

- Wheeler, 1988:417 (cat.). *New synonymy*
Lopidea rubrofusca Knight, 1965:13 (n. sp.). Henry and
 Wheeler, 1988:424 (cat.). *New synonymy*
Lopidea flavicostata Knight and Schaffner, 1968:75 (n.
 sp.). Henry and Wheeler, 1988:420 (cat.). *New*
synonymy

DIAGNOSIS.—*L. n. aculeata* Van Duzee is highly variable in size and coloration (Fig. 3B). It is usually larger than *n. nigridia* and often larger than *n. serica*, but it is always more linear than the latter. In the mountains of British Columbia, Washington, and Oregon it is solid red in dorsal coloration, with more yellowish individuals found at lower elevations. Northern California individuals show some white along the embolium and cuneus, this pattern increasing in distinctness and frequency in southern populations.

This subspecies is itself highly variable, and several distinct color forms can be distinguished as follows: (1) The type specimens of *aculeata* from Seattle, Washington, are yellowish with a dark head and a large hook at the posterior angle of the apex of the right paramere. The type material is representative of populations found at low elevations in the Willamette-Puget Lowland area of Washington and Oregon. (2) *L. n. hirta* Van Duzee was described from San Miguel Island off the coast of southern California. These specimens are solid red, small, and distinctly arcuate laterally. I have seen four males from San Miguel Island in the USNM. These specimens are larger and slightly less arcuate than the type specimens of *n. hirta*, but are still different from mainland populations at that latitude. (3) Specimens from the mainland of southern California are large and linear; most have a noticeably pale embolium and cuneus. Some populations from the southern Sierra Nevada, the San Gabriel and Santa Rosa mountains of southern California, are very distinct. The hemelytra are darker, almost fuscous, the disc of the pronotum is deep red and always shiny, and the setae, especially on the pronotum, are shorter and more decumbent. The type specimens of *discreta* Van Duzee are of this form.

DISTRIBUTION.—*L. n. aculeata* occurs in the Cascade Mountains of British Columbia, Washington, and Oregon, the eastern slopes of the coastal mountain ranges in these areas, and in the Blue and Wallawa mountains of Oregon and Washington. It occurs throughout the Coastal and Sierra Nevada ranges of

California. In southern California, however, the ranges of *n. aculeata* and *n. nigridia* overlap, and specimens intermediate and distinct in color pattern occur. Detailed studies of the local distributions of the color forms in this area are needed to clarify the problem.

- Lopidea nigridia serica* Knight, new status
Lopidea serica Knight, 1923:69 (n. sp.). Kelton, 1980:235
 (dist., hosts, fig., key). Akingbohunge, 1972:842
 (note). Henry and Wheeler, 1988:424 (cat.).
Lopidea medleri Akingbohunge, 1972:840–842 (n. sp.).
 Henry and Wheeler, 1988:422 (cat.). *New syn-*
onymy

DIAGNOSIS.—*L. n. serica* Knight is larger, more robust, with the lateral margins usually arcuate and solid red in dorsal coloration, except for black on the calli and light infuscation on the clavus (Fig. 3C). Females are usually submacropterous, with the membrane of the hemelytra reduced and barely reaching the end of the abdomen. Although this is the most morphologically distinct of the subspecies, it did not appear as such in the PCA because I did not use characters such as total length and maximum width of hemelytra.

DISTRIBUTION.—*L. n. serica* occurs along the eastern slopes of the Rocky Mountains from Alberta to Colorado and east across the northern Great Plains to southern Manitoba. It appears to inhabit the mesic grasslands of the eastern Rocky Mountains and short-grass prairie systems.

There are two interesting disjunct localities for *n. serica* in western Wisconsin and southwestern Yukon Territory and adjacent Alaska (Fig. 9). Although *n. serica* might be expected to occur in the relictual prairies of Wisconsin, the Wisconsin record comes from an area of scrub oak savannah. The Yukon records are from an area along the western edge of the Yukon Plateau and at the southern edge of the Alaska-Yukon glacial refugium. This record may represent a relictual population from the refugium or the tip of the post-Pleistocene northern migration along the Interior Plateau of British Columbia, although there are no other localities north of southern British Columbia. The host plants *Lupinus* and *Astragalus* are common to both the disjunct localities.

DISCUSSION OF SPECIES

Lopidea nigridia is the original spelling used in the description by Uhler (1895). This