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Coppers: Part 1

by Jeffrey Glassberg



1. A female Edith's Copper. July 24, 2006. Green River Lakes, Sublette Co., WY.

Almost all of the more than 50 species of coppers are “northern” butterflies but a few outliers are found in places such as New Zealand, northern Africa and Guatemala. Like other gossamerwing butterflies, such as blues and hairstreak, coppers are small and sun-loving.

Usually, one can place a gossamerwing into one of these three groups by a combination of color and flight pattern. Color often works because almost all of the blues are blue above (although many female blues are brown/gray) and few of the hairstreaks or coppers are blue above. But, of course, some hairstreaks, e.g. White-M Hairstreak, are blue above and Blue Copper is blue above.

Flight pattern usually will allow one to identify an unknown individual to one of these groups. Hairstreaks usually fly higher than do coppers with a more erratic and swift flight. Blues generally fly with a slower, more directional flight than do coppers.

In this article, I consider six species of coppers: Great, Edith's, Gray, Blue,

Ruddy and Gorgon. There is some evidence indicating that Edith's and Great Coppers could just as easily be considered one species and that Ruddy Copper and 'Ferris' Ruddy Copper could just as well be considered to be two species. As with the great majority of such taxonomic decisions, neither view is right nor wrong, simply different.

Let's start with three very similar species, Great Copper, Edith's Copper and Gray Copper, that until fairly recently were sometimes treated as a single species.

Great Copper/Edith's Copper

These two species are so closely related and so similar in appearance that it in some areas it is difficult to know where one ends and the other begins. Great Coppers are restricted to the West Coast and are pretty great — that is they are large for coppers. Generally a butterfly of the California and Oregon lowland grasslands and chaparral, this species can be found into the Sierra Nevada. Edith's Coppers are found in a wider range of habitats, including

sageland, mountain meadows and openings in coniferous forests.

Pratt, Wright and Ballmer examined the relationship of these two species in a 1991 article (*J. of Res. on the Lepidoptera*. 30: 175-195). They concluded that Great Coppers generally occur below about 6500 ft. while in the California Sierra, Edith's Coppers generally inhabited areas above 9800 ft.

The two features most useful for distinguishing these two species (or subspecies) are overall size and the size of the HW underside spots. Most individuals in most populations can be recognized as Great or Edith's Coppers on the basis of absolute size alone (see photos at right — shown life size). And, as you can see in the photos at right, most Edith's Coppers have larger and browner HW spots than do most Great Coppers.

However, there are gray areas where the two populations meet in California. Traveling along route 120 in the California Sierra one comes to Crane Flat at 6200 ft. (photo 9, pg. 22), then to Gin Flat at 7000 ft. (photo 14, pg. 23), and then to Lower Lee Vining CG at



2. Edith's Copper. July 24, 2006. Green River Lakes, Sublette Co., WY.



3. Great Copper. June 20, 1997. Mines Rd., Alameda Co., CA.

7500 ft on the other side of the crest (photo 15, pg 23). And there is disagreement about the correct placement of some of the populations in northeastern California (see photo 10, pg. 23). It is possible that there is a relationship between elevation and absolute size and size of the HW spots.

Above, other than overall size, the two species may be indistinguishable (see photos pages 24-25).