

Paul H

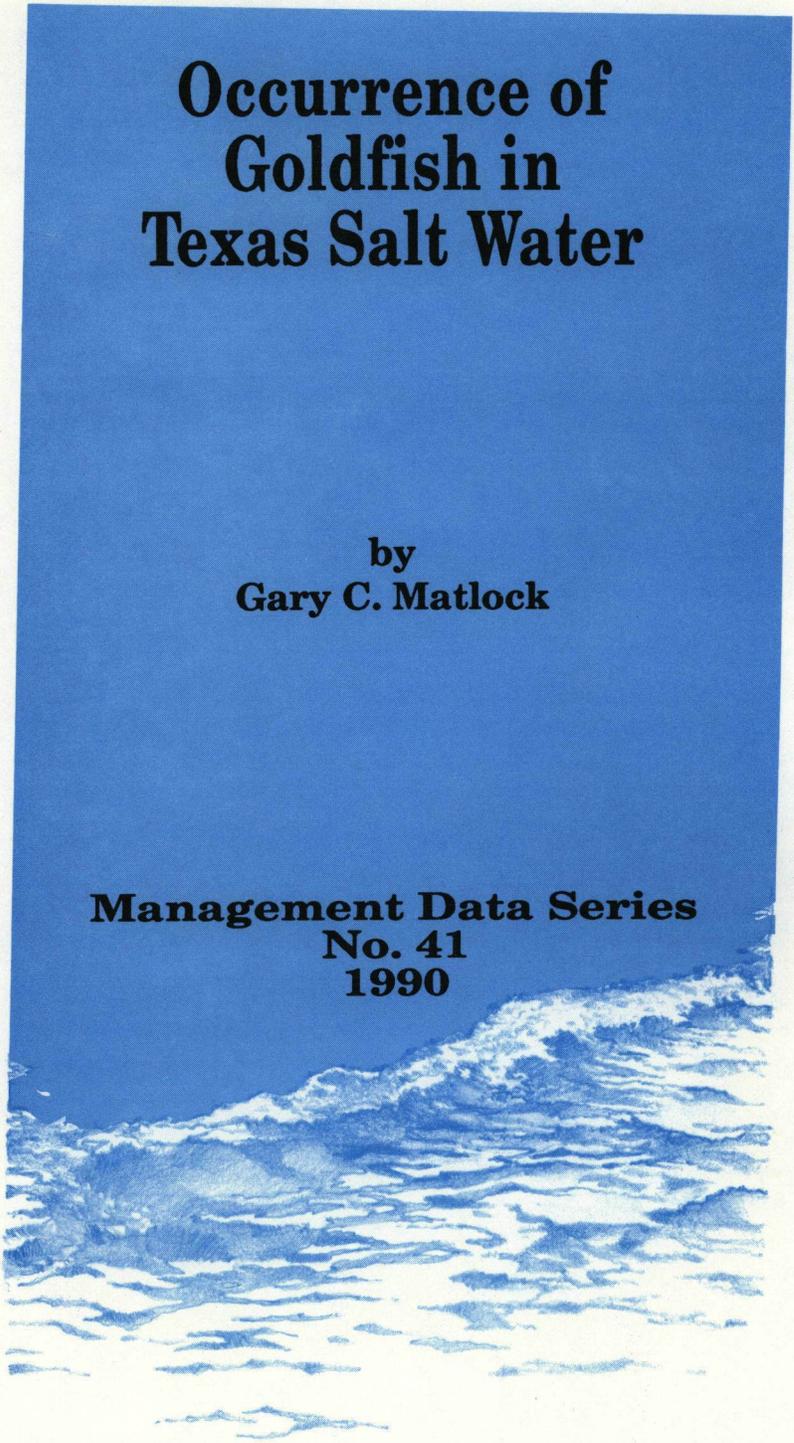
Occurrence of Goldfish in Texas Salt Water

by
Gary C. Matlock



TEXAS
PARKS & WILDLIFE
DEPARTMENT
FISHERIES DIVISION
4200 Smith School Road
Austin, Texas 78744

Management Data Series
No. 41
1990



OCCURRENCE OF GOLDFISH IN TEXAS
SALT WATER

by

Gary C. Matlock

MANAGEMENT DATA SERIES

No. 41

1990

Texas Parks and Wildlife Department
Fisheries Division
4200 Smith School Road
Austin, Texas 78744

ABSTRACT

Goldfish (Carassius auratus) are not indigenous to Texas, but they occur in many freshwater environments in Texas. The species' range in Texas is extended to Galveston Bay with the capture of an individual (88 mm TL) on 5 June 1989 during routine bag seining operations by the Texas Parks and Wildlife Department. This fish probably does not represent an established breeding population in Texas salt water.

INTRODUCTION

The topic of exotic species continues to garner much attention throughout the United States. Recent legislation in Texas (Senate Bill 1507, 71st Legislature) and subsequent rules by the Texas Parks and Wildlife Commission established a comprehensive philosophy that addresses this issue. Included in the legislation was a mandate to identify harmful and potentially harmful exotic (nonindigenous) species of fish, shellfish, and aquatic plants; possession of these would be prohibited or allowed only by permit. This mandate requires a categorization of species into indigenous and exotic (Harvey et al. 1989). Exotic species are further divided into harmful (including potentially harmful) and non-harmful groups. Among the criteria developed by the Texas Parks and Wildlife Department (TPWD) for deciding into which category an exotic species should be placed is the documented occurrence in Texas public waters. This criterion also will be used to consider additions to the exotic species list. Therefore, it is important to document occurrences of exotic species in Texas, especially as they first occur. This note accomplishes this objective for goldfish (Carassius auratus) in Galveston Bay, Texas.

Goldfish are not indigenous to Texas, and they are not classified as a harmful or potentially harmful exotic species by TPWD. Robins et al. (1980) concluded the species was introduced into North America from eastern Asia. Natural breeding populations are now widespread throughout this continent, including Texas (Toole 1951, Hubbs 1982). Goldfish occur in many freshwater environments in Texas (TPWD unpublished data). They are an integral part of the aquaculture industry in Texas and are sold for use in aquaria, as bait by anglers, as forage in fish production facilities, and for algal and plant control in small ponds.

MATERIALS AND METHODS

The TPWD has been conducting routine sampling of Texas bays and the adjacent Gulf of Mexico using gill nets, trammel nets, bag seines, oyster dredges, and shrimp trawls since about 1975 (Dailey et al. 1988). The catches of sport anglers have also been sampled by TPWD by interviewing anglers at boat ramps and fishing sites and inspecting their landings at the completion of fishing trips since 1974 (Maddux et al. 1989). All fishes encountered during each collection and interview have been identified. The data collected have been computerized and stored on magnetic tape. Data collected during these routine programs from 1 January 1974 through 1 January 1990 were searched for any listing of goldfish.

RESULTS AND DISCUSSION

On 5 June 1989, one goldfish (88 mm TL) was caught during TPWD routine sampling of Texas bays in an 18.3-m long bag seine at

29°37'00" N latitude, 94°56'20" W longitude in Galveston Bay, Texas. Hydrographic conditions at the time of capture included 0 o/oo salinity, 27.4 C, and 6.9 ppm dissolved oxygen.

The source of this fish is unknown, but it probably does not represent an established breeding population in Texas salt water. Its size (88 mm), salinity in which it was captured, and the absence of the species in more than 12,000 randomly selected bag seine collections coastwide since 1978 (Dailey et al. 1988) support this conclusion.

LITERATURE CITED

- Dailey, J. A., P. C. Hammerschmidt, and L. W. McEachron. 1988. Trends in relative abundance and size of selected finfishes in Texas bays: November 1975-December 1987. Management Data Series Number 155. Texas Parks and Wildlife Department, Coastal Fisheries Branch. Austin, Texas.
- Harvey, W. D., R. W. Neck, N. J. Johnson, G. P. Garrett, R. G. Howells, and T. J. Cody. 1989. A list of indigenous fish, shellfish, and aquatic plants species in Texas. Management Data Series Number 9. Texas Parks and Wildlife Department, Fisheries Division. Austin, Texas.
- Hubbs, C. 1982. A checklist of Texas freshwater fishes. Technical Series 11. Texas Parks and Wildlife Department. Austin, Texas.
- Maddux, H. R., H. R. Osburn, D. L. Trimm, and K. W. Spiller. 1989. Trends in finfish landings by sport-boat fishermen in Texas marine waters, May 1974-May 1988. Management Data Series 8. Texas Parks and Wildlife Department, Fisheries Division. Austin, Texas.
- Robins, C. R., R. M. Bailey, C. E. Bond, J. R. Brooker, E. A. Lachner, R. N. Lea, and W. B. Scott. 1980. A list of common and scientific names of fishes from the United States and Canada. 4th ed. American Fisheries Society, Special Publication Number 12.
- Toole, M. 1951. Fishes of Texas. Texas Game, Fish, and Oyster Commission. Austin, Texas.

PWD-RP-3400-337-11/90

Dispersal of this publication conforms with Texas State Documents Depository Law, and it is available at Texas State Publications Clearinghouse and Texas Depository Libraries.