

In my key to the species of the butalidis-group (PAPP, 1981) *A. barcinonensis* MARSHALL runs to couplet 39 (40) and together with *A. assimilis* PAPP they may be inserted in it with their common feature of the first tergite with arched sides being broadest behind its middle (figs. 6-7).

*A. barcinonensis* MARSHALL is reminescent of *A. lacteus* (Nees, 1834) in its elongated head (figs. 1-2). However, in the venation and colour of the wings as well as the form of the tergites 1-2 the two species are distinctly different.
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Figs. 10-14.—10-13: *Apanteles assimilis* PAPP: 10) head in frontal view; 11) tergites 1-3; 12) pterostigma, r1 + cuq1 and cu3 of right fore wing; 13) n. med.1, nervellus and n. anal. of right hind wing. 14: *A. nipio* REINHARD: tergites 1-3.
Because of its strongly fumous wing as well as the venation of the wings and the form of the body the species in question is deceptively similar to *A. vipio* REINHARD, 1880 (sporadically in Europe). However, the two species are easily separated by the following features:

**A. barcinonensis** MARSHALL.

1. Head in frontal view (fig. 1) elongated; cheek long (figs. 1-2), distinctly 1.5 times as long as basal width of mandible. Galea not rostriform.
2. Mesonotum shiny and punctate, notaulic course indicated by somewhat crowded punctures.
3. Two spurs of hind tibia equal in length and as long as half basitarsus.
4. First tergite subparallel-sided (figs. 6-7), its apical half uneven to subrugulose-rugulose, subshiny.
5. Ovipositor sheath in lateral view half as long as hind tibia and evenly wide.
6. Body 4 mm long.

**A. vipio** REINHARD.

1. Head in frontal view not elongated, usual in outline; cheek shorter than basal width of mandible. Galea rostriform (fig. 9).
2. Mesonotum glistening and subpunctate, notaulic course indistinct.
3. Two spurs of hind tibia conspicuously unequal in length, inner spur three-fourths to four-fifths and outer spur at most half as long as basitarsus (fig. 8).
4. First tergite parallel-sided (fig. 14), smooth to polished, at least laterally uneven.
5. Ovipositor sheath in lateral view almost as long as two-thirds of hind tibia and slightly widening apically.
6. Body 3-3.5 mm long.

**Acknowledgement.**—My taxonomic study was effectively promoted by Dr. J. L. NIEVES (M. N. C. N., Entomologia, Madrid) who was kind enough to lend me the types of *A. barcinonensis* MARSHALL and *A. rhamphus* MARSHALL housed in his institute. Herewith I express my sincere appreciation of his cordial assistance.

**Resumen.**

En el estudio de material de dos taxones, *Apanteles barcinonensis* MARSHALL, 1898, ♀, y *A. rhamphus* MARSHALL, 1898, ♂, se demuestra que ambos nombres se refieren a la misma especie; se da preferencia a la denominación de *A. barcinonensis*, nombre dado a la ♀ sobre *A. rhamphus*, que pasa a sinonimia. Se designan ejemplares tipo de ambos taxones. Se considera a *A. barcinonensis* constituyente de un grupo de especies de transición hacia el grupo: *butalidis-lacteus-vipio*, con el cual está estrechamente relacionado.

**Summary.**

The two taxon names *Apanteles barcinonensis* MARSHALL, 1898, ♀, and *A. rhamphus* MARSHALL, 1898, ♂, refer to the same species; the name *A. barcinonensis* represents the female sex, thus preference was given for this name over that of *A. rhamphus*. Type-specimens of the two taxa were designated. *A. barcinonensis* is considered as forming a species-group transitional towards and closely related to *butalidis-, lacteus- and vipio-group*. With 14 figures.
Bibliography.

MARSHALL, T. A., 1897-1900.—Les Braconides (Supplement).—In: E. ANDRÉ: Species des Hymenoptères d'Europe et d'Algérie, 5: i-viii + 9-373 + 1-82 + planches I-XV.


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