

Dicy Crosby

Redbreast sunfish_ LM26



Figure 1: PHOTO OF SPECIES (*LEPOMIS AURITUS*)

TAXONOMIC INFORMATION

- **Kingdom:** Animalia
- **Phylum:** Chordata
- **Class:** Actinopterygii (ray-finned fishes)
- **Order:** Perciformes (perch-like fishes)
- **Family:** Centrarchidae (sunfishes)
- **Genus:** Lepomis
- **Species:** Lepomis auritus

COLLECTION & DIVERSITY INFORMATION

Redbreast sunfish_LM26 was collected from a stream in Little Mulberry Park, Gwinnett County GA, coordinates 34.0407069, -83.8796619.

DISTINGUISHING MORPHOLOGICAL CHARACTERISTICS

The Redbreast Sunfish (*Lepomis auritus*) is a visually striking freshwater fish, renowned for its vibrant coloration and distinctive body morphology. One of its most notable features is the elongated, flap-like extension of the opercular (gill cover) region, which is typically a brilliant turquoise or aqua in color. The body of the Redbreast Sunfish is relatively deep and laterally compressed, making it almost disc-like in shape. This sunfish displays a kaleidoscope of colors, with an olive to rusty orange back, blending into a yellow-orange belly. The sides are marked with blue and orange streaks, and during the breeding season, males exhibit intensified colors to attract mates. The dorsal fin is especially prominent, consisting of both spiny and soft rays, the former being longer and sharper, which is a common trait among sunfishes. This combination of features not only aids in identification but also underscores its adaptability to various aquatic environments.

BASIC ECOLOGY

The Redbreast Sunfish (*Lepomis auritus*) thrives in freshwater environments such as gently flowing rivers, creeks, and lakes, particularly those rich in aquatic plants. These vegetated habitats are crucial, providing shelter from predators and fertile feeding grounds where they primarily consume small invertebrates, including insects, snails, and crustaceans. Vegetation is also vital during their reproductive season; males build and defend nests in these protected areas to attract females and protect their young. The Redbreast Sunfish plays a dual role in its ecosystem, acting as both a predator that helps regulate insect populations and as prey for larger aquatic species and birds. Its ability to adapt to various water qualities enables it to sustain stable populations across diverse aquatic settings.

DNA SEQUENCE

```
CCCCCTTTTTTCTCCCTTCTTACCATAGTATATTGGTGCATGAGCCGGAATGGTAGGC  
ACAGCTTTAAGCCTACTTATT  
CGAGCAGAGCTCAGTCAACCAGGCGCCCTCCTCGGAGACGACCAGATTTACAATGTT
```

ATCGTAACAGCACATGCATT
TGTAATAATTTTCTTTATAGTGATACCAATCATAATTGGAGGTTTCGGCAACTGACTTGT
CCCCTTAATAATTGGCGCCC
CTGATATGGCATTCCCCGAATGAACAACATAAGCTTTTGACTCCTTCCCCCCTCTTTC
CTCCTTCTCCTTGCCTCCTCC
GGAGTCGAAGCCGGGGCTGGCACAGGTTGAACCGTCTATCCCCCTCTCGCCGGCAAC
CTCGCCCATGCAGGAGCAT
CCGTTGACCTCACCATTTTTTCCCTGCATCTCGCAGGGGTCTTCAATTCTAGGGGCT
ATTAAC TTTATTACCACAATT
ATCAATATGAAACCTCCTGCCATCTCCCAATACCAGACACCACTGTTTGTATGATCAGT
CCTAATTACTGCTGTTTTACTC
CTACTTTCCCTCCCAGTCCTCGCTGCAGGAATTACTATGCTTCTAACAGACCGAAATCT
TAACACCACTTTCTTTGATCC
GGCAGGAGGCGGGGACCCCATCCTCTATCAACATCTGTTCTGATTCTTCGGTCACCCT
GAAGTGTCATANTTGTTTTN
CCCGGAAG