

**FIRST FRESHWATER RECORD OF PACIFIC LAMPREY,
LAMPETRA TRIDENTATA,
FROM BAJA CALIFORNIA, MEXICO**

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An ammocoete of the Pacific lamprey, *Lampetra tridentata*, was collected on 19 February 1995 in the lower Rio Santo Domingo, Baja California, Mexico, approximately 600 m above its mouth at Bahia San Ramon, 6 km west of Vicente Guerrero (30°43'N, 116°02'W; Fig. 1). This species had not been previously reported from freshwater in Baja California (Follett 1960, Castro-Aguirre 1978, Ruiz-Campos and Contreras-Balderas 1987, Page and Burr 1991). The **previous** southernmost known freshwater record for this species is the Santa Ana River in southern California (Jordan and Evermann 1896, Swift et al. 1993).

The Pacific lamprey is an anadromous species distributed from Hokkaido, Japan, through the Bering Sea and Aleutian Islands (Hart 1973) to Punta Canoas, Baja California, Mexico (Hubbs 1967, Miller and Lea 1972). This species commonly spawns in the rivers of western North America from Alaska to southern California (Hubbs and Potter 1971). In southern California, this species still maintains runs in several unaltered creeks from the Carmel River south to the Santa Ana River (Swift et al. 1993). Its habitat requirements and distribution are similar to those of the anadromous rainbow trout, *Oncorhynchus mykiss*, in southern California (Swift et al. 1993). The ammocoete lacks a sucker and lives buried in the mud, feeding on micro-organisms for about 5 yr. After metamorphosis, the young adult (about 135 mm total length [TL]) migrates downstream to the sea (Hardisty and Potter 1971).

Hubbs (1967) recorded the first marine occurrence of Pacific lamprey in Baja California, 55 km southwest of Punta Canoas (28°58'N, 115°25'W). The specimen, a juvenile male 170 mm TL, was captured during a pelagic research trawl along with Pacific hake, *Merluccius productus*. Hubbs (1967:304) speculated that the juvenile lamprey "hitch-hiked a ride on a hake" from "one of the streams tributary to Monterey Bay, central California, the southernmost streams in which any massive spawning of the species has been recorded." Our specimen of Pacific lamprey from the lower Rio Santo Domingo represents the southernmost freshwater record of this species in western North America.

The specimen was captured with a minnow seine at a branch in the stream, 5 m wide, 40 cm deep, bottom of sand and gravel, and salinity 0.3 ppt, flowing into a lagoon near the mouth of Rio Santo Domingo. The ammocoete (126.5 mm TL, 3.0 g) was preserved in 10% formalin and identified by the following diagnostic

RECORD OF PACIFIC LAMPREY, *PETROCHILUS TRIDENTATUS*, IN BAJA CALIFORNIA, MEXICO

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Lampetra tridentata, was collected on the mouth of the Río Santo Domingo, Baja California, Mexico, near the town of San Ramon, 6 km west of Vicente Guerrero. This species had not been previously reported from Baja California (Castro-Aguirre 1978, Ruiz-Campos and Castro-Aguirre 1991). The previous southernmost record of this species was the Santa Ana River in southern California (Swift et al. 1993).

This species is distributed from Hokkaido, Japan, to Baja California (Hart 1973) to Punta Canoas, Baja California Sur (Lea 1972). This species commonly occurs from Alaska to southern California. In Baja California, this species still maintains runs in the Santa Ana River (Swift et al. 1993). The distribution of Pacific lamprey in Baja California are similar to those of the Pacific lamprey in southern California (Swift et al. 1993). The young lives buried in the mud, feeding on organic matter (Hardisty and Potter 1971).

The occurrence of Pacific lamprey in Baja California is at 28°58'N, 115°25'W. This specimen was collected during a pelagic research trawl along with other specimens (UABC-304) speculated that the juvenile Pacific lamprey in "one of the streams tributary to the Santa Ana River in the most streams in which any massive runs of Pacific lamprey occur. Our specimen of Pacific lamprey from Baja California is the southernmost freshwater record of this species.

The specimen was collected in a net seine at a branch in the stream, 5 m from the mouth, and salinity 0.3 ppt, flowing into a stream. The ammocoete (126.5 mm TL), was identified by the following diagnostic

characteristics (Hubbs 1967, Hart 1973, Page and Burr 1991): hood surrounding the mouth, toothless mouth, nasal pit, confluent gill openings, and body brown on sides and back and light silver below. Measurements (proportions of TL) and counts of the specimen are as follows: tail length, 0.289; body depth, 0.058; branchial length, 0.111; height of first dorsal (with fleshy base), 0.006; height of second dorsal (with fleshy base), 0.014; length of first dorsal, 0.153; and number of trunk myomeres, 67.

The specimen (UABC-0111) is deposited in the Fish Collection, Facultad de Ciencias, Universidad Autonoma de Baja California, at Ensenada, Baja California, Mexico.

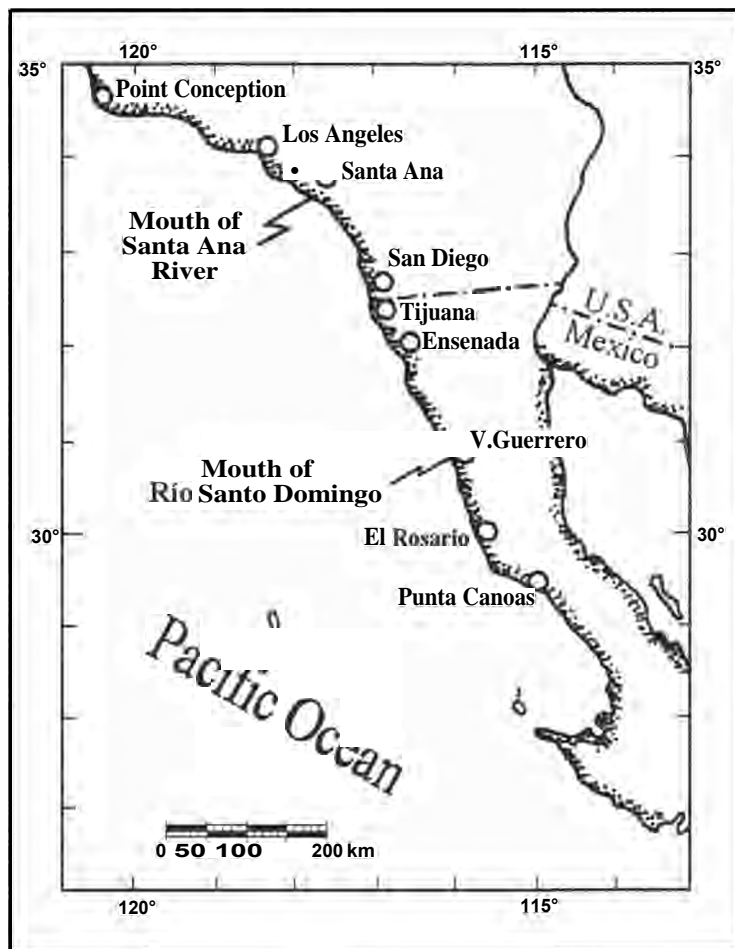


Figure 1. Map showing the geographical location of the mouth of Rio Santo Domingo, Baja California, Mexico.

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