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## FURTHER NOTES ON ALBERTA LEPIDOPTERA.

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(Continued from page 327.)

209. *Noctua rosaria* Grt.—I consider this identical with European *rubi* Viewag. In my earlier collecting days in Alberta I seemed to recognize in what I was taught to call *rosaria*, the familiar *rubi* so common nearly everywhere in England. I noted them as probably identical after studying the British Museum material in 1909, and have now European and Calgary specimens in my collection which match exactly. The late C. G. Barrett claims that they are identical in his "Lepidoptera of the British Isles" (IV, p. 90), though in many cases his associations of European with North American species are unjustified. Sir George Hampson keeps them distinct, ascribing to *rosaria* in the table dark streaks on the veins, stated to be lacking in *rubi*. This is a variable character in *rosaria*, of which, besides a long local series, I have three from Kaslo and over thirty from Vancouver Island.

Sir George Hampson still confuses Calgary specimens of *rosaria* with *calgary* Smith. Long familiarity with both in a state of nature would doubtless obviate this. They seem quite easily separable, and the differences pointed out in my former notes hold, except that I have since occasionally found *rosaria* with black in the cell.

A much nearer ally of *rosaria* is *perumbrosa* Dyar. Though there can be no doubt of their distinctness, the differences are hard to express in words. *Perumbrosa* and its eastern ally, *rubifera*, as I understand it, have varying shades of red and brown, but entirely lack the rosaceous tint of all *rosaria* that I have seen. The colour is also much more even throughout, whereas in *rosaria* the submedian and subterminal spaces are usually slightly, though rarely contrastingly, paler than the rest of the wing. The cross lines in *perumbrosa*, though indistinct, are finer and less diffuse. Structurally the thorax and abdomen are less robust, and the fore wing has both costa and hind margin more rounded.