

On the identity of *Diplazon abdinator* (Bridgman)
(Hymenoptera, Ichneumonidae), a parasite of *Cnemodon*
vitripennis (Meigen) (Diptera, Syrphidae)

by

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Some years ago I bred a number of parasites from the puparia of *Cnemodon vitripennis*, a predator of the woolly apple aphid, *Eriosoma lanigerum* (Hausmann) (Homoptera, Eriosomatidae). They were identified by Dr. Ch. FERRIÈRE, Geneva, Switzerland. Among them were *Diplazon abdinator* (Bridgman) and *Diplazon citropectoralis* (Schmiedeknecht) (EVENHUIS, 1959).

Later on I bred some more of these parasites. The specimens identified as *D. abdinator* were all found to be females, and those identified as *D. citropectoralis* all males. A thorough examination of the specimens made it quite clear that they belong to the same species. There is a great difference in colour between the two sexes, but the morphological structures of the head, the thorax and the abdomen, are quite similar.

The original description of *Bassus abdinator* by BRIDGMAN (1886) agrees morphologically with all my specimens, both males and females: "Head opaque, finely punctuated; apex of clypeus rotundate, slightly immarginate in the middle, distinctly separated from the face. Antennae about two-thirds of the length of the body. Metathorax without a trace of supero-medial area; the lateral angles of the metathorax terminate behind more prominently than usual, giving the upper part a square appearance, but transverse. Abdomen longer than the head and thorax. First segment of abdomen about one and a half times longer than wide, slightly tapering from behind the projecting spiracles to the apex of the segment; remaining segments transverse, compressed towards the apex; 1st segment opaque, scabrous, with indications of longitudinal aciculations; 2nd segment transverse, scabrous, at the base with a deep transverse depression on each side, and between them a shallower longitudinal groove, distinctly aciculated; remaining segments subopaque. Wings without an areolet; transverse anal nervure below the middle".

My female specimens vary in respect to the colours. BRIDGMAN made his description from only one female; he writes: "Black; mouth and greater part of mandibles yellow; apex of scutellum with a transverse yellow line; base of wings, tubercles, and squamulae yellow. Metathorax with a large dull red spot on each side. First segment of abdomen dull red, with a black central blotch; 2nd the same, but central blotch larger. Legs red; base of front coxae black, apex of coxae and trochanters yellow, apex of middle trochanters yellow; hind tarsi black, hind tibiae black, extreme base whitish, merging through dull red into the black. Stigma somewhat pale brown, extreme base pale".

Only a few of my female specimens agree fairly well with this description of the colours; with respect to the dull red colour of the thorax and of the two first

abdominal segments some other specimens vary, some even having the whole thorax and abdomen black. However, we may conclude that the species I bred from *Cnemodon vitripennis* is the same as that described by BRIDGMAN as *Bassus abominator*.

The validity of the species has been a matter of dispute among entomologists. THOMSON (1890) considers it as distinct from *Homoporus* (= *Bassus*) *biguttatus* (Gravenhorst); he writes of *Homoporus* (= *Bassus*) *abominator*: "Praecedenti in omnibus simillimus, colore metathoracis et abdominis, tibiis posticis nigredine basin versus albidam sensim incolorum rufescentem transeuntem tantum discendens". Besides the female specimen described by BRIDGMAN, he mentions that KRIECHBAUER found a female specimen in Bavaria, Germany.

GRAVENHORST (1829) described *Bassus bipunctatus* practically solely from colour characteristics. As I pointed out, these characteristics are not reliable, so it is not possible to distinguish the two species from the original descriptions. MORLEY (1906) states in respect to *Homoporus abominator*: "This is probably no more than a colour variety of *H. biguttatus*, though considered valid by Thomson". In 1911 MORLEY states: "It is said to agree with *H. biguttatus* in every way but its coloration: the metathorax apically and abdomen basally are rosy, and the hind tibiae nigrescent becoming basally whitish through gradual rufescence".

SCHMIEDEKNECHT (1926) also deals with *Homocidus biguttatus* and *H. abominator* as separate species. He uses, however, in his keys almost exclusively colour characteristics, so that several of my female specimens of *Dipazon abominator* would be given a wrong name. It is not fair to criticize SCHMIEDEKNECHT too much for this. His work is a compilation and many of the older authors used in their descriptions almost only colour characteristics. So in most cases only these can be used in the keys.

The publication of BEIRNE (1941) makes it evident that the two species are different. BEIRNE writes about *Diplazon abominator*: "The species is very like *citropectoralis* in the shape of the face, which is very much widened between the eyes, the inner margins of the eyes being obviously not parallel but wider apart below. This character serves to distinguish it from *biguttatus* and *flaveolineatus*, to which it is closely related". My specimens, both females and males, show this character very clearly. BEIRNE adds some more characteristics in relation to the colour marks: "Usually a central facial patch yellow; mesonotum sometimes with yellow shouldermarks". I have some female specimens which show one or both of these marks, others which do not.

As to the possibility of *Diplazon abominator* and *D. citropectoralis* being the female and the male respectively of the same species he writes of *D. abominator*: "The form usually found in Britain is without the red on the abdomen but usually with the red on the propodeum, with a yellow central facial patch and with yellow shouldermarks. J. F. PERKINS (in litt.) considers this might not be the true *abominator* but the male¹⁾ of *citropectoralis*". I think too much importance is attached to these colour marks, which, as I showed, may vary.

¹⁾ BEIRNE must have ment "female".

HABERMEHL (1926) described what he thought to be the male of *D. abdominalis*. He captured only one specimen at Worms, Germany. I give his description: "Mandibeln, mit Ausnahme der Zähnchen, Taster, Mittelflecken des Gesichts und Basis der hintersten Schienen weisslich. Vordere Hüften, Trochanteren und Trochantellen der Vorder- und Mittelbeine nebst den Spitzen der Hintertrochanteren weissgelb. Grosse Seitenmakeln des Mediansegments und Tergite 1—3 rot, äusserste Basis von 2—3 mit Spitzenhälfte von 3 mehr oder weniger verdunkelt. Sonst mit dem ♀ aufs beste stimmend". It is absolutely obscure to me how this author could indicate this specimen as the male of *D. abdominalis* on such weak grounds. His description must refer to the male of some other species.

As to the male specimens that I bred, the table of BEIRNE runs to *Diplazon citropeactoralis*. According to BEIRNE "This species may be instantly known by the shape of the face and its profuse yellow markings". The shape of the face is discussed already above. The colour markings he gives also agree well with those of my specimens. Furthermore he gives drawings of the ninth abdominal sternum and of the ninth and tenth terga, which evidently show very good characters to separate related species in this group of Hymenopterous parasites. I made microscopic slides of two of my male specimens and these agree with the drawings by BEIRNE of *Diplazon citropeactoralis*. So it may be taken for proven that my male specimens are the same as those described by BEIRNE as *Diplazon citropeactoralis*, from which species only the male is known.

It is a pity BEIRNE did not pay more attention to the morphological characters of the middle segment and the two first abdominal segments, otherwise he would probably have concluded himself that *D. abdominalis* and *D. citropeactoralis* are synonymous.

The original description of *Homocidus citropeactoralis* by SCHMIEDEKNECHT (1926) is mainly after colour marks. It agrees quite well with my specimens. There is some variation in the light colour marks on the abdomen; SCHMIEDEKNECHT distinguishes in this respect besides the nominal form two varieties. My own specimens show in this respect also some variation.

So we have the following synonymy.

Diplazon abdominalis (Bridgman)

<i>Bassus abdominalis</i> :	BRIDGMAN 1886 ♀
<i>Homoporus abdominalis</i> :	THOMSON 1887 ♀
<i>Homoporus abdominalis</i> :	MORLEY 1911 ♀
[<i>nec Homotropus abdominalis</i> :	HABERMEHL 1926 ♂ Misidentifi-
	cation]
<i>Homocidus abdominalis</i> :	SCHMIEDEKNECHT 1926 ♀
<i>Homocidus citropeactoralis</i> :	SCHMIEDEKNECHT 1926 ♂
<i>Diplazon abdominalis</i> :	BEIRNE 1941 ♀
<i>Diplazon citropeactoralis</i> :	BEIRNE 1941 ♂

According to my observations *Diplazon abdominalis* is a common parasite of *Cnemonon vitripennis* which is a common predator of the woolly apple aphid, *Eriosoma lanigerum*.

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Nederlandse Syrphiden-vangsten in 1964

door

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Op 23—24 mei 1964 organiseerde de Insektenwerkgroep van de N.J.N. een weekend in het Naardermeer, waardoor ik in de gelegenheid was de Syrphiden-fauna van dit voor mij nog onbekende gebied eens te bekijken. Op 26 mei bracht ik nogmaals een bezoek aan dit gebied. De volgende vangsten zijn vermeldenswaard:

Orthoneura intermedia Lundb. Op 24.V werden twee exemplaren verzameld; op 26.V nog eens 9 ♂♂ en 3 ♀♀. De dieren vlogen in gezelschap van *Chrysogaster birtella* Lw. en de beide *Liogaster*-soorten op een soppig stukje grasland met veel boterbloemen, waarop de vliegen dan ook gevangen werden.

Orthoneura geniculata Meig. Ik ving op 26.V één afgevlogen wijfje van deze soort op meidoorn langs de ringdijk om het Naardermeer. De heer PIET vermeldt deze en de vorige soort van Ankeveen, een soortgelijk gebied als het Naardermeer, zodat het niet verwonderlijk is dat deze soorten ook in dit meer blijken voor te komen.

Syrphus umbellatarum Fabr. 1 ♂ en 2 ♀♀ werden verzameld van meidoorn.

Cinxia lappona L. Van deze soort werden twee exemplaren verzameld op 24.V langs de ringdijk; 1 ♂ bevindt zich in mijn collectie. *C. lappona* komt algemeen voor in het Alpeengebied, maar is ook in Noord-Europa algemeen te vinden. Uit Nederland waren tot dit jaar drie exemplaren bekend en wel van Venlo, Schoonoord (Dr.) en het Malensbos (Z.L.). LUCAS ving dit jaar twee exemplaren in Twente. Met bovengenoemde vangsten is het totaal aantal bekende dieren uit Nederland gekomen op zeven.

Op 29.V.1964 deed ik in Soestduinen de volgende vangsten:

Syrphus hilaris Zett. Er werden 3 ♀♀ verzameld. Tot voor kort werd deze