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IDENTITY OF *PHANETA REFUSANA* (WALKER) WITH DESCRIPTION OF A NEW SPECIES (TORTRICIDAE)

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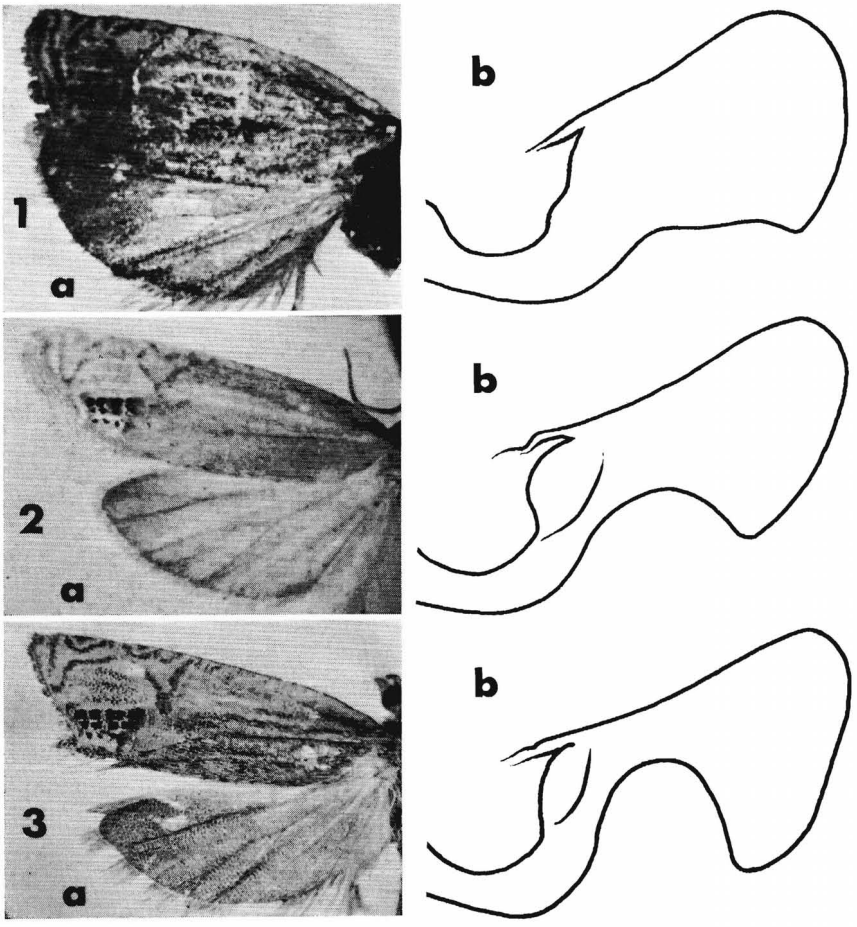
The name *Phaneta refusana* (Walker) is currently used for moths matching Heinrich's (1923) idea of Walker's species. Although Heinrich's interpretation is the most explicit available, Heinrich never saw the Walker type. He perpetuated Kearfott's (1905a) identification which was based mainly on Walsingham's (1879) description and lithograph figure. Photographs of the holotype taken by N. S. Obraztsov at the British Museum (Natural History), and made available by the American Museum of Natural History, show that true *refusana* is actually different from the *refusana* of Heinrich. I confirmed this finding by examining the type itself at the British Museum. The misidentified moths have no valid name and I here propose a new one for them.

The letter *n* in this paper signifies the number of specimens observed for a particular statement. Values of *n* differ from the total number studied because all specimens were not satisfactory for all purposes. Forewing lengths (one wing) are given to the nearest 0.5 mm including fringe and excluding patagium. The generic name *Phaneta* is used as suggested by Obraztsov (1952).

Phaneta refusana (Walker), new combination

Grapholita refusana Walker, 1863.
Semasia refusana; Walsingham, 1879.



Figs. 1–3. *Phaneta* spp. 1, *Phaneta refusana,* wings of holotype male as photographed by Obraztsov (a) and Valva of holotype (b); 2, *Phaneta verna,* wings of holotype male (a) and Valva (b); 3, *Phaneta autumnana,* wings of an example from St. Clair Co., Mich (a) and Valva (b).

Walker and Walsingham mentioned one specimen (Fig. 1) which is a holotype by reason of monotypy. The holotype, which is in the British Museum, is labeled "Type H. T.; Hudson's Bay St. Martin's Falls G. Barnston 1844–17; 44 17 St. Martins Falls; *Grapholita refusana* Wkr. . . .TYPE ♂ descr.; 138. *G. . . r. . . .* ; B. M. ♂ Genitalia slide No. 4891." Its forewing measures 7.5 mm. True *refusana* is distinguished primarily by its wide forewing and male valva which has only slight constriction in width (Fig. 1). The species is known only from the type. I have located

no examples in major North American collections nor in the British Museum. It may be a rare boreal species.

Phaneta verna Miller, **new species**

Thiodia refusana; Heinrich, 1923; Kearfott, 1905a; Kearfott, 1950b; McDunnough, 1939, no. 6782; McDunnough, 1942.

Head sordid white. Palpus white except for brown terminus and faint tinge of orange on outer side. Antennal base, collar, and patagium sordid white, partly tinged with yellowish orange. Thorax sordid white except first and second segments which dorsally are light yellow. Legs sordid white, except fore and middle legs which are tinged on outside with brownish yellow and have brown and white banded tarsi. Forewing (Fig. 2a) 8.0 mm, predominantly light yellowish brown, the hue darkening slightly on inner half and at base of fringe. Costa white except for about six faint brown geminations. Outer half of forewing marked with thin silvery gray lines, one of which partly encircles ocelloid area. Dorsal half of ocellus with 10 or 11 regularly arranged black spots, ventral half sordid white due to white-tipped brown scales, and surrounded by light yellow. Fringe speckled due to brown banded white scales. Hind wing mostly white, grading to light brown at outer margin. Fringe mostly white with base light brown and tip edged slightly with gray. Abdomen sordid white. Narrowest width of valva about one-third the greatest width of cucullus.

The description is based on the holotype male which is in the American Museum of Natural History. The holotype is labelled "Criddle Aweme Man. 21V04; Kearfott Col. Ac. 4667; ♂ genitalia V.26.69 Slide 85 C. W. Taylor." The type locality is Aweme, Manitoba, Canada.

Besides the holotype, I studied 17 specimens from localities as follows: MICHIGAN, Oakland, Allegan, and Ingham Counties; COLORADO, El Paso Co.; NEW JERSEY, Middlesex Co.; CONNECTICUT, Windham Co.; ONTARIO, Cochrane Co.; PENNSYLVANIA, Allegheny Co.; NOVA SCOTIA, Kings Co. Forewings ranged from 7.0 to 8.5 mm (13 *n*).

Phaneta verna most resembles and is sympatric with *P. autumnana* (McDunnough). It is tempting at first to think they are spring and fall broods of the same species. This possibility must be ruled out by the color and structural differences summarized below:

Item	verna (*n*)		autumnana (*n*)	
Forewing	Basal half light	(8)	Basal half dark	(11)
Hind wing	Light	(8)	Dark	(11)
Male genitalia	Valva moderately constricted in width (Fig. 2b)	(11)	Valva extremely constricted in width (Fig. 3b)	(18)
Female genitalia	Sternite laterally lobed near fusion with lamella antevaginalis	(5)	Sternite not lobed near fusion with lamella antevaginalis	(3)
Flight period (Michigan examples only)	May 15–29	(7)	Sept. 3–Oct. 13	(21)

Phaneta autumnana (McDunnough), n. comb.

Thiodia autumnana McDunnough, 1942.

This species is illustrated here for the first time (Fig. 3). I studied a total of 25 examples from localities as follows: MICHIGAN, Osceola, Macomb, Livingston, St. Clair, Otsego, Midland, and Shiawassee Counties; WISCONSIN, Oneida Co.; CONNECTICUT, Windham Co. Forewings ranged from 7.0 to 8.5 mm (24 *n*).

Acknowledgment

I thank the following for help with this study: Frederick H. Rindge, American Museum of Natural History; Thomas N. Freeman, Entomology Research Institute (Canada); Jerry A. Powell, University of California; and Paul E. S. Whalley, British Museum (Natural History).

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THE LIFE HISTORY OF *HELIOLONCHE PICTIPENNIS* (NOCTUIDAE)

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Heliolonche pictipennis (Grote, 1875, p. 220) feeds in the larval stage on the Desert Dandelion, *Malacothrix glabrata* (A. Gray) (Fig. 2). In the spring of the year when its food plant is in blossom, the moth often