

# Multicolored Orbweavers Are a Mystery

Naturalists' love a mystery as well as anyone else (especially mystery lovers) but the varied color forms of the spiny-backed orbweaver, *Gasteracantha cancriformis*, are a puzzle. This common "cancer, the crab" spider of eastern Texas woodlands is extremely plentiful this year and I can personally attest that it is encountered all too frequently, often with much arm-waving as one tries to remove oneself from one's web.

The females (most of the spiders we see, regardless of species, are females, in case you didn't know) are only about the size of a dime (males are much smaller, less than 20% of the female's size in most cases) but are quite distinctive with their all too obvious "*nomen*" being quite apparent—they are "spiny-backed." The puzzle is why they occur in three different color forms: white (apparently the most common), yellow, and red (the least common).

Consider that these spiders are predators, orbweavers that build large, elaborate webs in which to snare their prey while they wait in the center of their trap to pounce on hapless prey. The idea of the web, of course, is that it can't be seen so other insects stumble into and get caught before they're fully aware that they're already dead.

So why would the spiders themselves vary in such bright colors?

If the idea is to be invisible, why go out of your way to be multicolored and all too visible? At least part of the answer may be that they're also prey themselves—of birds and other critters that enjoy crunchy little tidbits while careening through the undergrowth of the forest.

Here's another thought: do they, perhaps, change color with age? Or maybe their color varies with the kind of habitat that they're in? For example, white ones may be harder to see against the sky while red ones may be more difficult to see against the red, needle-strewn ground of a Lost Pines woodlot. This question really comes down to "do the different color forms have different survival rates?" In other words, do color, habitat and predator pressure yield differences in survival success?

Still another possibility is that their color has nothing to do with anything but is just neutral variation. But, if it's not, do spiderlings look most like their mother or will a red spider have white, yellow and red young? Are white one's really the most common? If a female has all three color forms as young, which color form is the most common in a single brood?

I'm afraid that I can't answer these questions, though I do enjoy posing them. Keep in mind that there are really only five kinds of ques-



A trio of "crab" spiders of the spiny-backed orbweaver, *Gasteracantha cancriformis*, in their three color forms (top head down, below head up).

tions: who, what, when, where and why. Answers to the first four are often trivial but why questions can

get a nature lover's blood flowing! I so love a mystery. Do you?