

TAXONOMIC NOTES ON *ANAPHES DIANA* (GIRAULT), AN
IMPORTED MYMARID (HYMENOPTERA: MYMARIDAE)
EGG PARASITE OF *SITONA* WEEVILS
(COLEOPTERA: CURCULIONIDAE)

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Abstract.—*Anaphes* (*Patasson*) *lameerei* Debauche, imported from Europe to control *Sitona* weevils, is a junior synonym of *Anaphes diana* (Girault), new combination. A lectotype is designated for *A. diana* and a diagnosis is provided to separate it from other North American species of *Anaphes*.

During the past few years, several laboratories in the United States have been actively engaged in research designed to control weevils of the genus *Sitona*. Part of that research has focused on the importation of a mymarid egg parasite from various localities in Europe. The parasite has been released in several localities in eastern U.S. and recent field collections indicate that it may have become established.

While pursuing research on mymarid genera, I discovered that nomenclatural problems existed regarding the species in question. In addition, it has come to my attention that workers in the field are without any identification aid that would enable them to distinguish this parasite from others in the genus. Therefore, I have taken this opportunity to resolve the nomenclatural problem and provide a diagnosis.

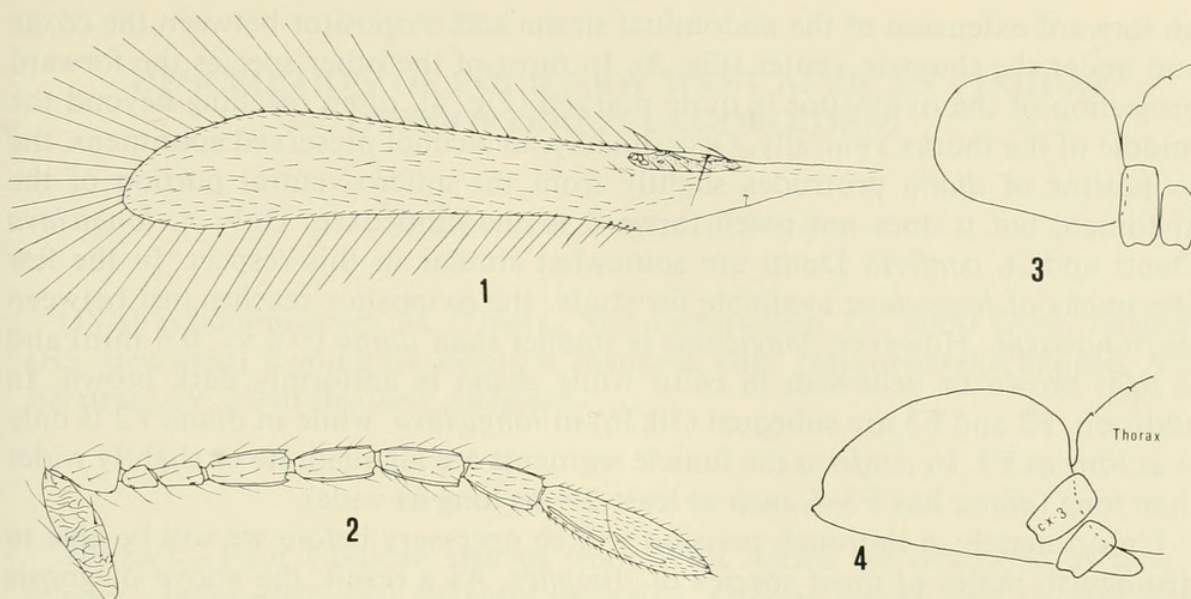
***Anaphes diana* (Girault), NEW COMBINATION**

Anaphoidea diana Girault, 1911: 215.

Anaphes (*Patasson*) *lameerei* Debauche, 1948: 182. NEW SYNONYM.

Specimens identified as *Patasson lameerei* Debauche have been imported and released in the U.S. Examination of the types of *A. (P.) lameerei* confirm that the imported specimens agree with the type material. However, I have also discovered that the types of *Anaphoidea diana* Girault are indistinguishable from *Anaphes lameerei*. Since *diana* has priority over *lameerei*, I propose the above synonymy.

Anaphes diana was described by Girault (1911) from specimens collected in England by Fred Enock and apparently donated to the U.S. National Museum of Natural History. Debauche (1948) in his study of the mymarid fauna of Belgium described *A. (P.) lameerei* from a number of specimens taken at various localities around that country. Debauche probably was unaware of the earlier description of *diana* because he made no mention of that species in his paper. Furthermore, his work was limited to Belgium and he might easily have missed or ignored Girault's description of an English species.



Figs. 1–4. 1–3, *Anaphes diana* female. 1, Forewing. 2, Antenna. 3, Thorax and abdomen (lateral view). 4, *Anaphes* sp. Thorax and abdomen (lateral view).

Debauche was the first to recognize that the species of *Patasson* Walker were best placed as part of the genus *Anaphes* Haliday. Previous workers had separated the two genera on the basis of the difference in number of antennal club segments (1 in *Anaphes* and 2 in *Patasson*). Several subsequent workers (e.g. Annecke and Doutt, 1961; Burks, 1979) did not agree with Debauche's views and continued to recognize *Patasson* as a valid genus. Consequently, when an egg parasite of *Sitona* weevils was found, it was identified as *Patasson lameerei* Debauche by European authorities.

Girault described *A. diana* from 2 specimens (1 male and 1 female) but did not designate a holotype. Therefore, I have designated the female specimen as the lectotype. The specimen is mounted in balsam with the following data: "A Fairy Fly, spot lens, 2 inch to ½ inch, *Anaphoidea diana* Gir., Type 13,663, Fred Enock preparer, Order Hymenoptera, Family Mymaridae, Genus *Eustochus*, species *atripennis*." No locality is given on the slide, but Girault gave it as "London or vicinity?" in his original paper. The paralectotype male is also slide mounted and has the same data.

DIAGNOSIS

Genus *Anaphes*: tarsi 4-segmented; abdomen subsessile (abdomen tapered slightly at point of attachment to thorax, with no visible petiole), phragma not projecting into gaster; antennal funicle 6-segmented, club 1 or 2 segmented (Fig. 2); forewing with a line of setae extending from under venation across membrane to the hindmargin (Fig. 1); propodeum divided medially by a sulcus.

Anaphes diana (female): antennal club 2-segmented; ovipositor not extended forward between hind or midcoxae (Fig. 3); funicle (abbreviated F) 2 only about $2\times$ as long as F1, ½ length of F3, F3–6 each longer than wide.

This species belongs to the "Patasson" group in which the females possess a 2-segmented antennal club. Of the nine other species of this group known from North America (i.e. *Patasson* of Burks, 1979), *diana* is the only one which shows

no forward extension of the abdominal sterna and ovipositor between the coxae and under the thoracic venter (Fig. 3). In most of the other species the forward projection of the ovipositor is quite marked (Fig. 4), often reaching beyond the middle of the thorax ventrally. Occasionally, in alcohol preserved specimens, the ovipositor of *diana* protrudes slightly from the antero-ventral portion of the abdomen, but it does not reach forward to the hindcoxae. Only *A. longiclava* Doutt and *A. conferta* Doutt are somewhat similar in this respect. In the few specimens of *longiclava* available for study, the ovipositor reaches just between the hindcoxae. However, *longiclava* is smaller than *diana* (0.4 vs. 0.6 mm) and is light brown or yellowish in color while *diana* is uniformly dark brown. In addition, F2 and F3 are subequal (30:36) in *longiclava*, while in *diana* F2 is only $\frac{1}{2}$ as long as F3. In *conferta* the funicle segments are all quadrate or slightly wider than long (*diana* has F3-6 each at least $2\times$ as long as wide).

Unfortunately, a thorough revision will be necessary before we will be able to distinguish males of most species of *Anaphes*. As a result, the above diagnosis only refers to females.

Specimens examined.—Lectotype (by present designation) and paralectotype of *A. diana* (Girault) (USNM); holotype and paratypes of *A. lameerei* Debauche (Brussels); holotypes or syntypes of all other North American species.

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