

June 1987

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Recommended Citation

Riotte, J.C. E. 1987. "Designation of a Neotype for *Sphinx Poecila* Stephens (Lepidoptera: Sphingidae)," *The Great Lakes Entomologist*, vol 20 (2)
DOI: <https://doi.org/10.22543/0090-0222.1602>
Available at: <https://scholar.valpo.edu/tgle/vol20/iss2/8>

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**DESIGNATION OF A NEOTYPE FOR *SPHINX POECILA* STEPHENS
(LEPIDOPTERA: SPHINGIDAE)**J. C. E. Riotte¹

This designation of a neotype, in accordance with the provisions of Article 75(b) of the International Code of Zoological Nomenclature (1985), has to be considered as continuation of the revisional article "*Sphinx poecila*, a valid North American species (Lepidoptera Sphingidae)" (Riotte 1980).

The unique specimen described by Stephens (1828) and illustrated in color by Wood (1839), was treated by Walker (1956) among the lepidopterous insects in the collection of the British Museum as *Anceryx poecila* with a description conforming to that of Stephens (1828) and Wood's illustration of 1839.

The detailed history of the unique specimen, without repeating all that I wrote in 1980, is as follows. Stephens found the single specimen "in fine condition" in Mr. Vigor's cabinet where it had come from Mr. Wilkin's cabinet as *Sphinx pinastri* L., i.e., clearly misidentified. After Vigor's death in 1840 his collection went to the Zoological Society in London with first choice of specimens to the British Museum, which then accessioned Vigor's specimens in 1859 (A. H. Hayes, in litt.). When I prepared my article (Riotte 1980) Hayes spent much time trying to locate Stephens' specimen but to no avail. He also checked for specimens of the closely related *Sphinx gordius* Cramer, but with no success. He then suggested that I inquire at the University Museum Oxford, which effort was also unsuccessful (E. Taylor, Hope Dept. of Entomology, Oxford, in litt.). Finally, the Museum of Victoria, Australia, Department of Entomology, where a number of specimens used by Walker were deposited, was consulted. This inquiry was also unsuccessful. I believe that the type specimen of Stephens' *Sphinx poecila* is no longer extant, and thus Article 75(a) is relevant.

It is not possible to say when the loss of the type occurred. Grote & Robinson (1865) synonymized *Sphinx poecila* with *Sphinx gordius* Cramer. They were the first of many subsequent authors to do this; they were also the first to synonymize not only Stephens' *poecila* but also the illustration of this insect by Wood (1839). This is surprising because Wood's illustration of 1839 (Fig. 1) leaves no doubt that this illustration is not at all an illustration of Cramer's *gordius*, of which also no type specimen exists. In later publications Grote (1875, 1877) changed his mind and synonymized Stephens' *poecila* with *Sphinx eremitus* (Hübner), with which it has not even a superficial similarity.

Evidence for the loss of Stephens' specimen may also be found in Butler (1876:617) who has *Hyloicus poecila* as a good species and nevertheless remarks "like a strongly marked female of *H. plebia*, which I believe it to be." In fact the specimen in the British Museum having the accession no. 5957, a "type" label, a "*Sphinx lineolata*" label, and an additional label "*plebeja*" was believed by A. H. Hayes to be the "substitute" for the then missing type of *Sphinx poecila* Stephens as well as the specimen on which Butler based his remark. It should be kept in mind that the unique type of Stephens' *poecila* was a male. Then on p. 618 Butler has Stephens' *Sphinx poecila* as a synonym of *Sphinx gordius*, but without any further explanation.

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Fig. 1. Wood's original illustration (1839) of Stephens' *S. poecila*, British Museum Library.

This taxonomic confusion was compounded by the bibliographical development of Wood's 1839 publication. Curle (1949) gave a vivid picture of the changes the illustrations underwent in the different editions of Wood's and then Westwood's publications. The Wood publication had a second edition in 1845. The illustration in this edition (Fig. 3) was clearly changed to an insect very similar if not identical with *Sphinx gordius*. In the Westwood (1854) edition the illustrator then removed the *gordius*-like additional dark shades, and in also making "artistic" changes the specimen became almost unidentifiable (Fig. 4). Was Stephens' original specimen already lost by 1845? This seems possible because Wood's original illustration of 1839 conforms almost exactly with the neotype (Fig. 2) herewith designated. This neotype was selected from the material in the collection of Bishop Museum by the author together with Drs. F. Howarth and J. Medler.

Rothschild & Jordon (1903) noted that they had seen the type of *Sphinx poecila*. However, since they also quoted Wood (1839) it may well be that they considered the illustration as the "type" as such. On the Manitoba and Saskatchewan prairies (probably also on remnant Wisconsin prairies) *poecila* and *gordius* are sympatric without hybridizing. This should definitively settle the question of conspecificity for Mayr (1966:21) stated that "The nonarbitrary criterion of the category species, biologically defined, is that of the interbreeding or noninterbreeding." This was pointed out in Riotte (1980) but it seems necessary to strongly repeat it. For distributional maps of both species see Riotte (1980). For excellent illustrations in color see, for *poecila* Hodges (1971), plate 5, nos. 3, 4, 7, and for *gordius*, plate 5, nos. 5 and 6. The illustration no. 3 on plate 5 in Covell (1984) is a female of *poecila*.

Stephens did not give any type locality data. Therefore a male specimen from the center of the distributional range of *Sphinx poecila* is designated as the neotype. It was collected in Otsego County, Michigan, Sec. 18, T29N, R2W, on 21 May 1965 by M. C. Nielsen (Fig. 2), and is in the type collection of Bishop Museum, type no. 13,541.

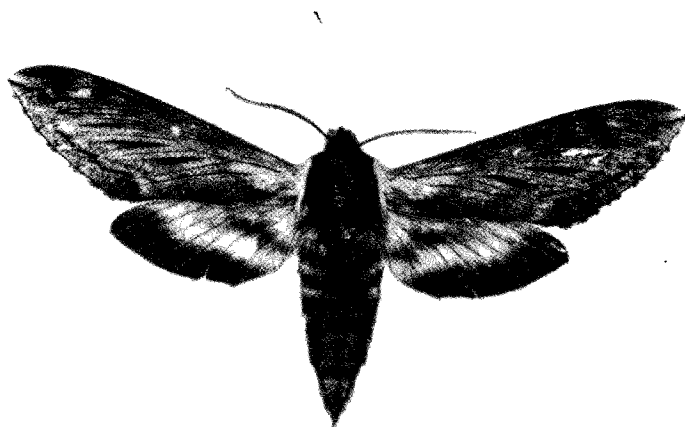


Fig. 2. Neotype of *S. poecila* in type collection Bishop Museum: 21 May 1965, Otsego Co., Michigan, M. C. Nielsen coll. BPBM Type no. 13,541.

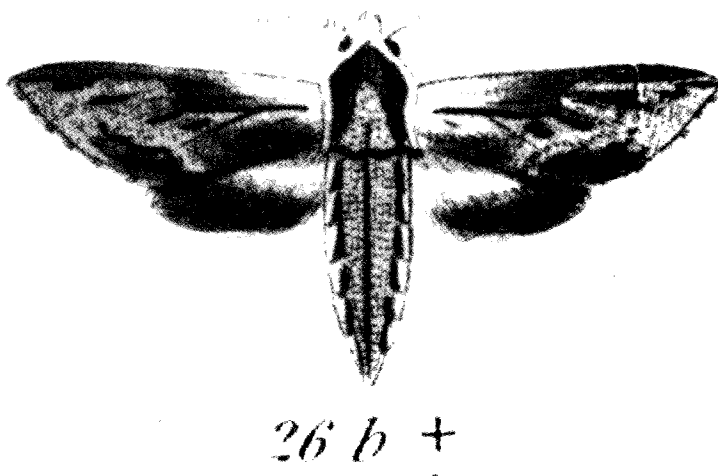


Fig. 3. Wood's illustration in the 2nd 1845 edition, Philadelphia Academy of Natural Sciences Library.

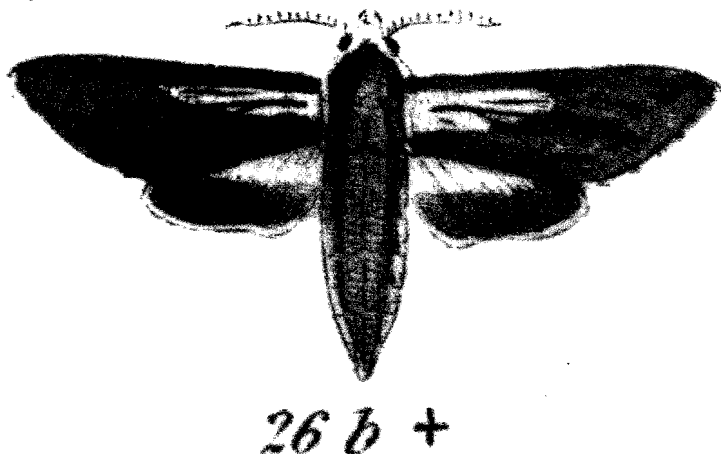


Fig. 4. Illustration in the Westwood edition of 1854, Royal Ontario Museum Library.

ACKNOWLEDGMENTS

With thanks acknowledged is the assistance of the libraries which checked their shelves for copies of the different editions of the Wood and Westwood publications: American Museum of Natural History, New York; Natural History Museum of Los Angeles County; California Academy of Sciences; Smithsonian Institution; Academy of Natural Sciences, Philadelphia; Royal Ontario Museum, Toronto, ONT, Canada; and Biosystematic Research Institute, Ottawa, ONT, Canada; especially of Ms. J. Evans of the Library of the Academy of Natural Sciences; the help of those who provided color slides of the illustrations of *poecila* in the different editions under investigation; the interest and work the late A. H. Hayes, British Museum Natural History, offered right up to his untimely demise; and the involvement of my colleagues at Bishop Museum, Drs. W. Gagné, F. Howarth, and J. Medler, in making the decision about the neotype and going over the different drafts of this note.

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