

THE LIVE FISH COLLECTION AT THE AQUARIUM OF THE UNIVERSIDAD  
AUTONOMA DE NUEVO LEON, MEXICO

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This article is to inform readers of what native fish species are maintained in captivity at the Museo de Historia Natural, Facultad de Ciencias Biologicas, Universidad Autonoma de Nuevo Leon (FCB, UANL). The museum, which is coordinated by David Lazcano, features 24 herpetological exhibits and 21 aquarium exhibits. The herpetarium section was opened to the public in September 1984, and the aquarium section was opened to the public in May 1986. Both sections have reserve areas also.

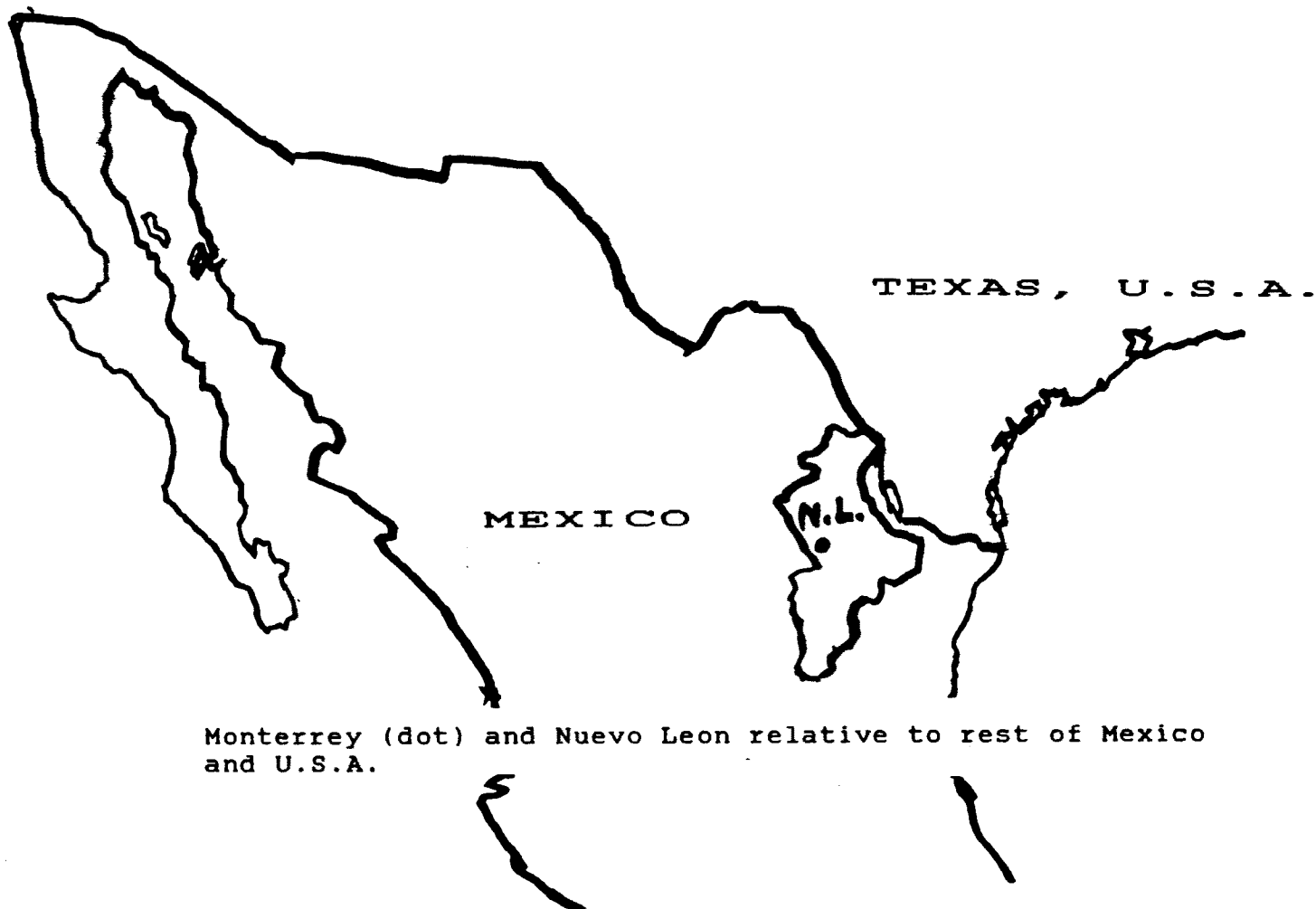
Most of the museum's visitors fall into two groups: elementary school pupils and university students. Our fish collection is divided into the following categories: ornamental fishes, fishes used for human consumption, sport fishes, and finally--but for us the most important--native fishes. We have at least 50 species of freshwater fishes, many of them endangered, threatened, or of special concern (Williams et al., 1989). In order to emphasize the importance of the native fish species whose status is endangered, threatened, or of special concern, we plan on developing additional space in the aquarium for them in the near future.

One of the native fish families we exhibit are the poeciliids. They include the Monterrey Platy, Xiphophorus couchianus (Girard, 1859), which is endemic to the metropolitan Monterrey, Nuevo Leon area, found only in three localities (small springs) out of the ten in which it has been recorded. We have specimens of the Northern Platy, X. gordonii (Miller and Minckley, 1963) from Cuatrociénegas, Coahuila, as well as specimens of the Muzquiz Platy, X. meyeri (Schartel and Schroeder, 1988) from Musquiz, Coahuila. All these platy species, which represent the northern platy complex, are considered endangered primarily because of habitat loss and the introduction of non-native species. As a result, these native platy species have suffered from reduced reproductive rates, hybridization, or outright extermination.

Other poeciliids we have in the collection include the Slender Pygmy Swordtail, X. pygmaeus (Hubbs and Gordon, 1943), which has a limited distribution in the state of San Luis Potosi. We also have the Tamesi Molly (Poecilia latipunctata) (Meek, 1904) from Tamaulipas, which is considered of special concern; the Guayacon (Gambusia longispinis (Minckley, 1962) endemic to Cuatrociénegas Basin, Coahuila, exceedingly secretive and considered threatened; and we also have Gambusia sp. (lacking more investigation) from Musquiz, Coahuila.

Another family represented in our collection are the Cyprinodontidae (killifish) of the Cyprinodon alvarezii complex, which are endemic to the southern portion of Nuevo Leon. They include the Potosi Pupfish, C. alvarezii; the Charco Azul Pupfish, C. veronica; the Palm Pupfish, C. longidorsalis; and the endemic Pygmy Pupfish, Megupsilon aporus (Miller and Walters, 1972). All these species are considered endangered, primarily because of over-exploitation of the waters that supply the springs. All these species, as well as the threatened Cyprinodon nazas, from Aquila, Chihuahua, have been maintained and reproduced in captivity since 1983 at the Aquaculture Laboratory (FCB, UANL), under the direction of M. Sc. Arcadio Valdez Gonzales. The laboratory is in the process of creating the "Centro de Resguardo para Peces en Peligro de Extincion" (Guard Center for Endangered Fishes).

We also maintain a number of species of the family Goodeidae, including the Darter Goodeid, Allodontichthis polylepis, from Guachinango in the state of Jalisco; the Speckled Sawfin Goodeid, Skiffia multipunctata (Pellegrin, 1901); the Golden Bumblebee Goodeid, Allotoca dugesi (Bean, 1877), from the state of Michoacan; the endangered Striped Goodeid, Ataeniobus toweri (Meek, 1904) from San Luis Potosi; and the threatened Black Rainbow Goodeid, Characodon audax



(Smith and Miller, 1986) and the endangered Red Rainbow Goodeid, C. lateralis (Gunther, 1866), both from the state of Durango. Of special note is the Opal Allotoca, Allotoca maculata (Smith and Miller, 1980) from west of Guadalajara, Jalisco, which was declared extinct in 1984 (Miller et al., 1989) and rediscovered in 1990.

The remainder of the native-species collection that we exhibit are the Rio Grande Darter, Etheostoma grahami, from Nuevo Leon and Coahuila, which is classified as of special concern; Mexican Tetra, Astyanax mexicanus; Channel Catfish, Ictalurus punctatus; Longear Sunfish, Lepomis megalotis; and Rio Grande Cichlid, Cichlasoma cyanoquittatum. These last four species, because of their wide distribution, are a significant part of the regional ichthyofauna.

Due to space limitations, we can only handle small numbers of fish, of species that are relatively easy to breed and maintain in small aquariums.

With the present condition of progressive deterioration of natural habitat, the role of museums and zoos will take greater importance in public education and captive-conservation programs. The public has been hearing about conservation and ecology for decades, but the importance of this topic must be constantly reiterated.

#### References

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