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JUVENILE RAZORBACK SUCKER (*XYRAUCHEN TEXANUS*) IN A MANAGED WETLAND ADJACENT TO THE GREEN RIVER

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Key words: razorback sucker, floodplain, wetland, juvenile.

The razorback sucker (*Xyrauchen texanus*) is a large, endemic catostomid of the Colorado River drainage. It was once widespread and abundant throughout the basin (Minckley et al. 1991). Species abundance and distribution declined following construction of mainstem dams and the introduction of many nonnative fishes (Behnke and Benson 1983, Carlson and Muth 1989). The razorback sucker was federally listed as endangered in 1991 (USFWS 1991).

The largest riverine population of razorback sucker is in the middle Green River (Lanigan and Tyus 1989). These fish spawn successfully (Tyus and Karp 1990), but Lanigan and Tyus (1989) reported little or no recruitment. Razorback sucker larvae in the Green River drift downstream from spawning sites (Robert Muth, Larval Fish Laboratory, Colorado State University, Fort Collins, CO), but few juveniles have been found and little is known of their habitat needs. Taba et al. (1965) captured 8 juveniles (90–115 mm total length [TL]) from Colorado River backwater habitat in surveys from 1962 to 1964 between Moab and Dead Horse Point, Utah. More recently, Gutermuth et al. (1994) collected 2 juveniles (37 mm and 39 mm) from a lower Green River backwater in 1991 and 2 others (59 mm and 29 mm) in a backwater on the Ouray National Wildlife Refuge in 1993 (Robert Muth, Larval Fish Laboratory, Colorado State University, personal communication). This note reports occurrence of juvenile and adult razorback suckers in a wetland adjacent to the Green River in Utah.

Old Charley Wash is a 60-ha wetland on the Ouray National Wildlife Refuge in Uintah County, northwest Utah, adjacent to river kilometer (RK) 402 on the Green River. The wash is a historical type IV wetland (Cowardin et al. 1979) with smartweed (*Polygonum sp.*) and

sago pond weed (*Potamogeton pectinatus*) being the primary aquatic plants. The natural levees of the wetland have been reinforced with dikes to retain water through the summer and fall periods. Water in- and outflow is controlled at flows <481 m³/s. Water enters the inlet at river flows of approximately 240 m³/s. Typical management is to fill in spring and then maintain water through the summer and autumn.

The outlet structure at Old Charley Wash was modified in April 1995 to facilitate fish capture by creating a drainable, 12-m concrete-lined channel in which fish could be concentrated and captured with seines.

Spring flow of the Green River peaked at about 595 m³/s in 1995 and inundated Old Charley Wash between 23 May and 1 July. Inundation was at flows >481 m³/s. The wash was dry prior to inundation. Maximum depth of the wetland was >2 m. Fish in the wetland were isolated from the river; when runoff subsided, no additional water was added. Fishes were sampled by fyke and trammel nets, minnow and light traps, and seines. Collections were weekly from 23 May to 1 July and every 2 wk from 2 July to 31 August. The wetland was drained from 25 September to 12 October, and fishes were collected from the outlet every other day during the first 2 wk and daily (except 9 October) during the 3rd week. Twenty-eight juvenile razorback sucker were collected when Old Charley Wash was drained in the fall of 1995 (\bar{x} = 94 mm TL [range = 74–125 mm] and 9.5 g [range = 3–18 g]; voucher specimens, catalog number LFL 24874, Larval Fish Laboratory, Colorado State University). Eight (461–525 mm TL; 1034–1650 g) adults also were captured, 6 prior to and 2 during the draining process. A total of 10.1 metric tons of

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fish were collected during draining. The following species were represented in order of contribution by weight: *Cyprinus carpio*, *Pimephales promelas*, *Lepomis cyanellus*, *Ictalurus punctatus*, *Ameiurus melas*, *Cyprinella lutrensis*, *Pomoxis nigromaculatus*, *Xyrauchen texanus*, *Esox lucius*, *Gila atraria*, *Catostomus latipinnis*, *Catostomus commersoni*, *Ptychocheilus lucius* (7 individuals ranging in TL between 175 and 207 mm, and weight from 33 to 62 g), *Gila robusta*, and *Culaea inconstans*.

Tyus and Karp (1990) reported that razorback sucker spawn on the ascending limb of the hydrograph, allowing drifting larvae to disperse during peak runoff and thus maximizing access to wetland habitats. It is unknown whether the juveniles collected during draining originated from riverine spawning sites or were produced in Old Charley Wash. However, their occurrence in Old Charley Wash in 1995 supports speculation (Tyus and Karp 1990, Modde et al. 1966) that floodplains may be important razorback sucker nursery areas.

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