

WHAT'S IN A NAME? FRECKLEBELLY MADTOM *NOTURUS MUNITUS*



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When they hear the word “catfish,” most people think of river fishing at night for Flatheads on the prowl, dunking worms for Channel Catfish in a pond, or laying chicken liver on the bottom below a hydraulic boil in a tailwater hoping to muscle out a big Blue. These species have a few things in common: they are active in low light, rely mostly on smell and touch, grow quite large, and make fine table fare.

Another group of catfishes, known for their *diminutive* size and equally secretive nature, has a curious name: the madtoms. Twenty-nine madtom species inhabit streams and rivers in the central and eastern United States and fall under the management purview of state fish and wildlife agencies.

Their common names pay tribute to the waters they swim (Neosho, Ouachita, Ozark, and Carolina madtoms) or describe shape, color, or other attributes (Smoky, Slender, Piebald, Pygmy, and Frecklebelly madtoms). Some are common; others, well, not so much. The Scioto Madtom of central Ohio was declared extinct in 2020. Most of the madtoms now have unnaturally fragmented and limited ranges and are the object of conservation concern.

The Frecklebelly Madtom was the subject of recent range-wide surveys. The tiny catfish naturally occurred in medium to large rivers in parts of Louisiana, Mississippi, Alabama, and Georgia, as well as a minute portion of Tennessee. A species status assessment paid for by State Wildlife Grants, administered by the US Fish and Wildlife Service’s Wildlife and Sport Fish Restoration program, funded several years of population surveys by the fish and wildlife agencies in all five states. State Wildlife Grants are appropriated by Congress—versus Pittman-Robertson and Dingell-Johnson Act taxes paid by firearms, archery, and fishing tackle industries—are meant for conservation work for fish and wildlife with a high conservation need.

The Frecklebelly Madtom had that need, and the surveys proved it: populations have declined over the years. It has suffered from habitat loss due to damming, dredging, and agriculture. The Frecklebelly, like all madtoms (not to mention some sport fish that co-occur with it, such as the Redeye Bass), needs clean, swift-flowing water over a rocky bottom. Perturbations that cause sediments to fall to the stream bottom and clog the cobbles rob fish of places to hide, feed, and spawn.

Frecklebelly Madtoms are shaped for life in fast water: low profile, flattened head, and slender like a torpedo, all in the length of a finger. They subsist on mayfly and caddisfly larvae. Blackflies make up a large part of their diet, something anyone who frequents streams for work or fun can appreciate given the insect’s propensity to inflict painful bites.

The Frecklebelly’s scientific name, *Noturus munitus*, is something

to unpack. Think “munitions.” The little fish’s pectoral spines are serrated like a buck saw blade and possess a venomous gland. They sting like a bee and turn a biologist’s hand numb and send his or her feet into an involuntary dance in shin-deep water. That sting might be the origin of their unusual common name, implying an angry tomcat. They are also known to writhe and wriggle untiringly in captivity. All the madtoms are in the genus *Noturus*, attributed to eccentric 19th-century French polymath and naturalist Constantine Rafinesque. The man walked over the Alleghenies and long reaches of the Ohio and lower Wabash rivers in 1818 collecting plants, fishes, and fossils. He eschewed a horse because mounting and dismounting took too much time from looking at plants. Rafinesque ascribed the Greek genus name to a Stonecat from the Ohio River, referring to its long, fleshy adipose fin that adjoins the tail.¹

An eerie coincidence: Rafinesque lost all his belongings—his papers and plant and fish collections—in a shipwreck on the Atlantic coast. Tulane University ichthyologist Royal Suttkus gave the Frecklebelly its scientific name in 1965, and he lost his belongings, collections, and papers in a 2005 hurricane. What’s more, Suttkus had named the Yazoo Shiner *Notropis rafinesquei* in honor of the eccentric naturalist.

State Wildlife Grants are the juice that makes things go for research and management of obscure but not necessarily unappreciated fish and wildlife species. The Frecklebelly surveys conducted up to 2019 revealed that the fish was absent from the Tennessee-Tombigbee Waterway but was more abundant elsewhere than previously thought.

Such was not the case in the upper Coosa River, lying in part over the Georgia-Tennessee state line. Those Frecklebellies were afforded protection under the Endangered Species Act in 2023, its fiftieth year in existence.

¹ According to <https://etyfish.org/siluriformes10>, *Noturus* is from “*noton*, back; *oura*, tail, i.e., tail over the back, referring to connected caudal and adipose fins,” and *munitus* means “armed or protected, referring to large spines and serrae”



Frecklebelly Madtom. (Photo by Zach Alley)

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