Common Name: MOUNTAIN MADTOM

Scientific Name: *Noturus eleutherus* Jordan

Other Commonly Used Names: none

Previously Used Scientific Names: none

Family: Ictaluridae

Rarity Ranks: G4/S1

State Legal Status: Endangered

Federal Legal Status: none

Description: This species is a small, slender catfish attaining a maximum total length of around 85 mm (3.3 in). It is usually mottled dorsally with a wide pale margin on the adipose fin, which is fused to the body as in other madtoms but nearly free from the caudal fin. Fins and sides are mottled brownish-yellow, and three light-brown dorsal saddles may be present. The pectoral spines are slightly curved and have small anterior serrae (teeth) and large, sharp, posterior serrae. The mountain madtom was first described in 1877 by ichthyologist David Starr Jordan, who along with C. H. Gilbert plucked the type specimen out of the mouth of a northern banded water snake while collecting fish in the Big Pigeon River in eastern Tennessee.

Similar Species: As a member of the catfish family, the mountain madtom is similar to a young yellow bullhead (*Ameiurus natalis*) in that both possess barbels (long, fleshy whiskers emanating from the snout and chin), a hard spine in the leading edge of both pectoral fins and the dorsal fin, and an adipose fin. However, in the mountain madtom, the adipose fin is fused to the body whereas in the yellow bullhead, the rear of the adipose has a free lobe. The yellowfin madtom (*Noturus flavipinnis*) is the only other

madtom species that historically occurred within the range of the mountain madtom in Georgia. Both species are members of the subgenus *Rabida*, and therefore are somewhat similar in appearance, except that the adipose fin of the yellowfin madtom has a dark vertical bar that extends to or nearly to the fin margin, and the mountain madtom lacks this dark vertical bar. The yellowfin madtom has not been seen in Georgia since 1893 and is presumed extirpated from South Chickamauga Creek, the only stream reach in Georgia from which it was known.

Habitat: This species inhabits large creeks to medium-sized rivers and is found in greatest numbers at gravel shoals. It is not known from impoundments.

Diet: Larvae of aquatic insects such as mayflies, caddisflies, and stoneflies. Feeding occurs primarily at night.

Life History: Spawning occurs in June and July, and egg clutches are deposited in cavities underneath flat rocks in gravel and cobble bottomed pools. The eggs are then guarded by males. The mountain madtom lives about 4 years and may be sexually mature after 1 year.

Survey Recommendations: The mountain madtom, like most members of the subgenus *Rabida*, are primarily nocturnal and can most easily be captured at night using a seine net. In clear water, they can be captured by snorkeling with a dip net while using a strong underwater light. Like all madtoms, this species should be handled with care because of the mildly toxic properties of its pectoral spines.

Range: East of the Mississippi River, the mountain madtom's range includes the Ohio, Cumberland, and Tennessee drainages. West of the Mississippi, it can be found in Missouri, Arkansas, and Oklahoma. In Georgia, this species is only known from South Chickamauga Creek in Catoosa County. Check the Fishes of Georgia Webpage for a watershed-level distribution map.

Threats: Degraded habitat and water quality in the South Chickamauga Creek watershed are the primary threats to the mountain madtom, a rare, limited-range species in Georgia. Stream degradation results from failure to employ Best Management Practices (BMPs) for forestry and agriculture, failure to control soil erosion from construction sites and bridge crossings, and increased stormwater runoff from developing urban and industrial areas. Fishes such as the mountain madtom that depend upon clean gravel and cobble substrates are eliminated from habitats destroyed by excessive sedimentation.

Georgia Conservation Status: The entire range of the mountain madtom in Georgia is restricted to the main channel of South Chickamauga Creek, a large direct tributary to the Tennessee River that originates in Catoosa and Walker counties and flows northward into Hamilton County, Tennessee. There have only been two specimens of the mountain madtom captured in the Georgia section of South Chickamauga Creek since 1980, but in 2006 a single specimen was captured approximately 12 miles downstream of the Georgia/Tennessee border. The state of Georgia changed its status from Threatened to

Endangered in 2006.

Conservation and Management Recommendations: Conserving populations of the mountain madtom depends on maintaining habitat quality in South Chickamauga Creek and its tributaries, and ultimately on improving habitat and water quality in degraded streams. It is essential to control sediment from land-disturbance activities, such as roadway and housing construction, and to minimize the input of contaminants such as fertilizers and pesticides from agricultural fields and residential properties. Vegetated buffers should be maintained or restored along the banks of all streams in the South Chickamauga Creek system. Protecting water quality in this ecologically valuable stream system also depends on maintaining natural patterns of streamflow by preventing excessive water withdrawal and by controlling stormwater runoff from urban and suburban areas.

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Author of Account: Byron J. Freeman and Gerry Dinkins

Date Compiled or Updated:
B. Freeman, 1999: original account
K. Owers, Jan, 2009: Updated status and ranks, added fish atlas link, converted to new format, minor edits to text
G.R. Dinkins, Aug, 2009: general update of account
B. Albanese, Sept, 2009: Added picture and completed final editing for web-posting.
Z. Abouhamdan, April 2016: updated links