

FRESHWATER BIVALVES OF THE LOWER RIO GRANDE SYSTEM, UNITED STATES AND MEXICO. Raymond W. Neck, Texas Parks and Wildlife Department, Austin, Texas, and Art L. Metcalf, Department of Biological Sciences, University of Texas at El Paso.

The Rio Grande system is one of the longer river systems of North America. Few field studies have covered this system because of its distance from centers of malacological study and the paucity of the bivalve fauna. This study was restricted to the lower Rio Grande from Falcon Reservoir to the Gulf of Mexico.

Species known from this lower portion of the Rio Grande are as follows: *Anodonta imbecillis henryiana* (Lea, 1857); *Anodonta grandis* (Say, 1829); *Unio merus tetralasmus manubius* (Gould, 1855); *Megaloniais gigantea* (Barnes, 1823); *Quadrula apiculata* (Say, 1829); *Popenaias popei* (Lea, 1857); *Cyrtonaias tampicoensis berlandieri* (Lea, 1857); *Toxolasma parvus* (Barnes, 1823); *Lampsilis teres* (Rafinesque, 1820); *Disconaias salinasensis* (Simpson, 1908); and *Corbicula fluminea* (Müller, 1774).

Most abundant species are *C. t. berlandieri*, *A. imbecillis* and *C. fluminea*. *U. t. manubius* has apparently not been collected since the original lot was procured from northern Mexico. *C. fluminea* may be locally abundant in faster-moving water in the Rio Grande and wave-washed shores of Falcon Reservoir. Several species (*M. gigantea*, *P. popei* and *D. salinasensis*) are known only from the Rio Grande proper.

Human impact upon the bivalve fauna of the lower Rio Grande has been varied. Most important is control of floods via a system of levees to contain high water flows, draining of certain resacas (abandoned river channels), agricultural and urban runoff, construction of Falcon Reservoir, and a button industry utilizing *C. t. berlandieri*.

Native bivalves of the lower Rio Grande are derived from two zoogeographical realms: Mississippian or Central Basin to the northeast, and the Mexican Gulf Coast to the south. Relatively few species have their affinity to the south. Close approach of low-elevation mountains to the Mexican coast has apparently restricted coastal plain stream migration. Therefore, few southern species occur in the lower Rio Grande.