

been described from the mountains of Colorado as a *purpurissata*, and subsequently, in Ent. News, IX, 241, Dec., 1898, separated as a species. My only Colorado specimen is a female from Durango, and looks like an obscure *purpurissata* merely. Vancouver Island specimens are paler and more distinctly maculate than any others that I have. I believe that *crydina* is merely a strongly marked form of *purpurissata*, and *juncimacula* is very doubtfully distinct.

287. *M. columbia* Smith.—I have seen two specimens of this form marked "type," both males labelled "Ft. Calgary, B. C.," one in the Neumögen collection, and the other at Washington. The description refers to both male and female types, which may be an error. In 1884, when Capt. Geddes collected the specimens, Calgary was merely a Northwest Mounted Police fort. The "B. C." error I have repeatedly corrected. Closer acquaintance has brought me to look upon this as a local race of *meditata* Grt. The majority of Calgary specimens are considerably paler than *meditata* from the Eastern States, and tinged with reddish rather than brown. Specimens from Cartwright, Man., and Redvers, Sask., include obvious intergrades, as well as specimens inseparable from some in both eastern and Calgary series, except in being smaller, as is usual with Manitoba and Saskatchewan races. *Determinata* Smith is a Colorado form very closely allied to these, with darker central band, and rather conspicuous discoidal spots, those in *meditata* and *columbia* being usually rather obscure, and sometimes scarcely discernible. Sir George Hampson separates *determinata* from the other two in the tables on the character of the orbicular being concave anteriorly. This is a variable character in my *columbia* series, in which I do not suspect two species. I have only a single Colorado male in my collection, from Colorado Springs, and a few of my local specimens come very near it. Prof. Smith has a good series from California.

288. *M. cervina* Smith.—I do not feel at all confident that this is distinct from *lustralis*, of which the type is a Wisconsin female in the British Museum. The eastern form does not appear to be very common, and I have not the material to enable me to form a definite opinion. The character by which Hampson separates *lustralis* from *cervina* in the table is the presence in the former of a black mark preceding the white patch near the anal angle in submedian fold. In his description, however, the mark is called brown. A brown mark is faintly discernible here in some of my local series of *cervina*. It is rather more evident in my one *lustralis*