

THE OCCURRENCE OF *CHLOROCLYSTIS RECTANGULATA* (L.)  
IN NORTH AMERICA (GEOMETRIDAE)

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While collecting moths in Nova Scotia in the summer of 1970 in company with Mr. Barry Wright of the Nova Scotia Museum, I was surprised to find a species with the habitus of *Eupithecia* Curtis but marked very obviously with bright green scaling on both wings and body. In more than 20 years of intensive field work in that area I had never seen such a moth, yet on this occasion collected nine specimens in three localities, separated by as much as 175 air miles.

A careful check on the identity of these specimens at the U.S. National Museum showed that they undoubtedly represent an Old World species, *Chloroclystis rectangulata* (Linnaeus), in the subfamily Larentiinae. The genitalia are very distinctive in both sexes and have been figured by various authors, including Pierce (1914, pl. 32), Juul (1948, pl. 13), and Nordström *et al.* (1940, text fig. 330, female). The Nova Scotian specimens agree with European ones in every detail, and both the normal and dark ("*nigrosericeata*") color forms are present. Colored figures of the adults may be found in many European works, and figures of the larvae are given by Juul (1948, pl. 3, fig. 27) and Nordström *et al.* (1940, pl. 40, fig. 211). This species will in any event be easily recognized because it is the only known representative of the genus *Chloroclystis* Hübner in the New World. In addition to the green markings, which do not readily fade, *Chloroclystis* differs from *Eupithecia* in rather obvious genital characters such as the obsolescence of the uncus, and the peculiar, forceps-like terminal armature of the aedeagus. The female of *rectangulata* has two separate, crescent-shaped signa on opposite sides of the bursa copulatrix.

It should be noted that one of the commoner species of *Eupithecia* of the eastern United States, *E. miserulata* Grote, also may have quite conspicuous green scales on the wings when very fresh. However, the green coloring in this species is no longer apparent in museum specimens more than one or two years old, having faded to yellowish brown. The genitalia of *miserulata* were figured by McDunnough (1949, fig. 4A). I know of no other North American species with which *C. rectangulata* is likely to be confused.

*Chloroclystis rectangulata* is very widespread and common in Europe, occurring even north of the Gulf of Bothnia. The main host plants are

reported to be *Crataegus*, *Prunus* and *Pyrus*, and Prout (1915: 299) stated that the larva feeds in the blossoms of wild and cultivated apple and is often very injurious. It has also been mentioned as a pest of pear (Meyrick, 1927: 218) and quince (Dirimanoff *et al.*, 1961). Harrison (1953) reported finding it on blackthorn (*Prunus spinosa*) in England, but noted that for the most part it seems restricted to orchards. The eggs hibernate and the larvae mature rapidly in the spring.

The Nova Scotian records for this species are as follows: Smiley Brook Provincial Park, near Brooklyn, Hants Co., July 20, 1970 (1); Middle River, Victoria Co., Cape Breton Island, July 27, 1970 (6); Baddeck River, near Baddeck Bridge, Victoria Co., July 29, 1970 (2)<sup>1</sup>. All were taken at light in moist bottomland situations. *Crataegus* spp. and *Prunus virginiana* L., possible host plants, were common to all three localities. The specimens are in the collections of the Nova Scotia Museum, Halifax, and the United States National Museum.

The sudden appearance of such a conspicuously different moth, in a region where the Geometridae had been investigated intensively over a period of many years, leaves little doubt that this represents a quite recent introduction. However, its presence both on the mainland of Nova Scotia and on Cape Breton Island, in localities so far apart, indicates a well established population.

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<sup>1</sup> Another specimen, a fresh female, was collected at the Hants Co. locality on 23 July 1972, indicating the continued presence of the species.