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SHORT COMMUNICATION

FIRST RECORD IN HONDURAS OF THE HALFBEAK *HYPORHAMPHUS ROBERTI HILDEBRANDI*, JORDAN AND EVERMAN 1927, (HEMIRAMPHIDAE) COLLECTED IN AN INLAND RESERVOIR

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Introduction

An inhabitant of tropical America, the Central American halfbeak (*Hyporhamphus roberti hildebrandi*), is one of 2 subspecies of halfbeaks of the subgenus *Hyporhamphus* (Collette 2003, Collette 2004) that belong to the family Hemiramphidae. This family has representatives from the Atlantic, Pacific, and Indian Oceans (Greenfield and Thomerson 1997, Berra 2001, Collette 2004), and nearly all species are marine; however, some Hemiramphidae species in the Indo-Australian region are restricted to freshwater (Greenfield and Thomerson 1997).

The distributional range of *H. r. hildebrandi* extends along the Caribbean coast of Central America from Mexico to the Gulf of Uraba in Colombia (Collette 2004, Miller et al. 2005). The sub-species is considered marine and estuarine, commonly found in mangrove forests (Greenfield and Thomerson 1997), and coastal lagoons (Schmitter-Soto 1998, Díaz-Ruiz et al. 2003, Collette 2004). For example, they have been collected in the Laguna de Bacalar in southern Mexico (Schmitter-Soto 1998) and the Tortuguero National Park in Costa Rica (Winemiller and Leslie 1992).

Previous specimens collected in Honduras have been from estuarine and marine systems or from freshwater systems with a direct connection to brackish or marine water (see NeoDat, http://www.neodat.org). Here, we report the first record of *H. r. hildebrandi* in Honduran freshwater (see Reis et al. 2003) as well as in a landlocked freshwater body of water.

Materials and Methods

In January 2003, three specimens of *H. r. hildebrandi* were collected by personnel from the Honduras Center of Studies of Contaminants Control (CESCCO) along the shore of the Francisco Morazán El Cajón ("El Cajón") reservoir. El Cajón is located in northeastern Honduras (Figure 1) at 15°04'N, 87°33'W (Central Offices), at an altitude of 285 m above sea level, between the municipalities of Santa Cruz de Yojoa in the department of Cortés, Victoria in the department of Yoro, and Lagos, La Libertad, Minas de Oro y Meámbar in the department of Comayagua. The reservoir spans an area of 94 km^2 with a perimeter of 469.7 km, and a maximum depth of 185 m.

Specimens were collected as part of a field assessment following a fish-kill and were dead upon collection. Specimens were immediately fixed in 10% formalin, rinsed in tap water, and then transferred to 70% ethanol for preservation. Standard length (SL, mm) was measured using digital calipers and specimens were weighed (wet weight, g). Fish were identified based on standard characters (Greenfield and Thomerson 1997) and deposited in The University of Southern Mississippi Museum of Ichthyology (voucher number: USM 31216).

To determine the presence of the sub-species in other Central America freshwater bodies of water, we queried NeoDat (http://www.neodat.org), an internet database specializing in collections of neotropical fishes.

Results

Three specimens of *H. r. hildebrandi* were collected and identified based on the following combination of characteristics (Greenfield and Thomerson 1997): lower jaw much longer than rest of head but shorter than half of the standard length; scales absent or only a few present on anterior part of the dorsal and anal fins, total gill rakers on first arch more than 38; dorsal plus anal rays usually total more than 30. Specimen identification was confirmed by B. Collette (Collette pers. comm., National Marine Fisheries Service Systematics Laboratory, Washington, DC, USA). Standard length and wet weight of fish were 124.4, 122.5, and 116.7 mm; and 7.6, 6.8, and 5.4 g, respectively.

Results from the database queries conducted showed that *H. r. hildebrandi* has been collected in Mexico, Belize, Guatemala, Honduras, Costa Rica, and Panama. Most of these collections came from coastal ecosystems. Unreported collections of *H. r. hildebrandi* from fresh-

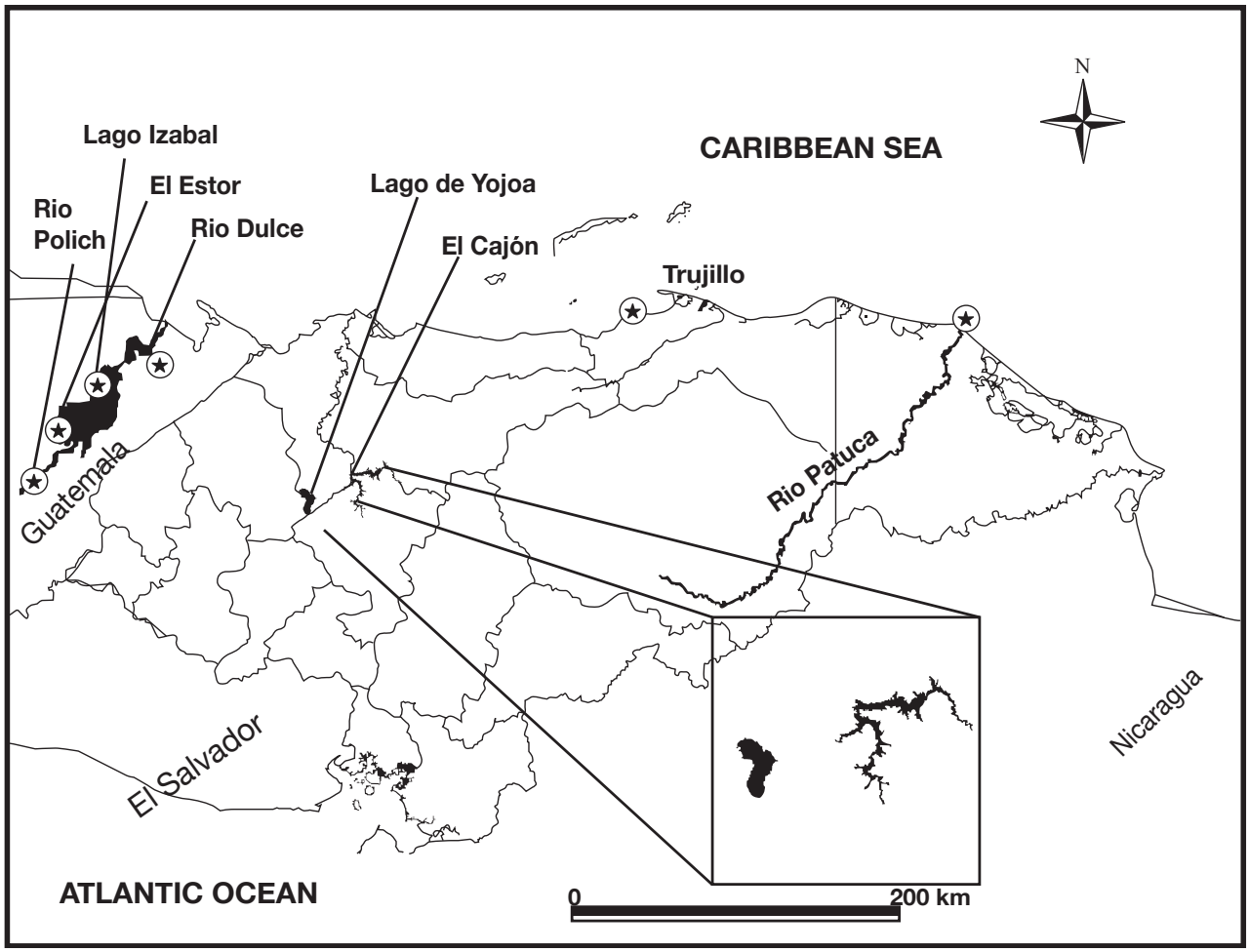

Figure 1. Map of Honduras showing the location of the hydroelectrical dam "El Cajón" and Lake Yojoa. Circled stars depict locations of previous unreported collections of *H. r. hildebrandi* in Honduras and Guatemala.

water systems that have direct connections to brackish waters including the following localities in Guatemala: Lake Izabal (USNM-114261, USNM-134705), Río Dulce (UMMZ-197188), Río Polochic (AMNH-35043, CAS-45429), and El Estor (USNM-134706). An additional site was located in the Río Patuca (UMMZ-199576) in Honduras and a site in Honduras located 30 km east of Trujillo (B. Collette, pers. comm., see Figure 1).

DISCUSSION

In Central America, Honduras is quite possibly the country with the least studied ichthyofauna. The need for systematic studies of Honduras freshwater fishes has been clearly recognized (Carr and Giovannoli 1950, Miller 1966). Recently, Lyons (2005) who focused on a disjunct distribution of the genus *Sicydium* in Mexico and Central America emphasized the need for a stronger knowledge base of the ichthyofauna in Honduras. Accordingly, it would not be surprising to discover range expansions of fishes in Honduras or other regions where ichthyological research is scarce. The novelty, however, is to encounter in an inland freshwater body a species from a family of fishes that is thought to primarily exist in coastal and marine waters.

Museum records demonstrate the presence of *H. r. hildebrandi* in coastal lagoons and marine environments of Honduras, as well as freshwater in Guatemala. Specimens collected in Lake Izabal and along river systems in the region, document the presence of the species in Guatemalan freshwater systems with connections to brackish water (Miller 1966). Yet, our report documents the first record of *H. r. hildebrandi* from an inland, landlocked, freshwater system, indicating the species may be established and recruiting in freshwater. It is unknown at what point *H. r. hildebrandi* may have been established in El Cajón, since the reservoir was constructed in 1985,

and no data exist in relation to the status of ichthyofauna diversity both before and after the dam was built.

Lake Yojoa, another freshwater body near El Cajón, was surveyed by Martin (1972) and Cruz (1985), but the presence of *H. r. hildebrandi* was not reported in their surveys. Currently this species is common in the littoral zone of the lake (W. Matamoros, pers. obs.), and we infer that the arrival of *H. r. hildebrandi* in the area happened after 1985. However, the means of dispersion employed by the species *H. r. hildebrandi* to expand its range is unknown.

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