

Var. (a) *perfracta* Swett (CAN. ENT., XLII, p. 279, 1910).

This looks like the normal *autumnalis*, only the mesial space is suffused with a deep pink and the course of the basal line is different. This variety was referred to without name by Guérèe (Phal., Vol. 2, p. 398, 1855, 1857) under *pluviata*. It approaches superficially *H. californiata*, but I have pointed out the differences in the description. The variety seems to be very rare. It was taken in the Catskills by Mr. R. F. Pearsall. There are no other records of it to my knowledge.

Var. (b) *crokeri* Swett (CAN. ENT., XLII, p. 278, 1910).

This variety occurs in the Northwest, most commonly around Victoria. The green shadings of the typical form are replaced by yellow in the variety, and it has an intensely black median irregular band, instead of being of the usual slate colour. It is a very striking and distinct form; there is nothing approaching it among the European varieties.

Var. (c) *columbiata* Taylor (CAN. ENT., XXXVIII, p. 399, 1906).

I have a photograph of the type, kindly sent me by the Rev. G. W. Taylor for comparison, and it approaches the European var. *constricta* Strand very closely, but it lacks the cinereous ground colour, and I think it will remain in good standing. It may be known by the narrow mesial area, shaded with dark where the typical form species is white. The intradiscal band near the inner margin lacks the long-toothed projection of *crokeri*, and the hind wings are light ash with two bands beyond the discal spot. It is also distinguished by the larger size and greenish ground colour.

Var. (d) *constricta* Strand (Ent. Zeit., Gub. XIV, p. 61, 1906) also Berl. Ent. Zeit., Vol. 51, p. 254-257, 1906, and Ach. Naturv. Christiania, XXII, No. 5).

This is a peculiar cinereous form, in which the mesial white space is suffused with smutty striations, giving the whole a rather smoky appearance, approaching melanism. The blue irregular median band is very faint and the lines are all hardly discernible. The variety can best be separated by the dark narrow central space and dark hind wings with prominent discal spots and two extradiscal bands. I have examples from Norway, Germany and North America, the latter being represented by a ♂ and a ♀ from Forest Hills, Mass. (June 20, 1911), and Monmouth, Maine (June 25, 1903), which agree with the European specimens. I have