



Photo by Bill Byrne

*Shad fishing on the Connecticut River is a rite of spring for thousands of sportsmen.*

generally less than 1 mm. Mysid shrimp may be as large as 15 mm, slightly smaller than most shad darts. Shad spoons likely resemble small fish."

When one compares shad flies and darts with the copepods, mysids and krill, the resemblance is more than passing. For example, certain features like round heads, spare tails and pink coloration are strongly evocative of the copepod shape and reddish oil seen through their transparent carapace. The two-tone, cone-shaped darts resemble the shape of krill and mysid shrimp, and often match them in color since organic matter these animals ingest looks bright green or charre-treue through the carapace.

Could the shad's lack of parallax vision and thus inaccurate depth perception be a factor? A small object up close looks large, thus the shad may not be sensitive to the disparity in size.

John considered this idea. "Perhaps. But maybe actually the size of the shad lures are not that much different than other shad prey such as mysids, krill and sand shrimp that may reach 5-6 mm in length. So I think the disparity in size between copepods (prey that are probably consumed more in a filtering capacity) and shad darts may be explained by the fact that other prey commonly taken is larger. This larger prey most definitely

would have to be attacked, as it could attempt to avoid the predator, thus the shad could not simply filter the water unless prey concentrations were extremely high. They are in some areas, but probably a shad has to spot and chase down the larger prey as it would a shad dart...Color may indeed play an important role in prey choice but it is very hard to say what exactly its role is. Either it can match a specific prey or it can serve to increase the visibility of the lure. I think that at different times both strategies may work."

John also pointed out that color would make less difference the deeper the fly is fished (it gets dark down there), but as the photos reveal, light at shallower depths would reveal color through the transparent body of the plankton. The bright fluorescent colors used in shad lures of all types open the possibility that shad might be attracted to plankton that phosphoresce.

"Shad prey may bioluminesce, especially oceanic euphausiids and some copepods," John commented. "This may attract shad to feed on them, especially at night or in low light levels, though many other planktonic life forms that shad do not feed on also produce light. I think most crustaceans bioluminesce the color of fireflies. It would be very interesting to