

1B. AQUATIC RESOURCE SURVEY FOR LOWER COSUMNES AND MOKELUMNE RIVERS: FISHES

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The lower Cosumnes River is tidal and contains a diversity of permanent freshwater habitats, but it is mostly shallow (<2 m) slough habitat that is lined with riparian forest, with large amounts of woody debris in the water, and channels that are often clogged with aquatic plants (mainly the invasive Brazilian waterweed, *Egeria densa*). The mainstem Cosumnes in this region in summer is very shallow (< 1m) and sandy bottomed. Above the tidal reach, it is dry in summer.

This region was extensively sampled for fish during the five year study period using seines and electrofishing but most of this data is summarized in Section 3 because it was used for comparison with the use of floodplain habitats by fish. Likewise, data for the Mokelumne River is summarized in the next section because the channelized, regulated river presents relatively uniform habitat from Woodbridge Dam to its confluence with the Cosumnes and then the Delta. In this section, therefore, only a summary of the electrofishing data (see Section 3 for details of methods) for adult and yearling fish is presented, because it is not discussed elsewhere.

Over the three years of quarterly sampling, 2457 fish were captured representing 31 species, of which 10 were native. (Table 1). The dominant species were aliens, especially centrarchids (bluegill, redear sunfish, largemouth bass), common carp, and two planktivores (threadfin shad and inland silverside). The most abundant native fish was Sacramento sucker, which were mostly captured as large (20-45 cm FL) adults. Splittail were rare and caught mainly in the spring sampling, indicating that they were living

elsewhere despite spawning on the floodplain. Overall, the species list is similar to that of the Delta, with sloughs dominated by fishes generally characteristic of similar habitats in eastern North America.

Species	2000		2001		2002	
	N	%	N	%	N	%
Pacific lamprey	0	0	3	<1	35	3
American shad	5	1	28	3	16	1
Threadfin shad	2	<1	88	10	8	<1
Hitch	6	1	8	1	1	<1
Sacramento blackfish	13	3	8	1	2	<1
Sacramento splittail	6	1	8	1	4	<1
Sacramento pikeminnow	28	7	7	1	5	<1
Golden shiner	54	13	27	3	86	7
Goldfish	4	1	3	<1	5	<1
Common carp	73	17	48	6	32	3
Sacramento sucker	72	17	143	7	54	4
Brown bullhead	0	0	1	<1	0	0
Black bullhead	1	<1	0	0	2	<1
White catfish	1	<1	2	<1	1	<1
Channel catfish	4	1	4	<1	13	1
Chinook salmon	0	0	2	<1	15	1
Rainbow trout	0	0	1	<1	12	1
Inland silverside	3	<1	166	20	55	4
Western mosquitofish	5	1	0	0	1	<1
Prickly sculpin	3	<1	1	<1	0	0
Striped bass	7	2	29	3	33	3
Bluegill	38	9	66	8	477	37
Redear sunfish	49	11	68	8	243	19
Hybrid sunfish	3	<1	2	<1	4	<1
Warmouth	0	0	0	0	1	<1
Black crappie	12	3	13	2	22	2
White crappie	0	0	17	2	0	0
Largemouth bass	28	7	74	9	98	8
Redeye bass	1	<1	7	1	1	<1
Spotted bass	5	1	13	2	58	5
Bigscale logperch	8	2	8	1	2	<1
Tule perch	2	<1	1	<1	0	0
Yellowfin goby	0	0	1	<1	1	<1

Table 1. Number and percentages of fishes caught in quarterly electrofishing samples in the lower Cosumnes River and connected sloughs 2000-2002.