

THE TYPE SPECIMEN OF *EUSISYROPA BOARMIAE* (COQUILLET)
AND A NEW SPECIFIC NAME FOR THE SPECIES
(DIPTERA: TACHINIDAE)

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Abstract.—The correct lectotype of *Eusisyropa boarmiae* (Coquillett) is established from a detailed study of published and unpublished records. *Eusisyropa boarmiae* becomes a synonym of *E. blanda* (Osten Sacken), and *E. sellersi* is proposed as a new specific name for *boarmiae* of authors.

The problem of determining the correct name-bearing type specimen of *Exorista boarmiae* Coquillett, now in the genus *Eusisyropa*, proved to be such a mixture of zoology and nomenclature, taxonomic and museum practice, misidentifications of hosts and parasites, and labels and notes, that the case should be written up in detail.

The background: The two species involved, *Eusisyropa blanda* (Osten Sacken) and *E. boarmiae* (Coquillett), were classified in the genus *Exorista* at the beginning of this history, and much later in *Zenillia*. They were placed in a new genus *Eusisyropa* by Townsend (1908), and this genus is accepted today.

Coquillett (1897: 95) described *Exorista boarmiae* and listed his type series as follows: "Cotuid [sic] and Boston, Mass.; District of Columbia; and Camden, Ark. Four males and three females. Type No. 3591, U.S. National Museum." On page 13 in a list of rearing records of the species contained in his Revision, he listed the following for *E. boarmiae*: "Boarmia pampinaria Guen. Issued September 12, 1883, from a caterpillar received August 13 from J. B. Smith, Cotuid [sic], Mass." "Loxostege similalis Guen. Issued July 16, 1886, from a chrysalis received from W. F. Avera, Camden, Ark." In his description of the species he stated "femora usually, and generally the tibiae, yellow;" thus showing by color as well as by the distribution that in terms of present day knowledge his series was a mixture of the northern species *blanda* and the southeastern species *boarmiae*.

The pre-1897 material in the tray of *boarmiae* in the National Museum collection consists of the following (pin labels quoted in exact wording and sequence, with my notes in brackets):

Female: "3193° Par. on Cidaria on cranberry Iss. Sept. 12.83 [old label]/*Ex Isturgia truncataria* Wlk. [newer label by Aldrich, based on corrected identification by Dyar]/Cotuit, Mass. J. B. Smith/Type No. 3591 U.S.N.M. [old red National Museum label]/This spm. err. call. HT by Ald. but is only a PT. See note by Sellers/*Zenillia blanda* O.S. Det. Sellers." [This is the specimen recorded as reared

from "*Boarmia pampinaria* Guen. (Coquillett 1897: 13). The host was cited as *Cymatophora pampinaria* by Townsend (1908: 98). Dyar's corrected identification of the host was *Epelis truncataria* Wlk.]

Female: "468 L° Nov 14.82/Paratype No. 3591 U.S.N.M. [red Museum label; labeler unknown]/LECTOTYPE ZENILLIA boarmiani [sic] (Coq.) by Tns. 1908 [labeler unknown]/Exorista boarmiae Coq. [Coquillett's original label]/Zenillia boarmiae Coq. Det. Sellers." [As recorded by Townsend (1908: 98), this specimen issued on Nov. 14, 1882 from a larva of *Aletia* (now *Alabama*) *argillacea* (Hübner) received from Oxford, Miss. (C. V. Riley Notes, Bureau of Entomology)].

Female: "78⁰³ April 19/87/No notes at Bur. Ent. [Aldrich handwriting]/Eusisyropa blanda OS. Det. CHTT [Townsend label]/Zenillia boarmiae Coq. Det./Sellers" [Townsend (1908: 98) noted that the specimen was reared "from *Hyphantria textor* at Washington, D.C.," according to Riley Note 78⁰³ that was apparently lost by Aldrich's time. *H. textor* Harris is currently considered a synonym of *H. cunea* (Drury)].

Female: "359° Form a June 1/75/blanda OS sub-sp. No. 2" [No notes found in Bureau of Entomology cards].

Male: "185° Aug. 5.83/blanda OS/Ex[orista] hypenae Coq. MS" [No notes found in Bureau of Entomology cards. However, the locality Washington, D.C. can be established from Howard (1897: 46–47). Howard recorded that "early in August, 1883" larvae of *Hypena humuli* (Harris) were "found very abundantly upon a hop vine in a garden in Washington," and in the following weeks a number of moths were reared. Then, "from our 1883 lot of larvae we reared, on September 5, a Tachina fly to which Mr. Coquillett has given the manuscript name of *Exorista hypenae*." This was never described nor is it even mentioned by Coquillett (1897); apparently he abandoned it in favor of *boarmiae*. The date of August 5 on the label is undoubtedly the date of collection of the larvae. The first pupation of larvae occurred on August 15 and the first emergence of moths on August 24, and the appearance of a parasitic fly on September 5 would be reasonable].

Male: "Camden, Ark./439 L° Iss. July 16.88 [old label]/Ex Loxostege similalis/Paratype No. 3591 U.S.N.M." [red Museum label] [all labels but the old one are apparently by Aldrich, who recorded in his card file that he had looked up the specimens under Bureau Number 439. The Bureau of Entomology notes under that number confirm that the date was 1888 (cited in error by Coquillett 1897: 13 as 1886) and show that Coquillett first identified the parasites as *Exorista hypenae* Coq.].

Male: "439 L° Iss. July 16.88:" [See preceding note].

Coquillett's regular procedure was to place the Museum's red "type" label on only one specimen, and thus the other six of his original series of *boarmiae* were unlabeled as part of the type series and can only be deduced from locality or rearing records. The seven specimens that I have listed include three males and four females whereas Coquillett wrote "Four males and three females." The sexes are easily separated and their recognition is not in question. Was the printed statement by Coquillett a lapsus, a reversal of the numbers, or is one male missing here and one of the females not part of the original series? The question cannot be answered and I can only record what I find in the collection. The other male may turn up in another collection, as Aldrich often sent material as a gift or exchange.

The locality and host data are more significant. The female numbered 468 L°, considered "the type specimen" by Townsend (1908), was reared from a larva of *Alabama argillacea* collected at Oxford, Miss., and neither locality nor host is cited for *boarmiae* by Coquillett. On the other hand, Coquillett appears to have put the red type label on this specimen, judging from the testimony of both Townsend (1908) and Aldrich and Webber (1924). The latter stated that the Mississippi specimen "was erroneously labeled as type of *boarmiae*, but was not originally included," and they moved the type label from the Oxford, Miss., specimen to the Cotuit, Mass., specimen ("Obviously this specimen should be the type of *boarmiae*, and we have so labeled it.") In Aldrich's Card Catalogue he wrote on June 5, 1922 that "I changed the type label to this [the Cotuit specimen]."

Aldrich and Webber's "should be" referred to the fact that Coquillett gave the host of *boarmiae* as "*Boarmia pampinaria*" and Aldrich in particular believed that "if the specific name chosen is based on that of the host, the type must be one from that host" (Aldrich Card Catalogue, re type of *boarmiae*). Sellers (1943) maintained that Aldrich and Webber had presented no evidence to prove that the Mississippi specimen "was not one of the three original females" and he considered that their transfer of the type label was "under any circumstances . . . untenable." However, the fact remains that as far as the original description and host list are concerned, the Mississippi specimen "was not originally included" (Aldrich and Webber) and this was the real reason for their rejection. The relationship of name to host was their basis for choosing the Cotuit, Mass., specimen after the Mississippi specimen had been eliminated.

As for the Aldrich and Webber argument that the type "should be" the specimen reared from what was then known as "*Boarmia*," Sellers wrote that "Similar instances indicate that Coquillett based his names not necessarily on the host rearing from which he selected the type specimen, but on the name of the host from which his records indicated that it was first reared." It could have happened that way, but that is not certain and moreover is irrelevant; the incontrovertible facts are that Coquillett cited the *Boarmia* record in his Revision (p. 13) but not that from *Alabama argillacea*, and that Oxford, Miss., is not listed as one of the original localities or states. The Museum's Type Book, with data entered by Coquillett himself on May 22, 1899, tells us simply "♂♀," "7" [specimens], and "Type." Perhaps the red type label was put on at that time, over a year after publication, and put inadvertently on a specimen not listed—perhaps also inadvertently—in the original publication. But this is speculation. We are confined to the facts as they appear in the publication.

A controversial question also affects this case: the status of the "Type No." system as used by Coquillett and many other authors of that period. Was it or was it not the designation of a single specimen as holotype when several specimens and especially several localities were mentioned? Probably this can be argued either way. I believe that in his "Revision of the Tachinidae" Coquillett recognized and designated a single name-bearing "Type" (i.e., a holotype). Stone and Knight (1955), who found mixed usage of labels in their work on the types of Culicidae, considered that the "Type No." on a single specimen out of two or more did mark the holotype, but stated further that "if this is not considered a validly proposed holotype, acceptance of such a specimen as type in this paper is to be

considered as lectotype designation." I followed a similar procedure in dealing with a Coquillett species in the family Chloropidae, designating the "Type No." specimen as lectotype to obviate any further argument (Sabrosky, 1950). Ideally, one should designate as lectotype the specimen labeled as "Type" by Coquillett, thus making the same specimen the name-bearing type whichever side of the question is taken.

For *boarmiae*, however, the "Type No." was originally placed on a specimen that was apparently not originally included. On the basis of that type label, Townsend (1908) regarded the Mississippi specimen as "*the* typical specimen" [italics mine]. However, neither locality nor host was cited by Coquillett. It is possible, or course, that the absence of mention was a lapsus on Coquillett's part, but a lapsus in labeling "Type No." is also possible. Accepting at face value what is published, as I believe we must rather than speculate, I believe that the Mississippi specimen must be rejected as part of the type series, and thus it is ineligible to be considered as either holotype or lectotype. Lectotype designation from among the remaining specimens is necessary. In my opinion, this is not a case for neotype designation: rather, the improper placement of the type label resulted in fact in a series of syntypes.

The next designation is that of Aldrich and Webber (1924). The Cotuit, Mass., specimen that they recognized as type was definitely included by Coquillett, from a locality stated in the original description backed up by the details of date, host, and collector in Coquillett's list of parasites and their hosts. I conclude that the Aldrich and Webber designation must therefore be accepted as the first valid lectotype designation. The effect of recognizing this specimen, which is *Eusisyropa blanda* (Osten Sacken), is that *E. boarmiae* falls as a synonym of the older *blanda*. Inasmuch as *boarmiae* has no available synonyms, a new specific name must be proposed. I name the species *Eusisyropa sellersi* (new name), in recognition of Seller's useful revision of *Zenillia* and allies (1943), with the name made available by bibliographic reference to the diagnosis of *boarmiae* in Sellers' key to the species of *Zenillia* (1943: 6-7).

As for the host, the old notes of the Bureau of Entomology reveal the changes in the name. The number 3193 was assigned to a "*Cidaria* sp. on cranberry," a catchall generic name, but the species was later identified as *Boarmia pampinaria* Guénée, as Coquillett cited it. Later, *Boarmia* was considered a synonym of *Cymatophora*, and the latter was used in Townsend (1908). Still later, Dyar identified the host as actually *Epelis truncataria* (Walker), a species cited in the time of Aldrich and Webber (1924) and Sellers (1943) as *Isturgia truncataria*. Specialists in the family have now returned to *Epelis*.

LITERATURE CITED

- Aldrich, J. M. and Webber, R. T. 1924. The North American species of parasitic two-winged flies belonging to the genus *Phorocera* and allied genera. Proc. U.S. Natl. Mus. 63(17): 1-90.
- Coquillett, D. W. 1897. Revision of the Tachinidae of America north of Mexico. U.S. Dep. Agric., Div. Entomol., Tech. Ser. 7: 1-156.
- Howard, L. O. 1897. Some insects affecting the hop plant. U.S. Dep. Agric., Div. Entomol., Bull. (n. s.) 7: 40-51.
- Sabrosky, C. W. 1950. A synopsis of the chloropid genera *Chaetochlorops* and *Eugaurax* (Diptera). J. Wash. Acad. Sci. 40: 183-188.

Sellers, W. F. 1943. The Nearctic species of parasitic flies belonging to *Zenillia* and allied genera. Proc. U.S. Natl. Mus. 93: 1-108.

Stone, A. and Knight, K. L. 1955. Type specimens of mosquitoes in the United States National Museum. I. The genera *Armigeres*, *Psorophora*, and *Haemagogus* (Diptera, Culicidae). J. Wash. Acad. Sci. 45: 282-289.

Townsend, C. H. T. 1908. The taxonomy of the muscoidean flies, including descriptions of new genera and species. Smithson. Misc. Collect. 51(2): 1-138.



Sabrosky, Curtis W. 1983. "The Type Specimen Of *Eusisyropa boarmiae* (Coquillett) And A New Specific Name For The Species (Diptera, Tachinidae)." *Proceedings of the Entomological Society of Washington* 85, 251–255.

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