

UNUSUAL OCCURRENCE OF A GREEN STURGEON, *ACIPENSER MEDIROSTRIS*, AT EL SOCORRO, BAJA CALIFORNIA, MÉXICO

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ABSTRACT

In December 2008, a green sturgeon (*Acipenser medirostris*) occurred 200 km south of Bahía de Todos Santos, Baja California (México), the southern limit of its known distribution. This green sturgeon (152 cm total length, TL) is the first documented northwest of Baja California in 27 years of samplings. The movement southward was possibly in response to the 2008 La Niña conditions that prevailed in the California Current.

INTRODUCTION

The green sturgeon, *Acipenser medirostris* (Ayers 1854), was named “medirostris” or “middle snout” due to its long rostrum compared to other sturgeon species. It is

anadromous and lives primarily in marine waters, benthic and long-lived inhabiting shallow sand and mud bottoms (Love 1996), and spawns in shallow freshwater (Erickson et al. 2002). Distribution of the green sturgeon ranges from Ensenada, Baja California (México), to the Bering Sea and Japan (Miller and Lea 1972). It is now considered a different species from the Sakhalin sturgeon (*A. mikadoi*) present in Japan (Erickson et al. 2002). The green sturgeon is divided into two genetically distinct breeding populations, a northern distinct population segment (DPS) that spawns in the Rogue River (Oregon), Klamath River and Eel River (California), and a southern DPS that spawns in the Sacramento River, California (Klimley et al. 2007). Spawning

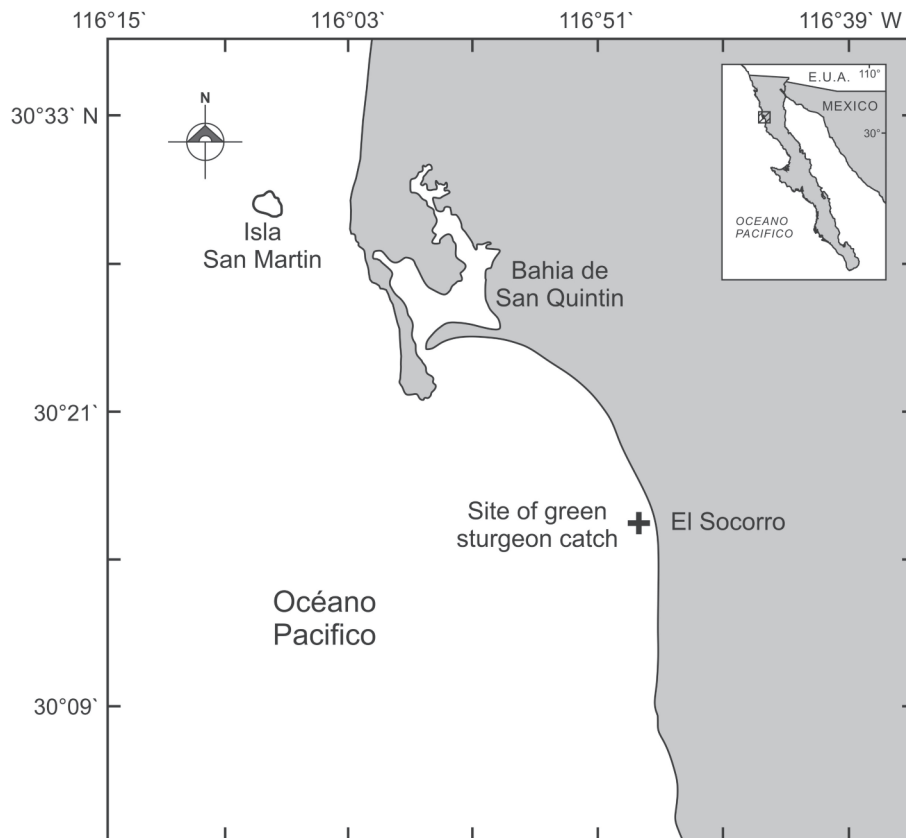


Figure 1. Map of the El Socorro coast in Baja California, México, showing the catch site of the green sturgeon (*Acipenser medirostris*).

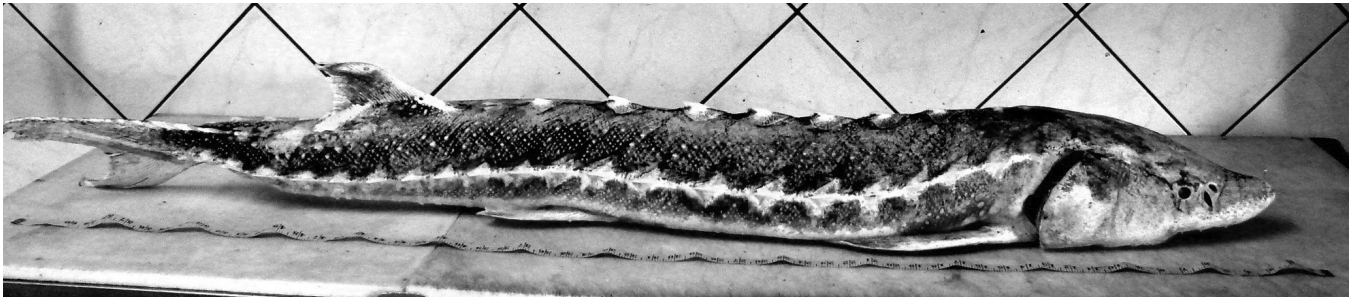


Figure 2. Green sturgeon (*Acipenser medirostris*) caught off the El Socorro coast. Measuring tape (bottom) is 160 cm length.

areas of the southern DPS green sturgeon have been lost due to the Shasta dam construction on the Sacramento River. This DPS now has to spawn outside of its natural habitat, increasing its vulnerability to overharvesting (Adams et al. 2007). The southern DPS is listed as threatened under the Endangered Species Act (Adams et al. 2007).

METHODS

A green sturgeon was captured with a commercial gillnet (17 December 2008) on the El Socorro coast (30°17'12.6N, 115°49'12.6W) located 30 km south of San Quintín, Baja California, México (fig. 1), and 200 km south of Ensenada, Baja California (Bahía de Todos Santos, 31°48.5'N, 116°42'W), its known southern distribution limit (Miller and Lea 1972; Love 1996). Surface-water temperatures at the site were 16.1°–17.7°C. This fish was 152 cm total length (TL) with a somatic weight of 19 kg, and it was identified as green sturgeon by the combination of the following characteristics (Miller and Lea 1972): body coloration was olive green; dorsal plates: eight; midlateral plates: 23; ventral plates: eight; dorsal fin rays: 33; and anal fin rays: 22. Four barbells were located in front and close to the mouth (fig. 2). All these characteristics distinguish and separate it from the white sturgeon (*A. transmontanus*), another species whose southern distribution is Bahía de Todos Santos.

Fish studies at Bahía de Todos Santos began in 1982 in the Estero de Punta Banda (Beltrán-Félix et al. 1986) in kelp beds (Díaz-Díaz and Hammann 1987), soft bottoms (Hammann and Rosales-Casián 1990), and from the sportfishing catch (Rodríguez-Medrano 1993). Other fish-community research has been conducted at Bahía de Todos Santos, and Bahía and Costa de San Quintín (1992–95), with beam trawl, otter trawl, beach seine, gillnet, and hook-and-line trawls (Rosales-Casián 1997a,b; Rosales-Casián 2004a). Also, artisanal fisheries were sampled at eight sites along the northwestern coast of Baja California (Rosales-Casián and Gonzalez-Camacho 2003). No sturgeon was collected during those studies. However, during an ongoing study at the seafood mar-

ket in Ensenada (15 March 2003), a male white sturgeon captured at Bahía de Todos Santos was registered (Rosales-Casián and Ruz-Cruz 2005).

CONCLUSIONS

With respect to the green sturgeon, its unusual occurrence at El Socorro, Baja California, México, is important because this extends its geographical range 200 km to the south. Its presence there may be due to the 2008 La Niña conditions that prevailed in the California Current (McClatchie et al. 2008). Northern fish species can migrate southward during La Niña, in a similar way to movements of tropical species northward during El Niño conditions (Pondella and Allen 2001; Rosales-Casián 2004b).

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