

## Colias Identification of Clouded & Orange Sulphurs

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First, this past Tuesday, October 2, 2001 was the first time I have encountered so many Clouded Sulphurs since moving from Iowa 40 years ago. I have been going up in the Macon Co. NC area for many years and have rarely seen this there. I never see these here on the SC coast. This is not a "southern" species. I think the range map in Opler and Krizek (Bflies E. of the Great Plains) is pretty accurate. Spring eurytheme (Orange Sulphur) here in Charleston can be mistaken for philodice in that they are quite yellow and with much narrower margins than the summer eurytheme. They are also larger than the same spring brood up "north". Eurytheme is not common on the SC lower coast and philodice is not here.

I think it is very difficult to impossible to tell the two apart for sure when their wings are closed by simple markings of the undersides. When perching I would look for one thing in the males. If there is strong sun light behind the individual so that the black margin of the forewings is silhouetted one can make a positive ID of summer individuals. In Clouded the edge of the black margin is positioned exactly where the underside line of black dots runs. In Orange this margin is well inside of these spots in the apical (tip) area of the forewings and slightly inside on the rest of the wing. When visiting flowers this tip area of the forewings is always visible so it is just a matter of looking at them from the right angle to sun light.

Naturally, eurytheme is more orange-ish and philodice yellow in "basic" lower ground color, but older faded eurytheme can easily be taken for philodice. The wing margins are yellow in both with eurytheme having on average a bit more pinkish at the vein tips. But again, this and looking at the black median dots or the single or double spot in the middle of the HW are all too subjective and time consuming. Just go straight to the apical area and focus on it to see the shape of the upper black border.

White females. I have to catch these to tell for sure. (These are a good butterfly to learn to catch and release with. They are a good size and have hardy (not delicate) legs. Like Monarchs, they are very sturdy and hard to "harm" in the net. This is why I caught and released the females I saw in Clay Co. - it is the only way I can make a positive ID.) I look for two things. 1) Male associations. If only one species male is found then the females belong to the same species. This is safe. 2) In my experience the light spots within the black boarder of the forewings are small to very small in Clouded while in Orange they are medium to large. I consider the white female in B. of W. VA to be an eurytheme and not a philodice. I also think the black margin tends to be wider in Clouded females and narrower in Orange. In yellow/orange females I would look for very orange-ish ground vs. very yellow ground on the lower side. But here again, faded or older Orange females can easily be mistaken for Clouded.

Even the simplest of butterflies are difficult for a beginner to ID. Thus, the best teacher is experience. This gets into the "look" thing that experienced lepsters talk about. They can't tell you why it is a \_\_\_\_\_, they just know it is as it has the look of \_\_\_\_\_. An example would be the very different flight pattern of Monarchs and Viceroy's. The experienced person is not keying in on color at all - just the look of the way they fly. Unfortunately, these Colias species fly the same - away before you get a chance to get a good look at them.