

Egg Hunters

How Synodontis catfish can use cichlids from two continents to hatch their young.

By Paul V. Loiselle

Q. I just read that the Lake Tanganyika catfish *Synodontis multipunctatus* will use Lake Malawi cichlid fish as hosts for their developing young. I have four *S. multipunctatus* in a 180-gallon Malawi community aquarium with four *Nimbochromis venustus*, three *Lethrinops lethrinus* and 20 assorted mbuna. The *N. venustus* and the mbuna spawn regularly, but I have yet to see any catfish fry emerge from cichlid mouths. Could you recommend one or two cichlid fish species that could reliably serve as willing hosts for these catfish?

A. As I have no hands-on experience with *Synodontis multipunctatus*, your query triggered a spate of phone calls to friends who do. The exercise was productive and quite informative. It transpires that this catfish is anything but choosy in its efforts to inflict its fry upon a mouthbrooding host. This state of affairs reflects the prevailing situation in Lake Tanganyika, where half a dozen cichlid fish species have been documented as *Synodontis multipunctatus* hosts.

Interestingly, none of the successful catfish breeders with whom I spoke made use of Tanganyikan cichlid fish as host species — their progeny are far too valuable to be sacrificed in the production of *Synodontis multipunctatus* fry! Most of my informants used Lake Malawi cichlid fish as hosts, but one found that such Lake Victoria species as *Haplochromis* (*Paralabidochromis*) "rock kribensis" are equally acceptable to ripe *Synodontis multipunctatus*. However, my friend Rusty Wessel's observation that his fish had successfully parasitized *Geophagus steindachneri*, a neotropical mouthbrooder, was a real eye-opener. Clearly, neither the species nor the point of origin of a potential host figures strongly in the reproductive strategy of *Synodontis multipunctatus* — any advanced mouthbrooder seems worth a try!

While host size probably enters into the equation at some point, I suspect the chief consideration that influences *Synodontis multipunctatus* in its choice is the willingness of a spawning pair of cichlid fish to tolerate intruders while they are preparing to do what comes naturally. The haplochromine cichlid fish of Lakes Malawi and Victoria differ greatly in their response to territorial intruders. Males of some species respond aggressively only to species members of the same sex. Other territorial proprietors will chase away any intruders regardless of species or sex. It is also worth noting that the females of some Lake Victoria haplochromines also become very intolerant of the close presence of other fishes with the approach of spawning.

Both the Malawian and Victorian species flocks include representatives that feed upon the newly laid eggs of other mouthbrooding cichlid fish. These egg snatchers lurk on the margins of a male's territory until a consorting couple begins spawning, then dart in to grab a few eggs before the female can take them into her buccal cavity. I suspect the degree of intolerance territorial males and ripe females of a given species display toward specific intruders reflects the intensity of such egg predation in nature. A species in which male territorial behavior has been shaped by such predation pressure is unlikely to prove the host of choice for a pair of ripe *Synodontis multipunctatus*.

The Malawian species that appear to consistently meet the reproductive needs of *Synodontis multipunctatus* are *Pseudotropheus lombardoi* and the peacock cichlid fish of the *Aulonocara struartgranti* complex. Indeed, the first photographs documenting the phenomenon of brood parasitism by this Tanganyikan catfish showed a pair of *Synodontis multipunctatus* breaking in on a spawning pair of *Ps. lombardoi*. Hardy and widely available, these colorful species are well worth keeping in their own right, and should fit into your existing assemblage of Malawian species quite well. I feel quite safe in predicting that adding one or both of these potential hosts will elicit a gratifyingly positive response from your catfish.