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## First Record of Freckled Madtom (*Noturus nocturnus*) in Iowa<sup>1</sup>

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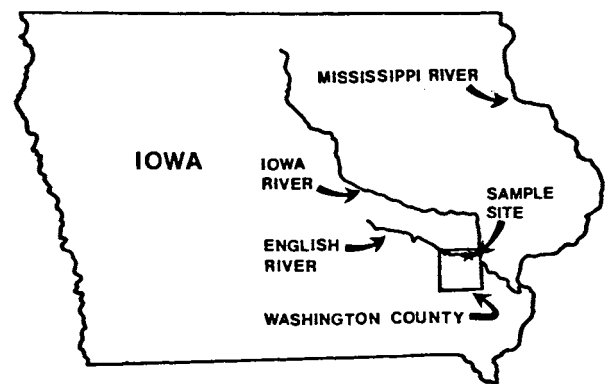
This is the first record of freckled madtom in Iowa and is one of the northern most records. On 30 August 1984, five freckled madtoms were collected from the English River, Washington County. The specimens ranged from 46 to 95mm in total length and mean weight of 3.3g. Estimate of standing stock was 0.807 Kg/ha with a density of 44 fish/ha.

INDEX DESCRIPTORS: *Noturus nocturnus*, Iowa fish distribution, Washington County.

The freckled madtom (*Noturus nocturnus*) occurs within portions of the Central Mississippi River Basin from Indiana to Oklahoma. It is found in two states adjacent to Iowa: in Missouri, within the Osage and Mississippi rivers and tributaries (Pflieger 1975), and in the southern two-thirds of Illinois (Smith 1979). It is not known to occur in Wisconsin (Becker 1983), nor was it previously recorded in Iowa (Harlan and Speaker 1969). On 30 August 1984, five freckled madtoms were collected from the English River, Washington County (T77N, R8W, Sec. 13), Iowa (Fig. 1). The English River is in the Mississippi River Basin and is a tributary to the Iowa River. The collections were made during a statewide study of stream fish populations (Paragamian 1985). The identification of freckled madtom in Iowa is a northern extension of its known range.

The specimens of freckled madtom collected from the English River ranged from 46 to 95 mm ( $\bar{X} = 59$ mm) in total length and had a mean weight of 3.3g. Estimate of standing stock was 0.807 Kg/ha with a density of 44 fish/ha (Paragamian 1985). The estimate of standing stock and density at the sample site cannot necessarily be applied to the entire river. Recent collections independent of my investigation, at eight sites in the English River Basin of which three were at the English River proper in Washington County, did not include the capture of freckled madtom (Dr. Bruce Menzel, personal communication).

Little is known of the life history of freckled madtom. However, the habitat from which the Iowa specimens were collected is typical for the species (Cross 1967, Pflieger 1975, and Smith 1979). Habitat within the sample site of the English River was rather homogeneous, comprised primarily of silt and sand substrate with some gravel and cobble. Water quality parameters included a pH of 7.8, 260 mg/l total hardness, and total alkalinity of 179 mg/l. Flow of the English River at the sample point was  $0.66 \text{ m}^3 \text{ s}^{-1}$ . Related species taken within the same site included yellow bullhead (*Ictalurus natalis*), channel catfish (*I. punctatus*), flathead catfish (*Pylodictus olivaris*), and stonecat (*Noturus flavus*).



### ACKNOWLEDGEMENT

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Fig. 1. Sample site of freckled madtom on the English River, Washington County, Iowa.

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