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## NEW HOST RECORDS IN *BARYCONUS* FOERSTER (HYMENOPTERA, SCELIONIDAE)

SUMMARY. - Three different species of *Baryconus* Foerster reared from eggs of *Phaneroptera* sp. (*Orthoptera*, *Phaneropteridae*) in the Palaearctic Region and two more species from undetermined *Phaneropteridae* in the Neotropical Region are reported. The host-parasite relationships are briefly discussed.

Two new combinations are proposed: *Baryconus gravelyi* (Mani) and *B. montanus* (Szabò), both transferred from *Hoploteleia* Ashm.

The world wide genus *Baryconus* Foerster includes many species most of them described under the name *Hoploteleia* Ashm. (MUESEBECK & WALKLEY, 1956). Nevertheless, virtually nothing is known about their hosts.

For this genus of scelionids there are only two brief notes of biological information indicating *Orthoptera* as its hosts. The former is *Baryconus gravelyi* (Mani)<sup>(1)</sup> recorded from the eggs of a long-horned grass-hopper laid in sugar cane in Madras (MANI, 1937); the latter is *Baryconus orthopterae* (Dodd) bred from eggs of an orthopteron on leaf in Sierra Leone (DODD, 1919).

These records come from the Oriental and Ethiopian Regions respectively. The present note reports five new host records, three from the Palaearctic and two from Neotropical Regions. Host-parasite relationships are also briefly discussed.

The first species from the Palaearctic Region is close to *Baryconus montanus* (Szabò)<sup>(2)</sup>. It emerged from eggs laid in between the two faces of a leaf of an unidentified tree (the Island of Sardinia, Cagliari, October). In a single leaf there were nine eggs and eight of them were parasitized; some *Baryconus* emerged by gnawing a hole in either the upper or lower face of the leaf (Figs. 1 and 2).

The second species, close to *B. europaeus* (Kieff.), emerged from eggs

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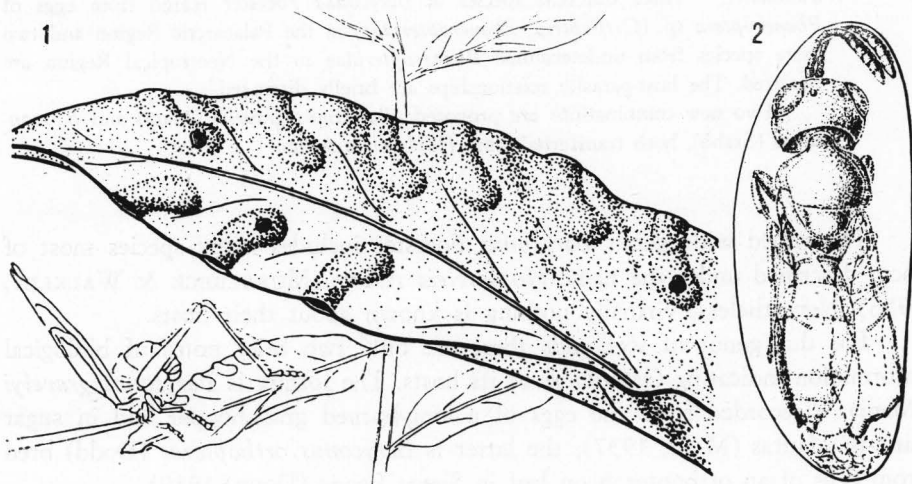
(1) *Comb. n.*; described as a *Hoploteleia* Ashm. but from the figure given by MANI (1939) it is clearly a *Baryconus* Foerster.

(2) *Comb. n.* (type examined); transferred from *Hoploteleia* Ashm.

similar to those of the species above mentioned and was collected in the same locality and date.

The third species, also close to *B. europaeus* (Kieff.), has been reared from an egg laid in an orange leaf (Naples, Portici, 20-V-1975; leg. VIGGIANI).

The shape of host-eggs and the characteristic manner of laying prove they belong beyond any doubt to a *Phaneroptera* sp. (*Orthoptera*, *Phaneropteridae*). According to the geographic distribution given by RAGGE (1956) it could be *Phaneroptera nana nana* Fieber as shown also by GOIDANICH (1938-41) who found this species (by then known as *Ph. quadripunctata* Brunn.) to be the most common in continental and insular Italy.



Figs. 1-2 - Eight of the nine eggs of *Phaneroptera* sp. (1) were parasitized by *Baryconus* sp.; three specimens emerged through a hole gnawed in the upper face of the leaf and others in the lower one. An egg (length about 4 mm) of the katydid (2) removed from the leaf with a female of *Baryconus* sp. on a transparency.

The eggs of *Phaneroptera* spp. are laid in autumn and overwinter; most likely *Baryconus* parasitizes the eggs just after the oviposition, then overwinters in an immature stage and emerges in the following spring.

From the Neotropical Region I have a specimen of *Baryconus* sp. (from Recife, Brazil) reared from an unidentified *Phaneropteridae*. Moreover, MASNER (*in litteris*) has kindly informed me that he has seen (in the U.S.N.M. of Natural History in Washington) several specimens of *Baryconus* sp. (from the Virgin Islands) hatched from eggs of a *Phaneropteridae* laid in a leaf which looks like that in Fig. 1.

As far as the geographic distribution of *Phaneroptera* spp. is concerned, it is interesting to note (RAGGE, 1956) that large parts of the Palaearctic, Ethiopian, Oriental and Australian Regions are covered by only five species of *Phaneroptera* Serv.

Moreover, one could speculate that the host range of *Baryconus* is not restricted to *Phaneroptera* only; as a matter of fact there are some other genera of *Phaneropteridae* scattered in the world which oviposit in the same places and manner (CHOPARD, 1938). This factor could be rather important for the morphotypical specialization (KOZLOV, 1970) of *Baryconus* Foerst. <sup>(3)</sup>.

These host records also suggest that the shape of the body in *Baryconus* spp., apart from the characteristically depressed head, is not as flat as one might expect judging from the flatness of the eggs in which they develop. *Baryconus* is in fact far from being as remarkably flat as *Platyscelio* Kieff., which is also presumed (KOZLOV, 1970) to be a parasite in greatly flattened eggs of *Phaneroptera*. Such a peculiar adaptation could also be explained (BRUES, 1922) by the need of looking for the host-eggs in very narrow places, like beneath bark, and obviously this is not the case of *Baryconus*.

However, further observations seem to be necessary to confirm the host record of *Platyscelio* Kieff. and not only from the taxonomic point of view.

Finally, it is generally known that the scelionid egg-parasites of *Orthoptera* look for their hosts either in the soil, e. g. *Acrididae* and *Gryllidae*, or in the stems of herbaceous plants, e. g. *Oecanthidae* and *Ephippigeridae*; in comparison with them, *Baryconus* Foerst. appear to be confined to trees or bushes where *Phaneropteridae* lay their eggs.

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#### RIASSUNTO

NUOVE SEGNALAZIONI DI OSPITI DI *Baryconus* FOESTER (*Hymenoptera*, *Scelionidae*)

Sono riportate tre specie di *Baryconus* Foester ottenute da uova di *Phaneroptera* sp.

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<sup>(3)</sup> It is also worth to remark that DODD (1919) says about *B. orthopterae* « bred from eggs of an Orthopteron on leaf » and not « ... in leaf »; if his statement is correct it is a logical conclusion that *Baryconus* parasitizes also the eggs of katydids, like the Nearctic *Microcentrum rhombifolium* Sauss., which oviposits on leaves or twigs.

(*Orthoptera, Phaneropteridae*) della regione paleartica e altre due ottenute da un *Phaneropteridae* della regione neotropica. Sono brevemente discusse le relazioni ospite-parassita. Sono inoltre proposte due nuove combinazioni: *Baryconus gravelyi* (Mani) e *B. montanus* (Szabò), entrambe trasferite da *Hoploteleia* Ashm.

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