



Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

Survival of Razorback Sucker Stocked into the Lower Colorado River, Final Project Report October 2004 - December 2005



August 2007

Lower Colorado River Multi-Species Conservation Program

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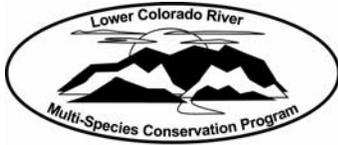
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Lower Colorado River Multi-Species Conservation Program

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River, Final Project Report
October 2004 - December 2005**

**Lower Colorado River
Multi-Species Conservation Program Office
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada
<http://www.usbr.gov/lc/lcrmscp>**

August 2007

Survival of razorback sucker stocked into the lower Colorado River

**Final Project Report
October 2004 - December 2005**

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Summary

Portions of the lower Colorado River, Parker Dam to Imperial Dam, were surveyed during the period October 2004 to December 2005 for presence of razorback sucker *Xyrauchen texanus*. The study area primarily encompassed areas of known razorback sucker occupation including the main river channel and confluent, watercraft-accessible backwaters and side channels in the counties of La Paz and Yuma, Arizona, and San Bernardino, Riverside, and Imperial, California. Methods were boat electrofishing, trammel netting, and hoop netting that resulted in contact with a total of 31,122 fish representing at least 22 species and including 654 razorback sucker encounters; 2.1% of the total catch. These encounters represent 592 individual fish, all of which are thought to have been repatriated. Five hundred fish were PIT tagged by ASU during the study period and 92 were tagged prior to the study period or prior to stocking. Mean total length was 37.7 cm (range 27.6 – 54.0). Sex ratios were 100 female, 169 male, 277 juvenile, and 46 unknown. Razorback sucker recapture occurrences have been sufficient for mark-recapture analysis and population estimation for three lower Colorado River backwaters.

Results to date suggest that overall post-stocking survival is low and few individuals persist longer than a few months after release. Predation by non-native fishes is presumed to be the major source of mortality, and this and other potential mechanisms of population depletion currently are under investigation.

Introduction

Razorback suckers have been repatriated to the lower Colorado River for nearly 30 years, but stocking size has recently been increased in attempt to meet survival requirements of a U.S. Fish and Wildlife Service Biological Opinion of lower river operations (USFWS 1997). Moreover, monitoring of these fish has been largely sporadic and incidental to sport-fish related activities. The purpose of this work was to assess survival of stocked fish by performing an intensive, opportunistic survey that targeted razorback suckers in approximately 237 km of river from Parker Dam downstream to Yuma. The intention was to collect multiple samples from areas of known razorback sucker occupation and to assess post-stocking survival, distribution,

and abundance of the target species. Population abundance of razorback sucker was to be estimated quantitatively using mark-recapture methods if adequate data were available.

Twelve interim trip reports on the study have been submitted to U.S. Bureau of Reclamation (USBR) (Table 1). This document satisfies the requirement for a final project summary, and represents a continuation of studies initiated in 2003 and reported by Schooley et al. (2004).

Study Area

The survey area for this project included 237 km of lower Colorado River (LCR) main river channel, backwaters, side-channels, reservoirs, and floodplain lakes between Parker Dam at river mile (RM)¹ 192 and Imperial Dam at RM 45. This reach of the LCR is partitioned into six USBR administrative divisions (Appx. A). Because of permitting issues, the primary survey area largely excluded waters within the boundaries of the Colorado River Indian Tribes (CRIT), approximately located between RM 180 and 125, Parker Division. With the exception of the CRIT, Arizona State University (ASU) sampling efforts have covered a large portion of the total survey area. Survey dates and locations are summarized in Table 1.

To optimize recapture rates, this study focused on sampling places of known razorback sucker occupation, which for this report has been categorized into two regions. The first of these is labeled here as the “stocking zone” (Appx. A Maps 1 & 2) located in the Palo Verde Division between the southern boundary of the CRIT and C-10 backwater, a reach of 24.4 km (15.25 RM). The zone includes six named backwaters (A-7, A-10, C-3, C-5, C-7, and C-10) and three unnamed backwaters. Razorback suckers were consistently repatriated only to A-7 backwater since year 2000, but in February 2005, additional stockings to A-10 backwater were initiated. Prior to 2000, fish were stocked at a variety of locations along the lower river (Minckley et al. 1991; Schooley et al. 2004; Schooley and Marsh in press).

¹ River miles are measured upstream from the Southerly International Boundary near San Luis, Arizona.

The second region addressed here includes all other captures outside the stocking zone. This suite of habitats is variable and is grouped simply due to convenience and the relatively low incidence of captures outside the stocking zone. Notable localities of known razorback sucker habitat include the Palo Verde Outfall Drain (Appx. A), located in the Cibola Division, which is the first major off-channel habitat 49.6 km (31 RM) downriver of the stocking site. Schooley, et al. (2004) and USBR (1976) provide details regarding channel modifications in this area. Survey efforts have consistently encountered razorback suckers in this area. Additionally, there are three small backwaters (<1 hectare total) located at RM 99-100 among which we encountered a total of 11 razorback suckers (Appx. A). These backwaters comprise the only off-channel habitat between the stocking zone and the Palo Verde Outfall Drain, possibly providing a valuable intermediate area between the two localities. Isolated captures of individual razorback suckers or of smaller groups have occurred in other localities.

Methods

Primary sampling methods were boat electrofishing and trammel netting, with the additional use of hoop nets in certain localities. Electrofishing (Smith-Root SR-18H package with GPP 7.0 pulsator) was conducted during evening and nighttime. Visual observations of habitat quality² were recorded for the main channel and backwaters.

Trammel nets (46 x 1.8 m x 3.8 cm mesh) were set in the evening, primarily fished overnight³, and retrieved the following day. Net set locations were chosen based on water depth (>1.5 m) and habitat (proximal to cover but free of submerged obstacles or debris). Net sites generally were in backwaters off the main channel. Nets were intentionally set in remote, slightly inaccessible locations to avoid watercraft traffic. Nominal time for setting and removing nets varied over a range of times depending on daylight cycles and catch.

Hoop nets (0.6 x 1.2 m x 0.6 cm mesh, double-hoop, single throat, no lead, or 1 x 3 m x 2 cm mesh, quad-hoop, double-throat, no lead) were set in similar fashion as trammel

² Habitat observations included factors such as water depth, temperature, electrical conductivity, total dissolved solids, flow, turbidity, cover, and both aquatic and riparian vegetative communities.

³ In areas of higher razorback sucker concentration or in elevated water temperatures (>20 C), trammel nets were often set and retrieved before and after dusk, respectively, as an attempt to reduce entanglement stress.

nets, but were used primarily in main-channel sampling. Hoop nets were baited with Aquamax ®, generally deployed for multiple days, and checked daily.

All fish were identified to species when possible and counted by life stage (age-0 [young-of-year plus small bodied species such as red shiner, mosquitofish, and mollies] and age-1+ [adult]) and method of capture. When applicable, native fish were individually measured (total length [TL], in cm), scanned for hatchery wire tag (WT) or passive integrated transponder (PIT) tag, sexed (male, female, juvenile, and unknown [for adults for which gender could not be reliably determined]), and examined for general health and condition. A PIT tag was implanted into the abdominal cavity of natives if none was present, and all fish were released near the site of capture. Voucher specimens up to a total of 10 individuals per non-native species⁴ were fixed in 10% formaldehyde prior to rinsing and preservation in 70% ethanol, and deposited into the ASU Collection of Fishes (Table 2). Exceptional individuals and others exhibiting key characteristics or other features were photographed to provide a permanent record.

Nighttime collections of larval razorback sucker followed well-established methods (Marsh and Langhorst 1988; Bozek et al. 1991; Mueller et al. 1993; Mueller 1995). Larval fishes (up to 25 specimens per locality) were preserved in 95% ethanol and deposited with Arizona State University School of Life Sciences for genetic analysis.

Data Analysis

Population estimates were calculated when possible using successive collections in backwaters. Single census (modified Petersen) estimates were calculated using the following formula:

$$N^* = \frac{(M+1)(C+1)}{R+1} - 1 \quad (\text{Ricker 1975})$$

Where M is the number of razorback suckers captured, PIT tagged if none was present and released (excludes mortalities) in a backwater during a single sampling trip, C is the number of razorback suckers captured in the subsequent sample of the same

⁴ This represents the total number of vouchers for the two-year study period.

backwater, and R is the number of razorback suckers that were caught during both sampling trips. Often the value of C had to be adjusted due to a stocking that occurred between sampling trips; see Schooley et al. (2005) for further discussion of this situation. Confidence intervals (95%) were calculated using the above formula, adjusting R as instructed by the Ricker table provided in Ricker (1975).

Partial-batch PIT tagging began in November 2004. Optimally, the largest 10% of each stocking batch was implanted with a PIT tag prior to release. During the study period, 90 razorback suckers that were tagged at release were later captured. Of these, only 65 were accurately sexed; 31 females and 34 males. The release and capture TL and time at large were used to compare growth in the lower river with Lake Mohave razorback suckers. An independent growth curve for lower river razorback suckers was not possible due to the small window of time at large that is represented by lower river capture data (all fish were less than a year at large). Instead, a graphical comparison was made by plotting lower river fish TL and time at large on published growth curves for male and female razorback suckers in Lake Mohave (Marsh et al. 2005).

Differences in size at release for fish stocked in the lower river compared to Lake Mohave (average size at release; Lake Mohave – 32.1 cm female, and 31.3 cm male, lower river – 38.6 cm females, 37.1 cm males) required an adjustment to time at large. The actual time at large for lower river fish was increased to reflect the greater size at release using the Lake Mohave growth curve to determine the length of time after release the average Mohave fish took to reach the lower river release averages. This resulted in an adjustment of 0.35 years for females and 0.32 years for males (e.g. if a female fish was caught 1 year after release from the lower river, 1.35 years since release was used for graphing purposes). An important distinction to make is that time at large was not adjusted so that capture total lengths fit the curve; only release total length was used to adjust time at large.

Mean species richness and mean species diversity (Shannon Index, H) were calculated from capture data for eight lower river backwaters for the period January 2003 to December 2004; the latter using the following formula:

$$H = -\sum p_i \ln(p_i)$$

where p_i is the observed relative abundance of species I (Meffe and Carroll 1997). These values represent the only cumulative analysis reported here, as all other analysis is restricted to the project period October 2004 to December 2005.

As a surrogate for fish density, catch per unit effort (CPUE) was used to graphically examine abundance of razorback sucker as well as striped bass *Morone saxatilis* and flathead catfish *Pylodictis olivaris*, the assumed two primary predators of stocked razorback sucker, across all sampling localities. Standardized units of effort were electrofishing: number of fish captured per 1,000 seconds real time and trammel netting: number of fish captured per 100 m² of net per 12 hours. No CPUE analysis was presented here, because hoop netting effort was sporadic with low catch rates,.

Results and Discussion

Field surveys on the lower Colorado River yielded 31,122 fish from October 2004 to December 2005 (Table 3). Razorback sucker encounters numbered 654, represented 592 individual fish (Tables 4, 5, 6, and Appx. B), and comprised 2.1% of the total catch. Though electrofishing represents nearly 71% of the overall catch (Table 3), a higher proportion of razorback suckers was encountered via trammel netting (74%).

Most fish (500) were marked by us with PIT tags and released near their capture site. The remaining 92 fish consisted of 90 PIT tagged prior to release and two fish tagged by ASU in the previous survey period. Total length averaged 37.7 cm (range 27.6 – 64.0). Sex ratios were 100 female, 169 male, 277 juvenile, and 46 unknown. There were 11 mortalities; six of which were fixed and preserved for later study. All razorback suckers are thought to be repatriated fish because 1) most contained wire hatchery tags, 2) 47% were juvenile, and 3) growth rate data suggest that a 37.7 cm razorback is 2 to 3 years old (Marsh et al. 2005).

Total length and weight histograms (Figs. 1 & 2) reveal a uni-modal distribution, with approximately half of razorback suckers falling into the < 35.0 cm and < 550 g categories. For further examination, length and weight categorical figures are presented

(Figs. 3-6) to illustrate proportional distribution of fish by mark status, gender, wire tag location, and gear type.

Although data were limited, growth for razorback suckers in the lower Colorado River appears to be similar to growth in Lake Mohave for males (Fig. 7) and females (Fig. 8). The lack of growth data beyond a year after release further supports a previously reported hypothesis that persistence of razorback suckers in the lower Colorado River is brief (Schooley and Marsh in press). However, the partial-batch PIT tagging of razorback suckers upon release has allowed at least this limited picture of growth, without which there would be little to analyze, since 90 of the 106 (85%) razorbacks listed as recaptures in the database were PIT tagged upon release.

Twenty-two recapture events⁵ were also recorded representing 21 individual fish. Fourteen of these fish were caught and recaptured in A-10 backwater upper section, two were captured and recaptured in A-7 upper, two were captured and recaptured in C-7, one was captured and recaptured in lower A-10, one was captured in C-7 and recaptured in A-7 upper, and one was captured and recaptured in C-5. Due to the low numbers of recaptures in most backwaters, only five population estimates were made during the study period; three for A-10 backwater upper section, and one each for C-7 backwater and A-7 backwater upper section (Table 7).

Survivorship estimates based on number of fish stocked and population estimates from mark-recapture data demonstrate that razorback suckers persisted for several months longer when released into A-10 upper compared to those released in A-7 upper. Survivorship as estimated here is actually a combination of survivorship and emigration because fish are free to leave the backwater via culverts connected to the river channel. However, few fish are captured outside the stocking zone, and calculated survivorship for A-7 is a conglomerate of all estimates available for the stocking zone at the time (C-7 and A-7), possibly containing the vast majority of fish alive from the stockings into A-7. In addition, more than 40,000 fish had been stocked into A-7 in the 5 years previous to the two stockings used for the survival estimate (Schooley et al. 2004), and long-term

⁵ Recaptures as denoted in the database and in Tables 4, 5, & 6 are any fish captured during the study period that had been previously PIT tagged. Recaptures noted here are fish that were captured and recaptured during the study period. PIT tags were either detected or injected during capture.

(more than a few months) survival or persistence of razorback suckers released into A-7 thus appears to be zero.

The abrupt decline in survivorship in A-10 upper from May to September (Table 7) could be an actual summer die-off due to poor conditions in the backwater (high temperatures and low dissolved oxygen), or a mass exodus of fish into the main channel (where most are assumed to perish) due to increased flows and subsequent accessibility to the main channel. A PIT tag scanning unit recently was semi-permanently mounted in a culvert that connects A-10 to the main channel, and should aid in determining the fate of these fish in summer 2006.

Most razorback capture locations coincided with recent Arizona Game and Fish Department (AZGFD) stocking release locations. One fish was captured upstream of the stocking zone and was possibly one of a cohort of 1,308 fish stocked into the Parker Strip in 2000 (Schooley and Marsh in press). This fish was the largest razorback sucker captured (64 cm) and was possibly 6 years in age. A second fish was captured 4.8 km upstream of A-7 backwater, the fish's likely stocking site. The remaining captures occurred within (631 captures) or downriver from (21 captures) the stocking zone.

The primary agency for recent stocking efforts below Parker Dam has been AZGFD. California Department of Fish and Game (CADFG) has not actively stocked the lower river since 1990, before the current release size standards were put into effect (Lower Colorado River Native Fish Work Group, personal communication). Since year 2000, AZGFD has stocked 48,996 razorback suckers in the lower river at A-7 and 2,161 at A-10, and the 500 untagged fish we captured most likely came from these latter efforts. A comprehensive historical account of razorback sucker stocking in the lower Colorado River was provided in the previous project summary (Schooley et al. 2004) with updated lower river stockings provided here (Table 8).

The ASU razorback sucker PIT tag databases report a total 2,629 razorback suckers released into the Colorado River below Parker Dam⁶ since 1994 (Table 9) (LaBarbara

⁶ These data exclude all PIT tagged RBS held in isolated waters such as Cibola High Levee Pond and Senator Wash Reservoir; at which separate razorback sucker projects are ongoing.

and Minckley 1999; Slaughter IV et al. 2002). In the present survey we have encountered no previously PIT tagged fish from other projects or investigators.

Additional native fish included only 1 striped mullet *Mugil cephalus*, captured in the Palo Verde Division and comprising less than 0.1% of total catch. The fish was not tagged because the species has no protected status and is a “catadromous, cosmopolitan, coastal marine species” (Berra 2001). This single capture may indicate a recent local decline of the species as 14 individuals were captured in the previous project period (Schooley et al. 2004).

Exotic (non-native) species capture data are extensive. Total catch and effort for each sampling locality are presented in Appx. C. Trend analysis of species diversity indicated that although variation in measured diversity was high, it appeared that A-10 backwater, upper and lower sections, had lower species diversity than other backwaters in or near the stocking zone (Fig. 9). Mean species richness in A-10 backwater, upper (9.6, 95% CI: 8.5 – 10.7) and lower (8.0, 95% CI: 5.2 – 10.8) sections was lower than that of A-7 backwater, upper section (12.3, 95% CI: 10.8 – 13.8), or C-7 backwater (12.4, 95% CI: 10.9 – 13.9, Fig. 10).

Relative abundance (CPUE) of razorback sucker, striped bass, and flathead catfish varied spatially as well as between collecting methods. Electrofishing efforts failed to detect razorback sucker outside the stocking zone and detected few striped bass and flathead catfish within the stocking zone (Fig. 11). Trammel netting efforts succeeded in detecting razorback sucker in habitats outside the stocking zone, including Oxbow Recreational Area and Hippie Hole / Sandy Cove (Fig. 12). Additionally, trammel netting appeared to provide a higher proportional razorback sucker catch per unit effort than electrofishing. It was notable that A-7 backwater, the recipient of 48,996 stocked fish, was virtually indistinguishable from C-7 backwater in respect to razorback sucker abundance indicated by these methods (Figs. 11 & 12).

It was further supported that CPUE for razorback sucker, striped bass, and flathead catfish differed between the stocking zone and other habitats. This difference was due to an abundance of razorback sucker within the stocking zone, while there was an abundance of striped bass and flathead catfish outside the stocking zone.

To accompany and verify population estimates for A-10 backwater, CPUE (standardized) for electrofishing and trammel netting were compared to mark-recapture estimates (Fig. 13). Variations in estimated population size mimicked fluctuations in catch per unit effort, indicating consistencies between data collection and analysis.

Qualitative razorback sucker data such as health (e.g. physical scars, tattered fins, wounds), sexual condition, and presence of external parasites are annotated in addition to the quantitative measurements and tagging process (Appx. B). This information can be compiled and compared across capture locations with basic presence or absence of key comments in the database, and a summary of such observations is presented in Table 10. The most prominent of these qualitative notations was the incidence of external parasites grouped by capture location. We observed an increased incidence of parasitic anchorworm *Lernaea cyprinacea* on razorback suckers encountered outside the stocking zone (32%) when compared to fish captured within the stocking zone (16%). This statistic may simply be due to the time-at-large for fish captured in each respective zone. Presumably, hatchery fish are relatively parasite-free at time of stocking. As fish disperse, their diets and occupied habitats may diversify, resulting in differential susceptibility to parasitism. The previous study period reported a wider disparity between regional levels of parasitism: 47 and 9% respectively (Schooley et al. 2004).

A categorical grading system was utilized to assign a health or condition level to each razorback sucker upon capture. Categories included excellent (fish appears healthy, vibrant, and without blemish); good (fish is vibrant with few wounds or scars); fair (fish looks rough, but has energy and will likely survive); poor (fish appears stressed, injured, or unhealthy and may die); and mortality (fish is dead). Most fish (86%) were categorized as excellent or good condition upon release (Table 10). Distributions of health categories were not significantly different between the stocking zone and other locations ($\chi^2 = 5.4$, $df = 4$, $p = 0.25$).

Results to date suggest that post-stocking survival is low and few individuals persist longer than a few months after release. Predation by non-native fishes is presumed on the basis of other studies to be the major source of mortality, and we have direct

evidence of failed predation attempts by piscivorous fishes. Predation as the primary mechanism of loss is supported by the fact that razorback suckers stocked into predator-free habitats have been known to survive and persist for much longer periods than those released into open waters of the lower Colorado River. This and other potential modes of population depletion currently are under investigation. We also continue to evaluate temporal aspects of dispersal from stocking sites, the effects of delayed dispersion on survival and persistence, and final destinations of fish that survive for relatively long periods of time.

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Table 1. Razorback sucker survey trip report numbers, dates, and survey areas, lower Colorado River, AZ-CA, October 2004 to December 2005.

Report #	Trip Date	Survey Area
15	Oct 13-21, 2004	Cibola Lake, Walter's Camp, Hippie Hole, Oxbow Recreational Area
16	Nov 2-9, 2004	A-10 backwater (upper and lower), Squatter backwater, Adobe Lake, Imperial NWR, Yuma Wash
17	Nov 30-Dec 8, 2004	C-10 backwater, Main Channel Parker Strip, PVID lagoon and canal
18	Jan 10-18, 2005	A-10 backwater (upper and lower), C-5 and C-7 backwaters
19	Feb 4-13, 2005	Walter's camp, Main Channel Cibola, Oxbow Recreational Area
20	Mar 1-10, 2005	A-10 backwater (upper and lower), A-7 backwater (upper and lower), Hippie Hole, Main Channel Palo Verde
21	Apr 5-14, 2005	Face Lake (AB16), Clear Lake, Fisher's Landing, Martinez Lake
22	May 9-13, 2005	A-10 backwater (upper), C-5 and C-7 backwaters
23	Sep 14-23, 2005	A-10 backwater (upper and lower), A-7 backwater (upper and lower), Hippie Hole, C-5 and C-7 backwaters, Main Channel Palo Verde
24	Oct 3-12, 2005	Face Lake (AB16), Fisher's Landing, Martinez Lake, Imperial NWR, Main Channel Imperial, Main Channel Parker Strip
25	Nov 2-11, 2005	C-10 backwater, Three-Finger Lake, Walter's Camp, Main Channel Cibola, Oxbow Recreational Area
26	Dec 6-15, 2005	A-10 backwater (upper and lower), A-7 backwater (upper), C-5 and C-7 backwaters, Main Channel Palo Verde

Table 2. Voucher summary (number of field-collected specimens fixed, preserved and deposited into Arizona State University Collections) for the project period October 2004 to December 2005. Asterisks indicate species that were not encountered in the previous project period; see Table 3 in Schooley et al. 2004 for vouchers acquired January 2003 to September 2004.

Species	# of Vouchers
<i>Cyprinella lutrensis</i>	5
<i>Ictalurus punctatus</i>	5
<i>Morone saxatilis</i>	7
<i>Notemigonus crysoleucas</i> *	1
<i>Pimephales promelas</i> *	1
<i>Poecilia latipinna</i> *	5
<i>Pomoxis nigromaculatis</i>	7
<i>Pylodictis olivaris</i>	3
<i>Xyrauchen texanus</i> ⁷	6

⁷ Of the 11 mortalities associated with the project period, only six were fixed and preserved. The remaining fish were deemed unsuitable for preservation.

Table 3. Number of fish captured by species, percent of catch, and effort data for lower Colorado River, October 2004 to December 2005. Asterisks indicate species that were not encountered in the previous project period.

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Ameiurus natalis</i>	5	<0.1%	6	0.1%	0	0.0%	11	<0.1%
<i>Carassius auratus</i>	70	0.3%	28	0.3%	0	0.0%	98	0.3%
<i>Cyprinella lutrensis</i>	1,035	4.7%	0	0.0%	0	0.0%	1,035	3.3%
<i>Cyprinus carpio</i>	2,153	9.8%	2,192	24.3%	0	0.0%	4,345	14.0%
<i>Dorosoma petenense</i>	2,858	13.0%	6	0.1%	0	0.0%	2,864	9.2%
<i>Gambusia affinis</i>	11	<0.1%	0	0.0%	0	0.0%	11	<0.1%
<i>Ictalurus punctatus</i>	263	1.2%	605	6.7%	1	1.4%	869	2.8%
<i>Lepomis cyanellus</i>	247	1.1%	0	0.0%	10	14.3%	257	0.8%
<i>Lepomis gulosus</i>	431	2.0%	60	0.7%	1	1.4%	492	1.6%
<i>Lepomis macrochirus</i>	3,438	15.6%	2,186	24.2%	9	12.9%	5,633	18.1%
<i>Lepomis microlophus</i>	1,654	7.5%	1,134	12.5%	7	10.0%	2,795	9.0%
<i>Lepomis sp.</i> ⁸	2,768	12.6%	1	0.0%	26	37.1%	2,795	9.0%
<i>Micropterus dolomieu</i>	682	3.1%	73	0.8%	1	1.4%	756	2.4%
<i>Micropterus salmoides</i>	5,520	25.1%	799	8.8%	12	17.1%	6,331	20.3%
<i>Morone saxatilis</i>	234	1.1%	301	3.3%	0	0.0%	535	1.7%
<i>Mugil cephalus</i>	0	0.0%	1	<0.1%	0	0.0%	1	<0.1%
<i>Notemigonus crysoleucas</i> *	1	<0.1%	0	0.0%	0	0.0%	1	<0.1%
<i>Pimephales promelas</i> *	1	<0.1%	0	0.0%	0	0.0%	1	<0.1%
<i>Poecilia latipinna</i> *	5	<0.1%	0	0.0%	0	0.0%	5	<0.1%
<i>Pomoxis nigromaculatus</i>	133	0.6%	179	2.0%	1	1.4%	313	1.0%
<i>Pylodictis olivaris</i>	108	0.5%	338	3.7%	0	0.0%	446	1.4%
Tilapiine fishes ⁹	226	1.0%	646	7.1%	2	2.9%	874	2.8%
<i>Xyrauchen texanus</i>	172	0.8%	482	5.3%	0	0.0%	654	2.1%
Total	22,015	70.7%	9,037	29.0%	70	0.2%	31,122	
CPUE	96.07		0.04		0.03			
Effort	229,155	sec.	519	nets	29	nets		
			6,468.20	hours	901.97	hours		

⁸ Differentiation between *L. macrochirus* and *L. microlophus* is often quite difficult. Therefore, the two species are grouped as *Lepomis sp.* When possible, young-of-year are categorized by species.

⁹ On the lower Colorado River, numerous feral populations of Tilapiine fishes can be found (Barrett 1983, Moyle 2002, Costa-Pierce, 2003). For simplicity, here they are grouped due to high levels of hybridization and the lack of standardized, local taxonomic information on the fish.

Table 4. Arizona State University razorback sucker data summary, lower Colorado River, October 2004 to December 2005. Comprehensive details are included in Appendix A.

General Data

Total capture events:	654	
Individual fish marked by PIT tag:	500	PIT tagged by ASU during study period.
Short-Term Recaptures ¹⁰ :	37	
Recaptures:	106	Includes fish tagged upon release or during previous study.
Mortalities	11	

Gender Ratios (592 records)

Female:	100	17%
Male:	169	29%
Juvenile:	277	47%
Unknown ¹¹ :	46	8%

Hatchery Wire Tags

Detectable wire tags	95%	560 of 592 records
Tag location- Left Dorsal ¹²	31%	171 of 560 detected
Tag location- Right CP ¹³	69%	389 of 560 detected

Size Data (cm)

Mean Total Length:	37.7	592 records
Minimum Total Length:	27.6	
Maximum Total Length:	64.0	

¹⁰ Fish captured a second time during the same site visit are referred to as “short term recaptures” (STR) to differentiate them from captures of fish marked during prior trips or by other investigators.

¹¹ Razorback suckers classified as “unknown gender” are >40.0 cm TL and display no diagnostic secondary sexual characteristics. Fish <40.0 cm displaying no diagnostic secondary sexual characteristics are classified as “juvenile.”

¹² Repatriated razorback suckers grown out at AZGFD Bubbling Ponds State Fish Hatchery and released in A-7 backwater are implanted in the left dorsal area with a wire tag prior to release.

¹³ Repatriated razorback suckers grown out at AZGFD Bubbling Ponds State Fish Hatchery and released in A-10 backwater are implanted in the right caudal peduncle (CP) with a wire tag prior to release.

Table 5. Arizona State University razorback sucker data summary for stocking zone, lower Colorado River, October 2004 to December 2005.

This data table is specific to a reach of the lower Colorado River, Palo Verde Division, labeled the “stocking zone” (Appendix A). This area consists of 24.4 km (15.25 RM) of main channel and several backwaters including A-7, where razorback suckers have been consistently repatriated since year 2000. The arbitrary UTM boundaries for the stocking zone are as follows: 3724855N to 3705525N.

General Data

Total capture events:	632	
Individual fish marked by PIT tag:	482	PIT tagged by ASU during study period.
Short-Term Recaptures ¹⁴ :	37	
Recaptures:	103	Includes fish tagged upon release or during previous study.
Mortalities	10	

Gender Ratios (570 records)

Female:	97	17%
Male:	164	29%
Juvenile:	264	46%
Unknown ¹⁵ :	45	8%

Hatchery Wire Tags

Detectable wire tags	95%	541 of 570 records
Tag location- Left Dorsal ¹⁶	28%	153 of 541 detected
Tag location- Right CP ¹⁷	72%	388 of 541 detected

Size Data (cm)

Mean Total Length:	37.7	570 records
Minimum Total Length:	28.8	
Maximum Total Length:	60.0	

¹⁴ Fish captured a second time during the same site visit are referred to as “short term recaptures” (STR) to differentiate them from captures of fish marked during prior trips or by other investigators.

¹⁵ Razorback suckers classified as “unknown gender” are >40.0 cm TL and display no diagnostic secondary sexual characteristics. Fish <40.0 cm displaying no diagnostic secondary sexual characteristics are classified as “juvenile.”

¹⁶ Repatriated razorback suckers grown out at AZGFD Bubbling Ponds State Fish Hatchery and released in A-7 backwater are implanted in the left dorsal area with a wire tag prior to release.

¹⁷ Repatriated razorback suckers grown out at AZGFD Bubbling Ponds State Fish Hatchery and released in A-10 backwater are implanted in the right caudal peduncle (CP) with a wire tag prior to release.

Table 6. Arizona State University razorback sucker capture data summary excluding stocking zone, lower Colorado River, October 2004 to December 2005.

This data table is specific to the remainder of the lower Colorado River below Parker Dam with the exclusion of the “stocking zone”.

General Data

Total capture events:	22	
Individual fish marked by PIT tag:	18	
Short-Term Recaptures ¹⁸ :	0	
Recaptures:	3	Includes fish tagged upon release or during previous study.
Mortalities	1	

Gender Ratios (22 records)

Female:	3	14%
Male:	5	23%
Juvenile:	13	59%
Unknown ¹⁹ :	1	5%

Hatchery Wire Tags

Detectable wire tags	86%	19 of 22 records
Tag location- Left Dorsal ²⁰	95%	18 of 19 detected
Tag location- Right CP ²¹	5%	1 of 19 detected

Size Data (cm)

Mean Total Length:	38.0	22 records
Minimum Total Length:	27.6	
Maximum Total Length:	64.0	

¹⁸ Fish captured a second time during the same site visit are referred to as “short term recaptures” (STR) to differentiate them from captures of fish marked during prior trips or by other investigators.

¹⁹ Razorback suckers classified as “unknown gender” are >40.0 cm TL and display no diagnostic secondary sexual characteristics. Fish <40.0 cm displaying no diagnostic secondary sexual characteristics are classified as “juvenile.”

²⁰ Repatriated razorback suckers grown out at AZGFD Bubbling Ponds State Fish Hatchery are implanted in the left dorsal area with a wire tag prior to release.

²¹ Repatriated razorback suckers grown out at AZGFD Bubbling Ponds State Fish Hatchery and released in A-10 backwater are implanted in the right caudal peduncle (CP) with a wire tag prior to release.

Table7. Population and survival estimates for razorback sucker individual backwaters on the lower Colorado River between October 2004 and December 2005. Population estimates and recent stocking data provided in trip reports 20, 22, 23, and 26 (Lee et al. 2005, Schooley et al. 2005, Thornbrugh et al. 2005, Karam and Kesner 2006).

	Estimate	# Stocked	% Survival	
A-10 upper section				
March-05	824	689	120%	Stocking in February of 689 fish.
May-05	1,365	1,053	130%	Stocking in April of 364 fish.
September-05	184	1,053	17%	A stocking of more than 1,000 fish in September occurred after sampling event.
A-7 upper section				
January-05	315	4,657		Stocked in November and December 2004 (all but 1 PIT tagged razorback captured in Jan 2005 were released in November or December)
C-7				
January-05	153	0	10%	Combined survivorship of fish stocked in A-7, estimates from A-7 and C-7

Table 8. Summary of razorback sucker stocking records for the lower Colorado River downstream from Parker Dam, November 2004 through September 2005. Hatchery wire tag (WT) locations are left dorsal musculature (L Dorsal) and right caudal peduncle (RCP).

Date	Number of fish stocked	Mean TL (mm)	Tag type(s)	WT location	Stocking site
11/4/2004	2,024	327	WT	L Dorsal	A-7 Backwater
11/4/2004	598	366	PIT, WT	L Dorsal	A-7 Backwater
12/7/2004	213	343	PIT, WT	L Dorsal	A-7 Backwater
12/7/2004	1,822	343	WT	L Dorsal	A-7 Backwater
2/4/2005	70	352	PIT, WT, Radio	RCP	A-10 Backwater
2/4/2005	69	348	PIT, WT, Radio	L Dorsal	A-7 Backwater
2/4/2005	619	352	WT	RCP	A-10 Backwater
2/4/2005	620	348	WT	L Dorsal	A-7 Backwater
4/21/2005	44	378	PIT, WT	RCP	A-10 Backwater
4/21/2005	44	391	PIT, WT	L Dorsal	A-7 Backwater
4/21/2005	321	391	WT	L Dorsal	A-7 Backwater
4/21/2005	320	378	WT	RCP	A-10 Backwater
9/22/2005	969	-	WT	L Dorsal	A-7 Backwater
9/22/2005	120	372	PIT, WT	L Dorsal	A-7 Backwater
9/23/2005	988	-	WT	RCP	A-10 Backwater
9/23/2005	120	376	PIT, WT	RCP	A-10 Backwater

Table 9. Number of razorback suckers PIT tagged by other researchers (captured, tagged, and released or simply tagged and stocked) and total length (TL) data, below Parker Dam, lower Colorado River, 1993 to December 2005. Data were reviewed since previous report (Schooley, et al. 2004) and current numbers reflect any changes (C. Pacey, ASU, unpublished data).

Year	N	Avg. TL (cm)	SD	Min	Max
1994	80	28.2	2.4	25.0	37.8
1995	514	31.7	5.9	23.0	59.2
1996	207	39.2	9.9	20.0	66.0
1998	79	42.4	8.2	25.7	55.3
1999	38	48.6	3.4	41.3	54.8
2000	7	28.6	1.2	27.2	30.2
2001	1	35.3	-	-	-
2002	10	41.6	1.1	26.4	56.0
2003	18	43.0	3.6	38.4	50.4
2004	811	36.0	2.4	32.5	45.5
2005	864	35.8	4.1	28.0	57.0
Totals	2,629	35.5	5.9	20.0	66.0

Table 10. Objective field notations for razorback sucker, lower Colorado River, below Parker Dam, October 2004 to December 2005.

Total records: 654

External Parasites

Total parasite notations:	16%	107 of 654
... from stocking zone:	16%	100 of 632
... outside of stocking zone:	32%	7 of 22

Sexual Condition

Ripe Female:	8	
Ripe Male:	94	(includes 2 listed as juveniles)
Tuberculate Males:	100	

Health²² (stocking zone)

Excellent:	244	39%
Good:	304	48%
Fair:	56	9%
Poor:	18	3%
Mortality:	10	2%

Health (other locations)

Excellent:	5	23%
Good:	12	55%
Fair:	2	9%
Poor:	2	9%
Mortality:	1	5%

²² See text for descriptions of health category qualifications.

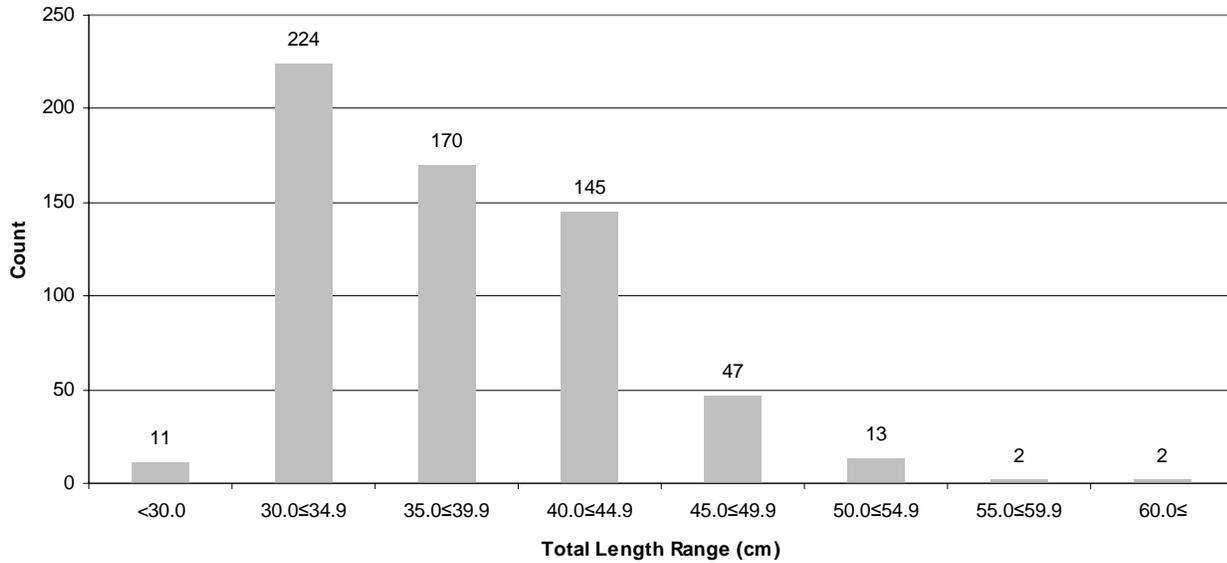


Figure 1. Total length (cm) histogram for razorback sucker captured in the lower Colorado River, AZ-CA, 2003-2005; overall range = 27.6 to 64.0 cm.

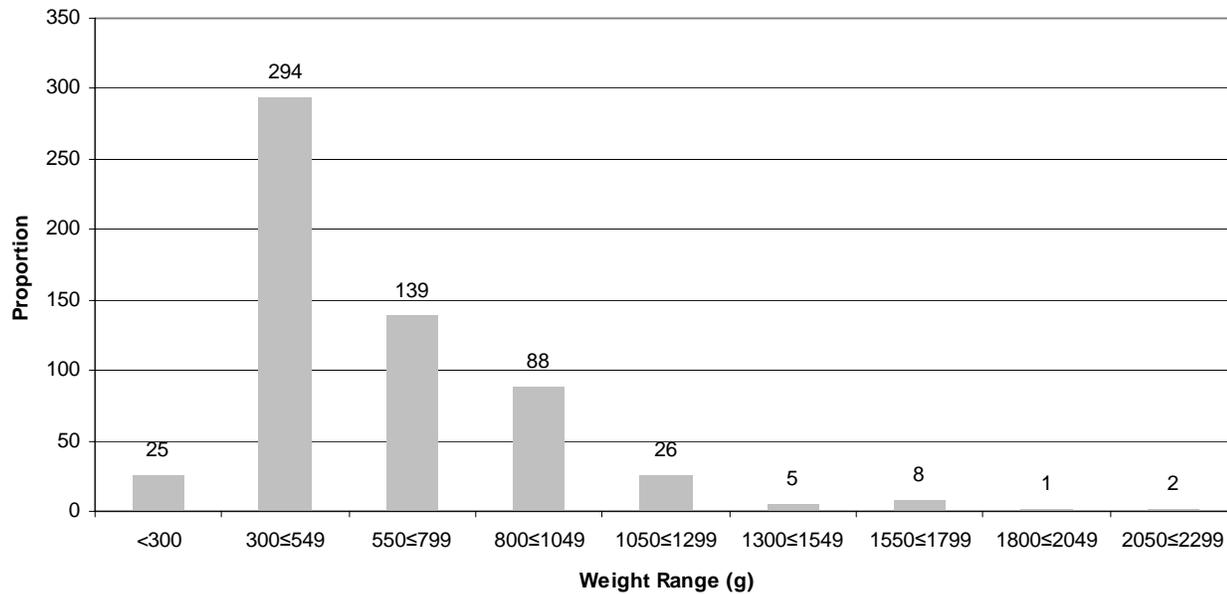


Figure 2. Weight (g) histogram for razorback sucker captured in the lower Colorado River, AZ-CA, 2003-2005; overall range = 230 to 2,370 g.

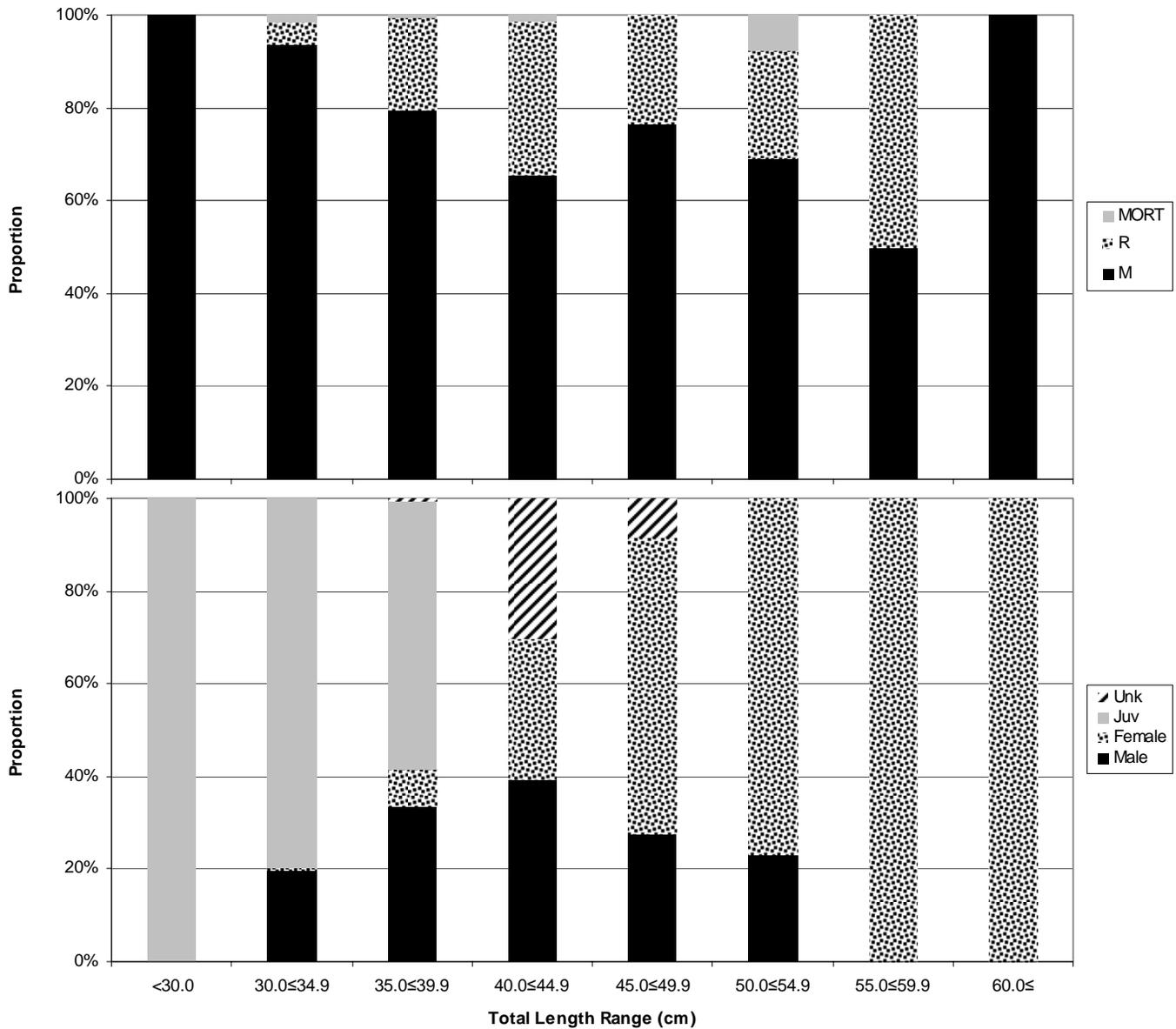


Figure 3. Total length (cm) ranges for razorback sucker captured in lower Colorado River, AZ-CA, 2003-2005. Upper figure shows proportion of fish in each capture status category (mark, recapture, and incidental mortality). Lower figure shows proportion of fish in each gender category (male, female, juvenile, and unknown).

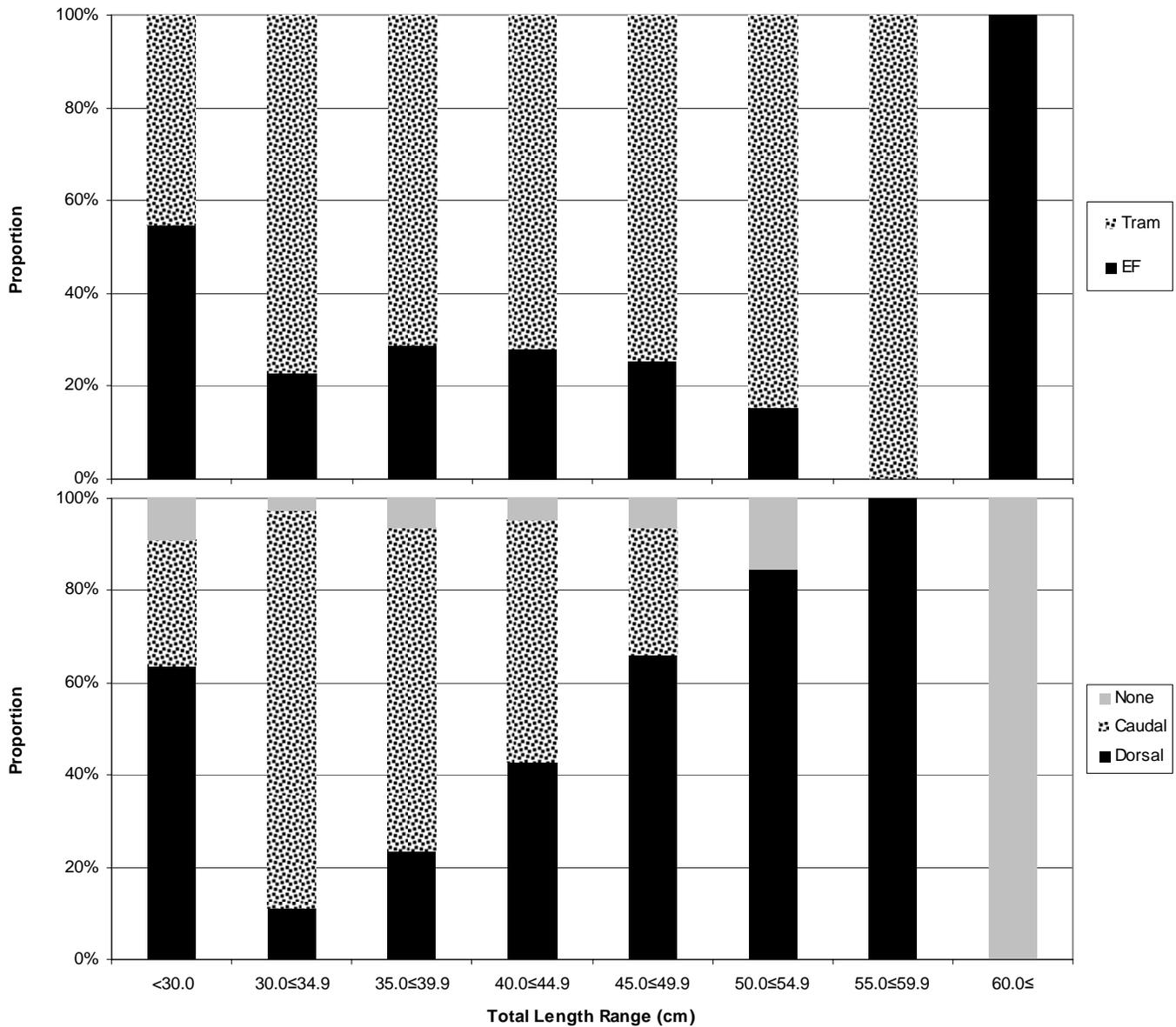


Figure 4. Total length (cm) ranges for razorback sucker captured in lower Colorado River, AZ-CA, 2003-2005. Upper figure shows proportion of fish captured by each gear type (trammel netting and electrofishing). Lower figure shows proportional hatchery wire tag locations. Fish tagged dorsally were stocked in A-7 Backwater. Fish tagged caudally were stocked in A-10 Backwater.

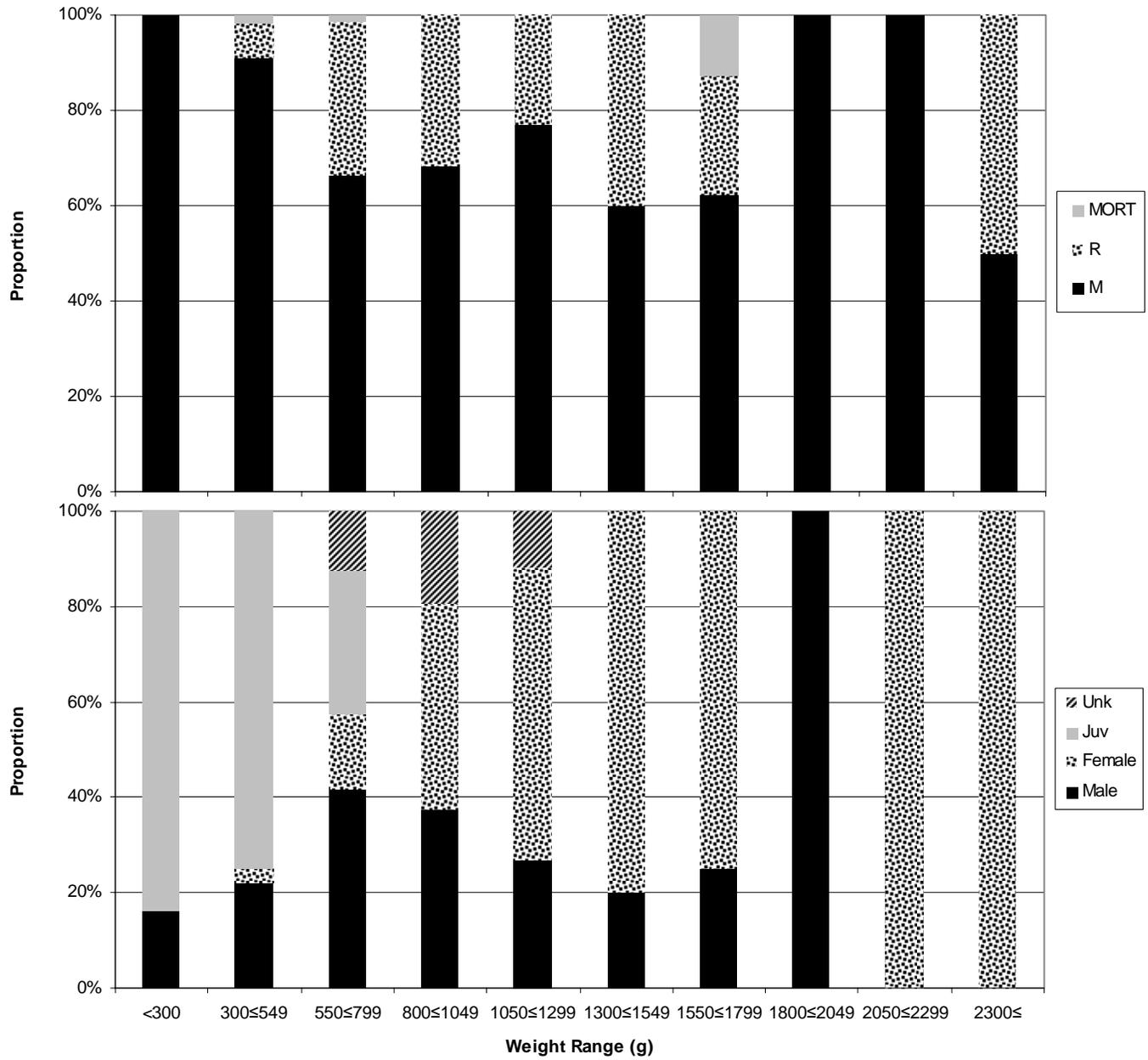


Figure 5. Weight (g) ranges for razorback sucker captured in lower Colorado River, AZ-CA, 2003-2005. Upper figure shows proportion of fish in each capture status category (mark, recapture, and incidental mortality). Lower figure shows proportion of fish in each gender category (male, female, juvenile, and unknown).

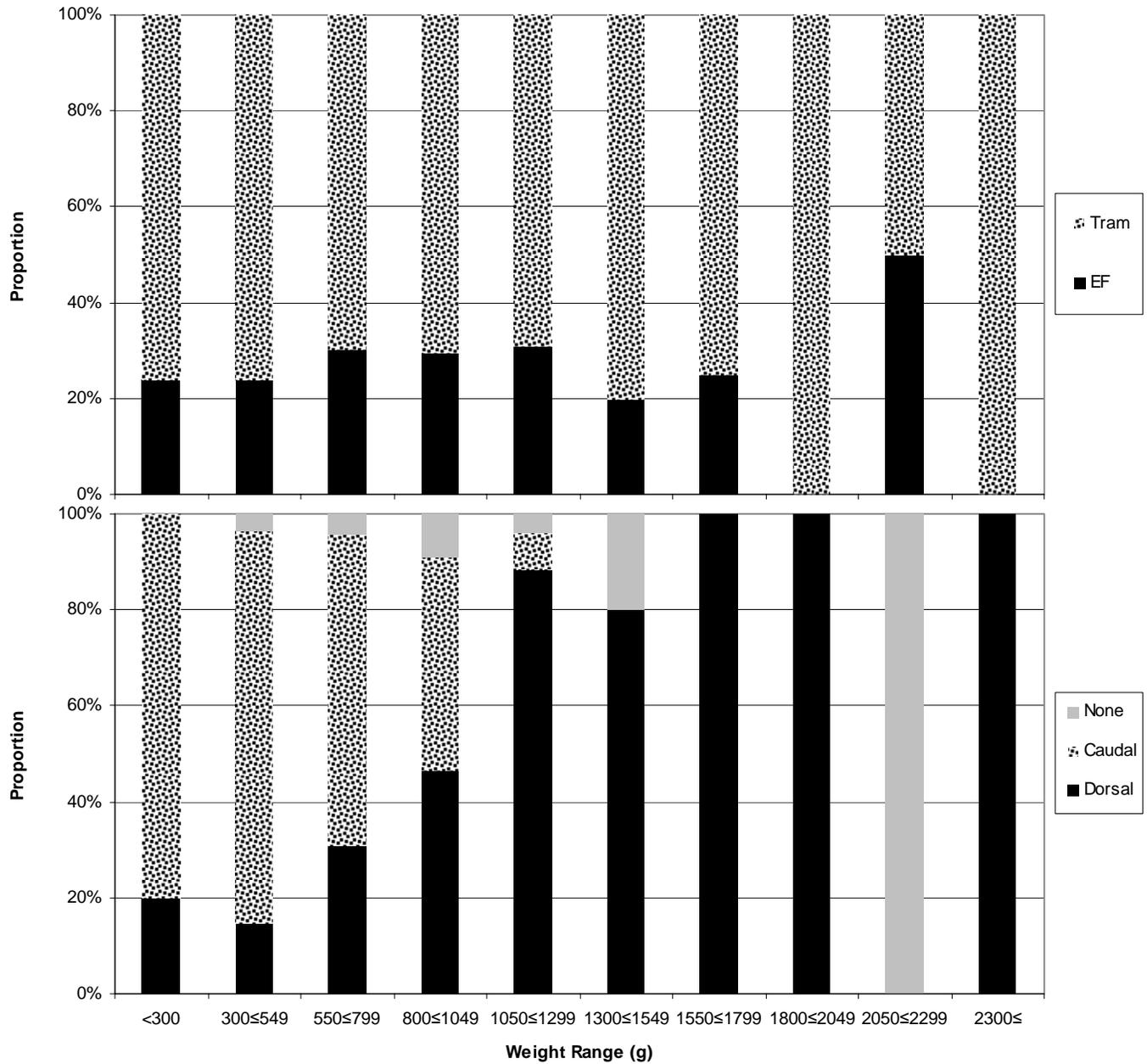


Figure 6. Weight (g) ranges for razorback sucker captured in lower Colorado River, AZ-CA, 2003-2005. Upper figure shows proportion of fish captured by each gear type. Lower figure shows proportional hatchery wire tag locations. Fish tagged dorsally were stocked in A-7 Backwater. Fish tagged caudally were stocked in A-10 Backwater.

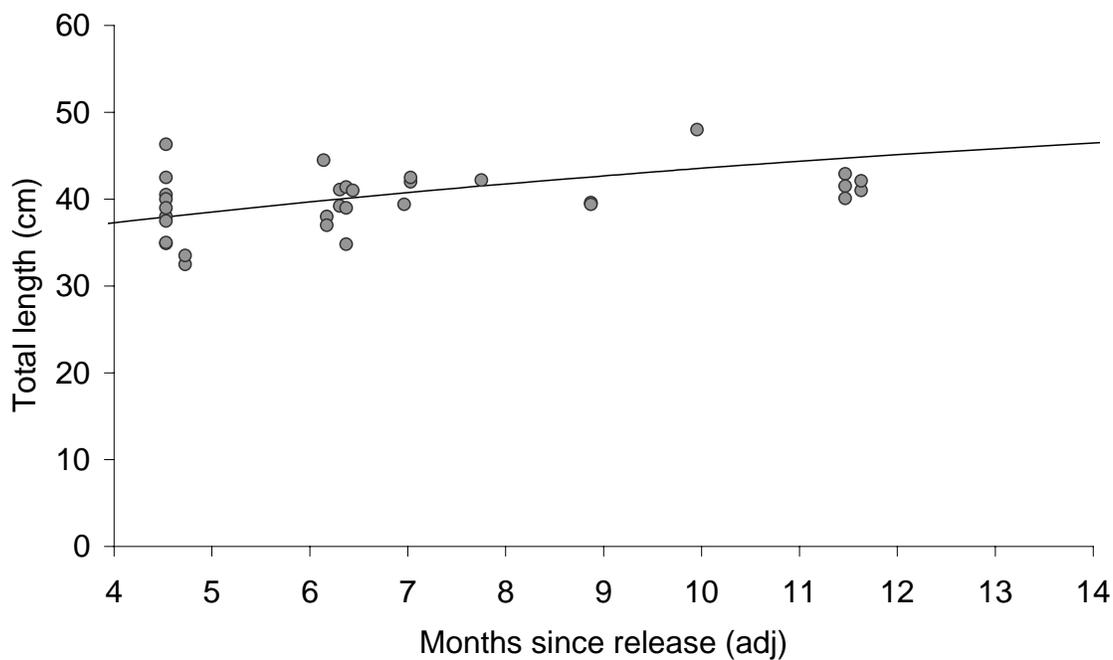
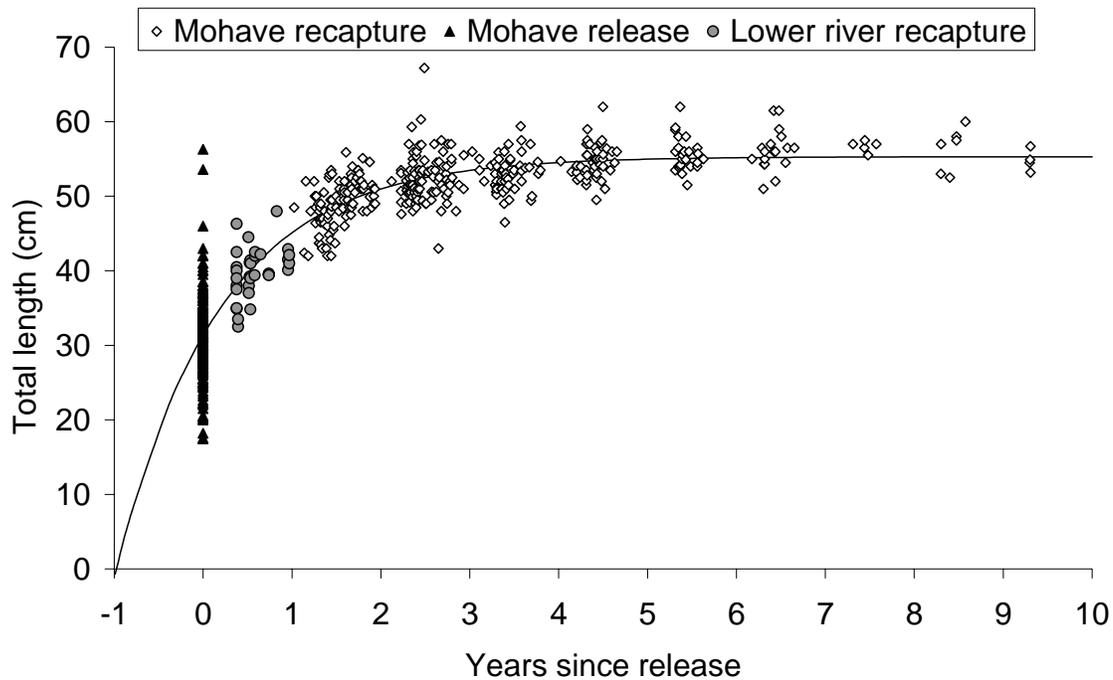


Figure 7. Growth patterns between male razorback suckers from the lower Colorado River (October 2004 to December 2005) and Lake Mohave appear similar when total length (TL) upon capture and time at large for razorback suckers on the lower Colorado River is plotted with similar data from Lake Mohave (top). A closer look comparing lower Colorado River data and the best fit growth curve from Lake Mohave across months appears coincident as well (bottom). Months since release was adjusted due to differing average size at stocking (see text).

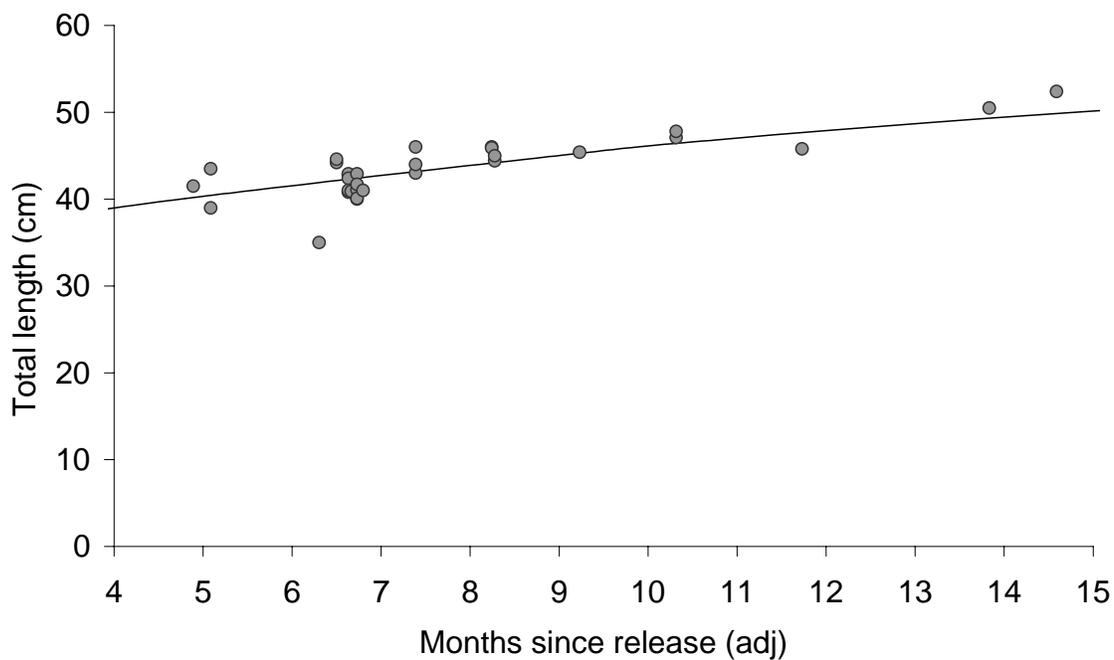
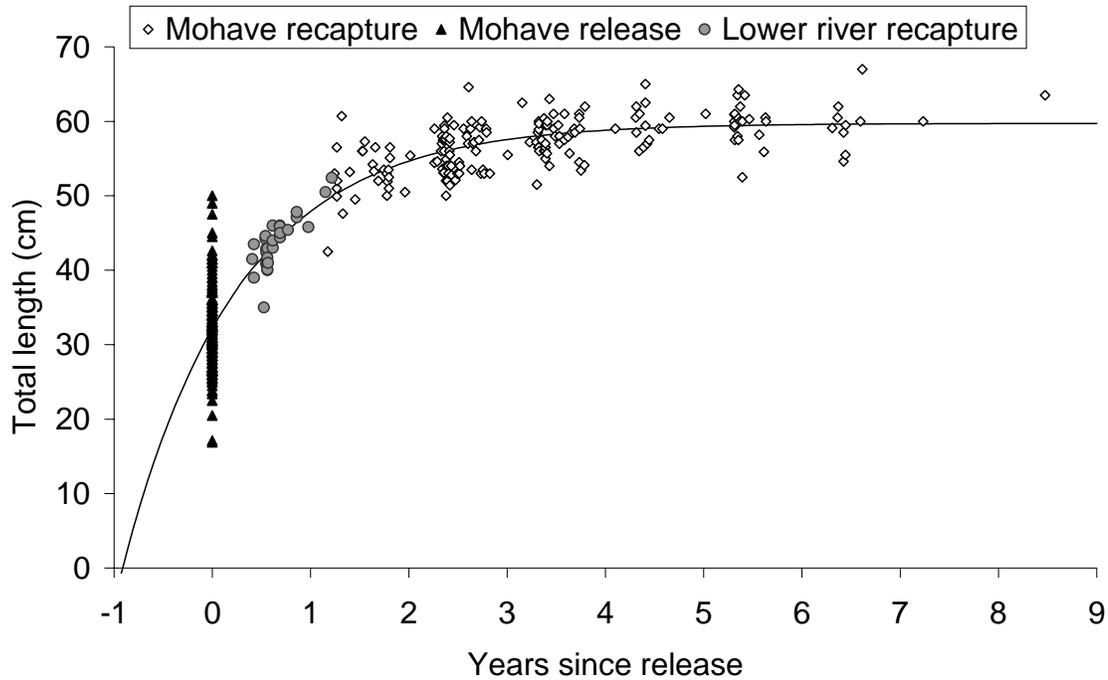


Figure 8. Growth patterns between female razorback suckers from the lower Colorado River (October 2004 to December 2005) and Lake Mohave appear similar when total length (TL) upon capture and time at large for razorback suckers on the lower Colorado River is plotted with similar data from Lake Mohave (top). A closer look comparing lower Colorado River data and the best fit growth curve from Lake Mohave across months appears coincident as well (bottom). Months since release was adjusted due to differing average size at stocking (see text).

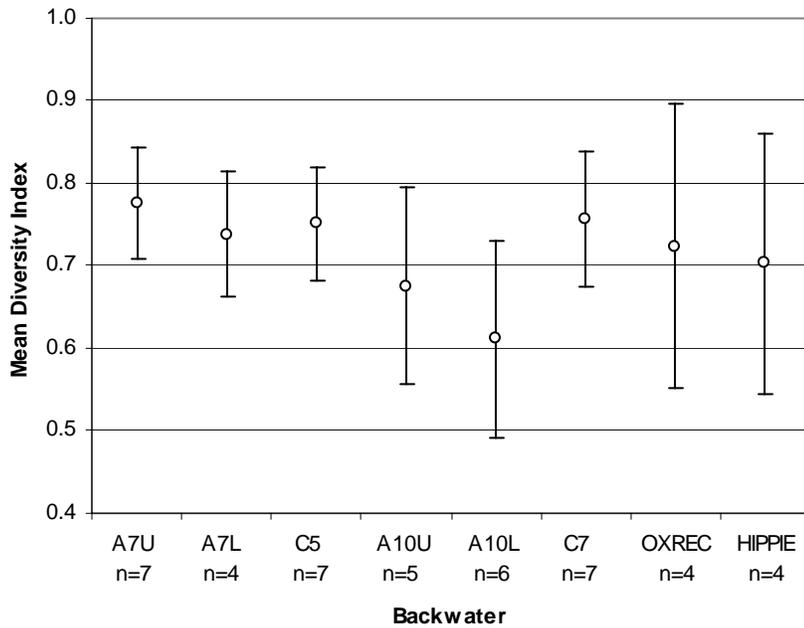


Figure 9. Mean species diversity (Shannon Index) for various lower Colorado River backwaters, AZ-CA, January 2003 to December 2005. Error bars represent 95% confidence intervals and reveal no significant differences between backwaters. Overall, mean species diversity appears to be lowest in A-10 backwater, upper and lower sections.

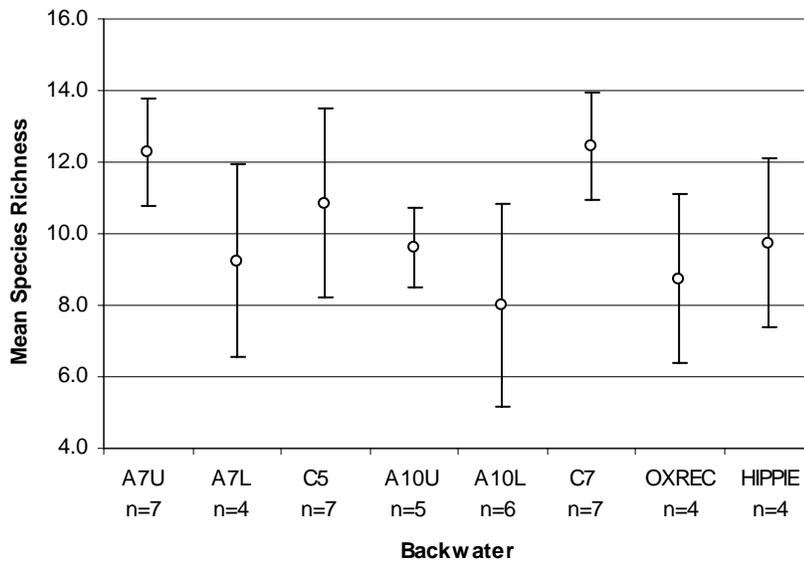


Figure 10. Mean species richness for various lower Colorado River backwaters, AZ-CA, January 2003 to December 2005. Error bars represent 95% confidence intervals. A-7 (upper section) and C-7 backwaters appear to have significantly higher numbers of fish species than A-10 backwater, upper and lower sections. Wide intervals are likely due to seasonal community changes as well as small sample sizes.

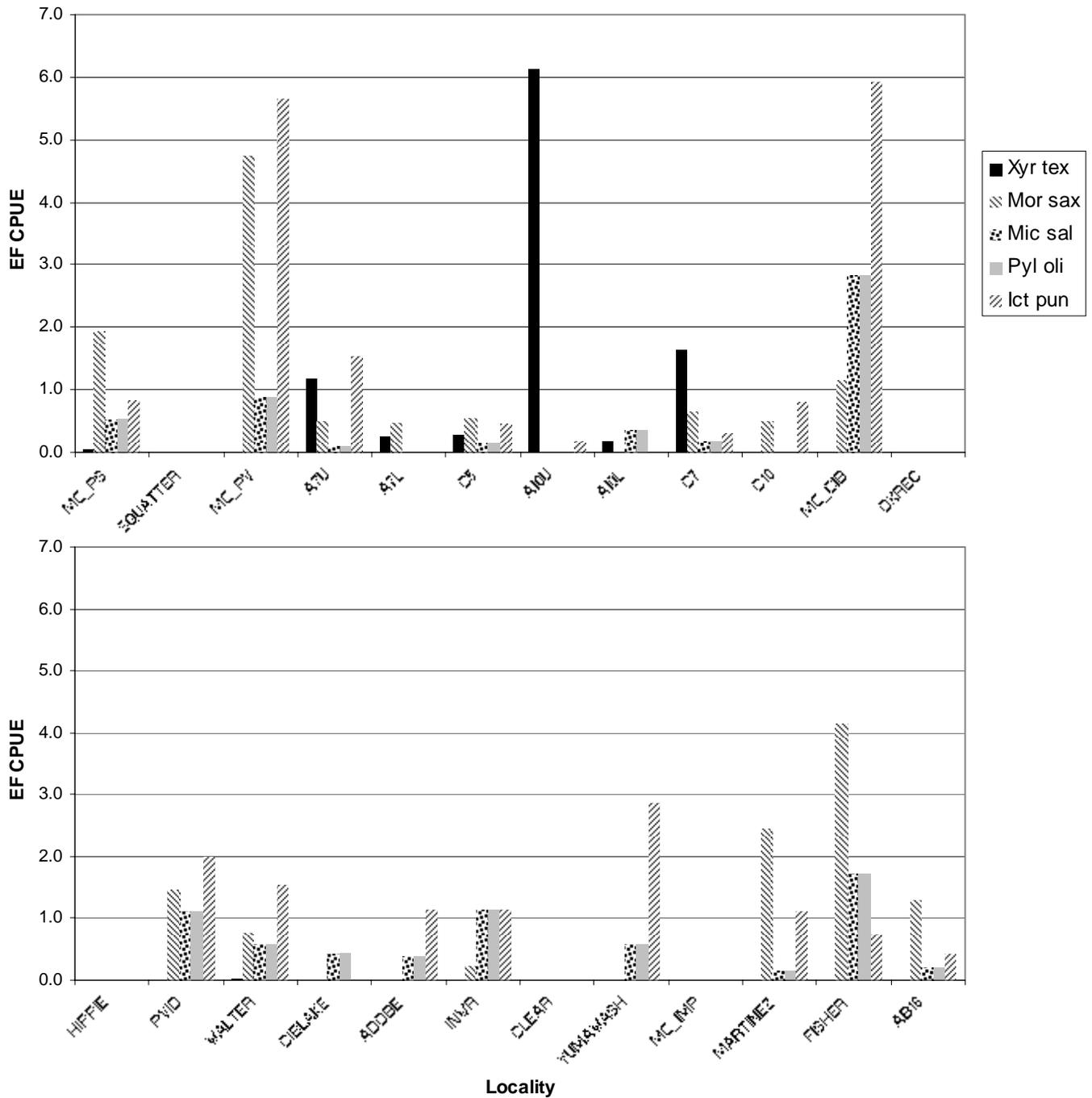


Figure 11. Electrofishing catch per unit effort (CPUE) for razorback sucker (*Xyr tex*), striped bass (*Mor sax*), largemouth bass (*Mic sal*), flathead catfish (*Pyl oli*), and channel catfish (*lct pun*) in various lower Colorado River localities, AZ-CA, October 2004 to December 2005.

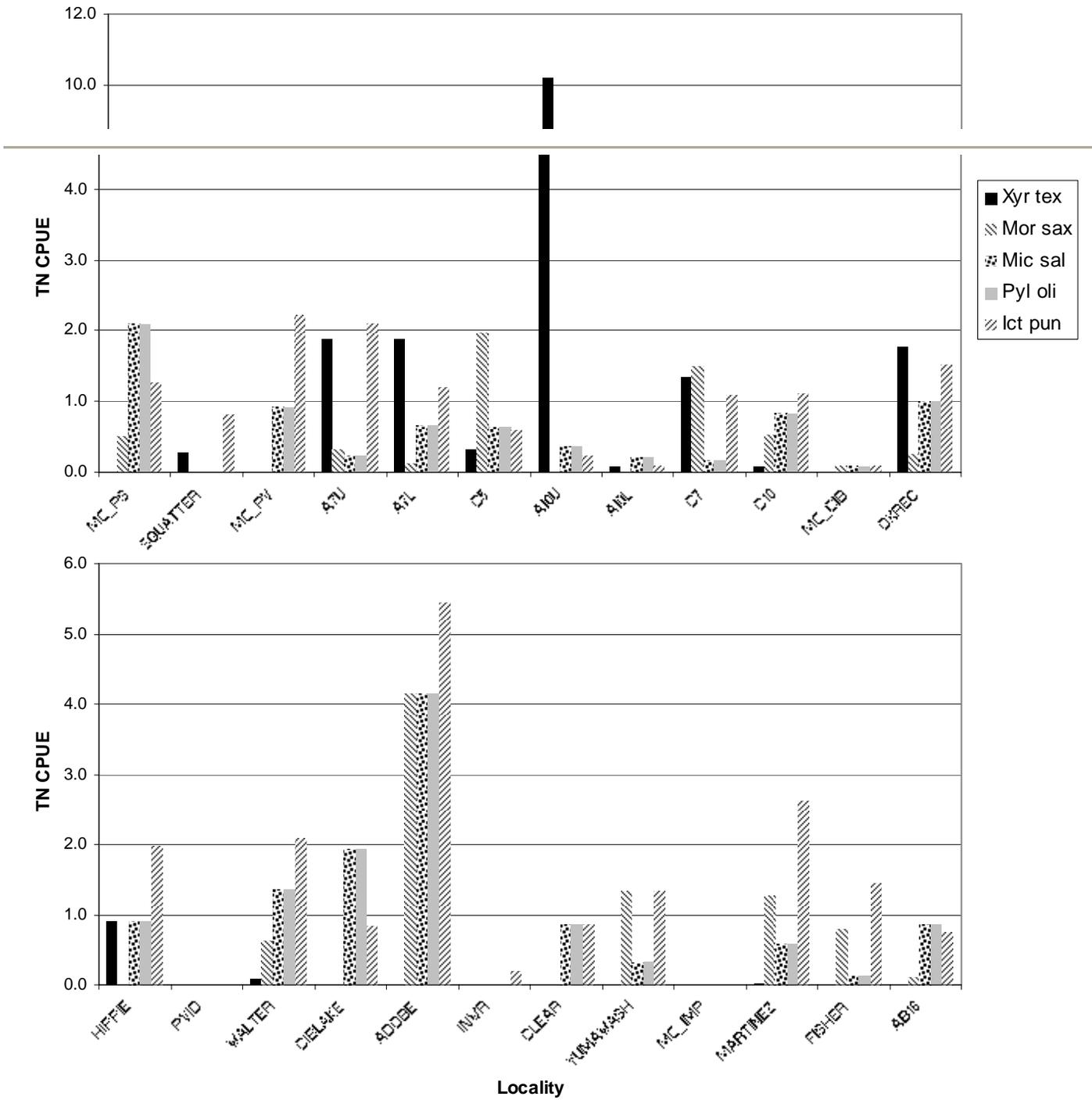


Figure 12. Trammel net catch per unit effort (CPUE) for razorback sucker (*Xyr tex*), striped bass (*Mor sax*), largemouth bass (*Mic sal*), flathead catfish (*Pyl oli*), and channel catfish (*lct pun*) in various lower Colorado River localities, AZ-CA, October 2004 to December 2005.

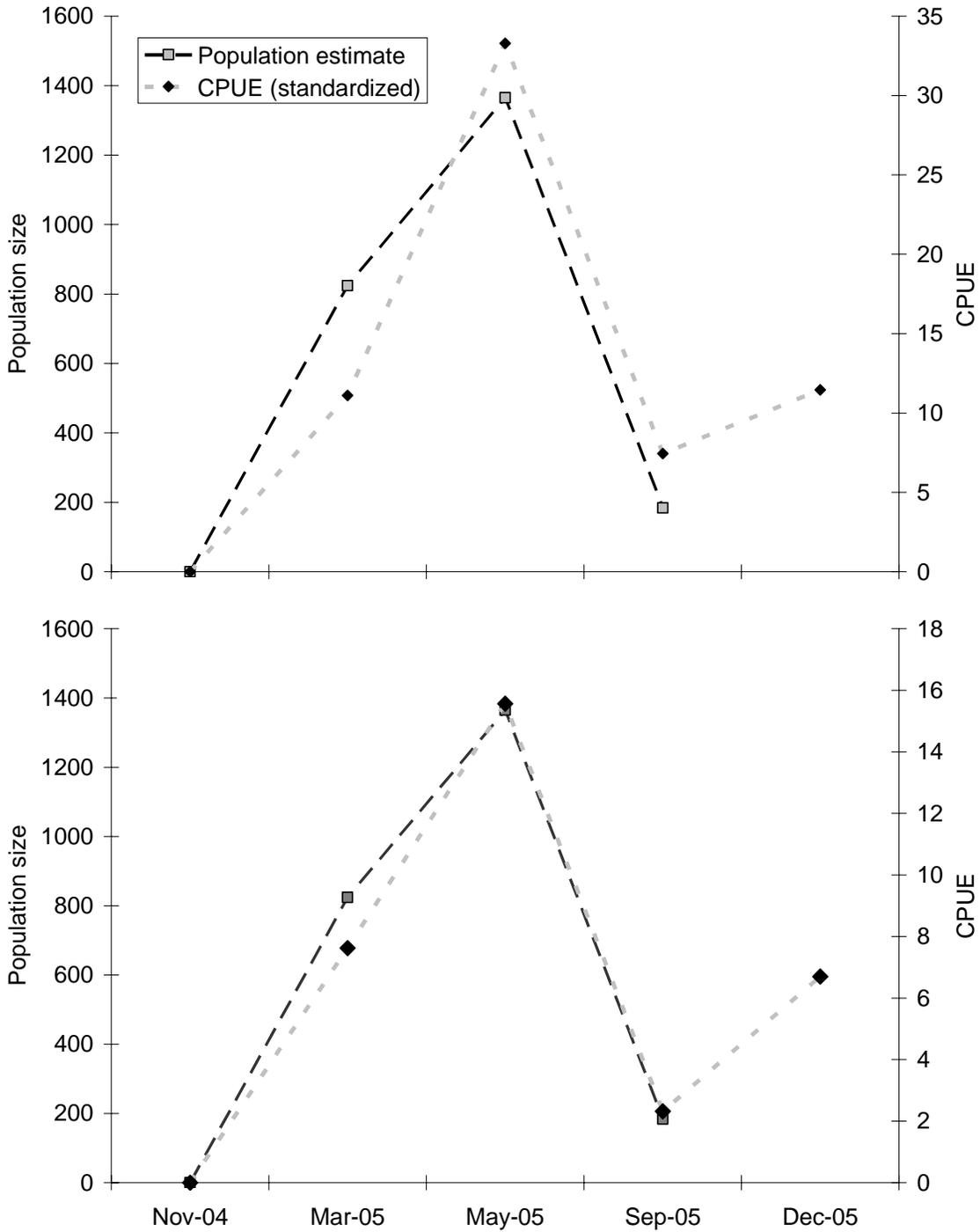


Figure 13. Trends in catch per unit effort (CPUE) of razorback suckers for trammel netting (top) and electrofishing (bottom) are coincident with trends in population estimates made during 13 months of sampling in A-10 lower section, lower Colorado River, from November 2004 to December 2005.

Appendix A: Lower Colorado River Study Area Maps

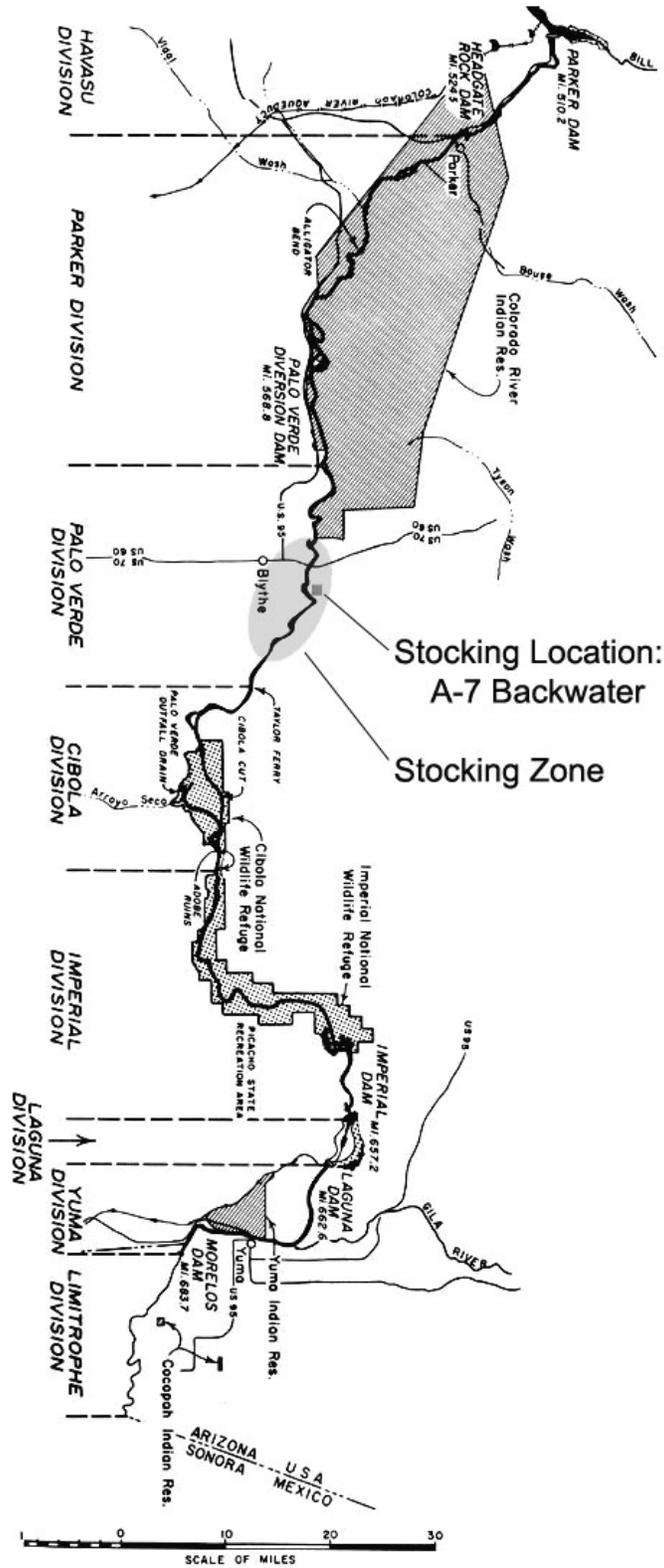
The following pages provide annotated aerial photos and map illustrations for razorback sucker surveys performed by ASU Native Fish Lab on the lower Colorado River.

Sampling localities include main channel, backwaters, lakes, and sloughs visited during the contract period October 1, 2004 to December 31, 2005.

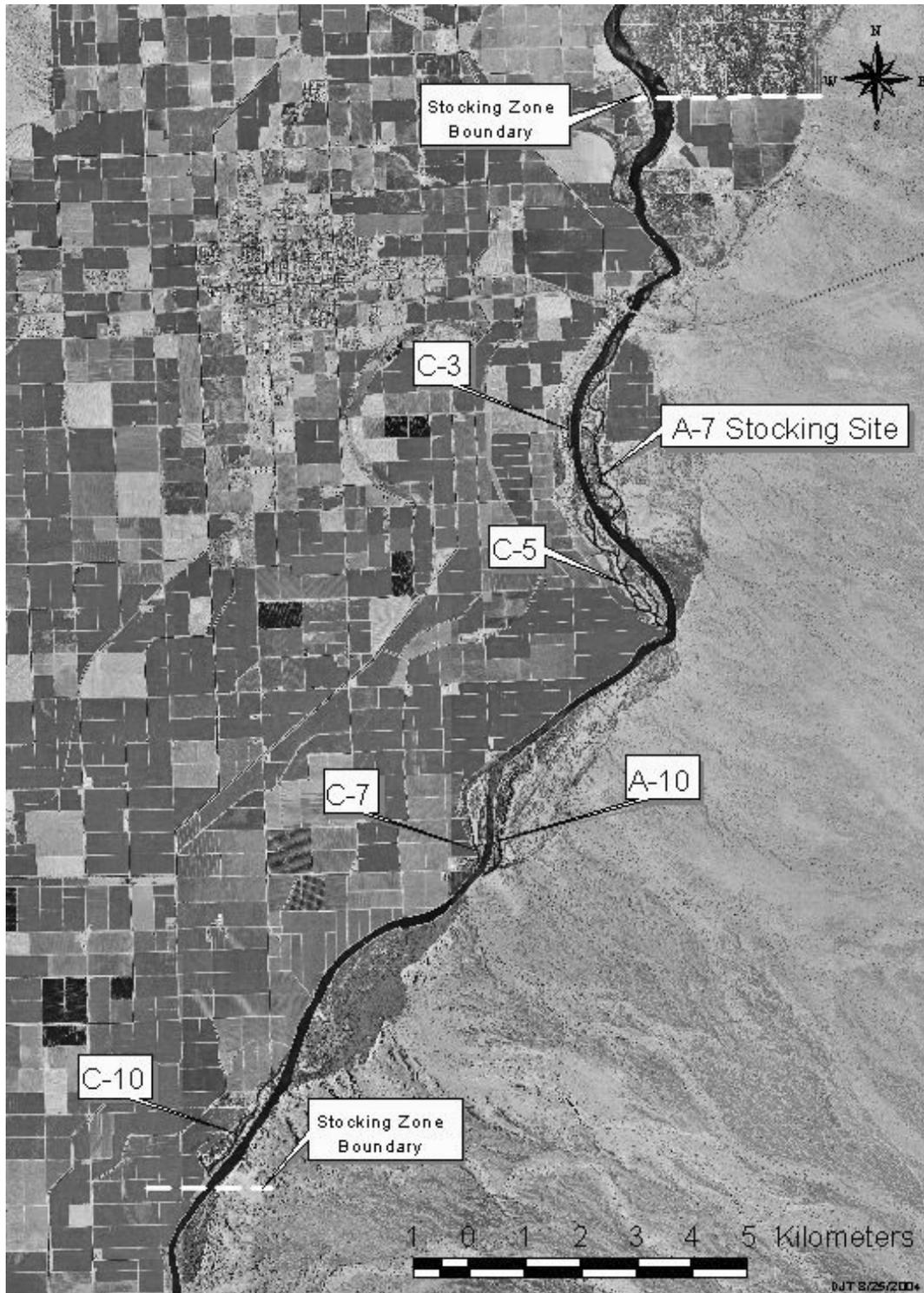
In the report body text, figures, and tables, locality codes are often used in the place of the longer locality names. Refer to the table below for locality terminology and river miles (RM)¹.

Location Code	Location Name	Approx. RM
MC_PS	Main Channel, Parker Strip	192
SQUATTER	Squatter Backwater	124
MC_PV	Main Channel, Palo Verde	121
A7U	A-7 Backwater, Upper Section	119
A7L	A-7 Backwater, Lower Section	119
C5	C-5 Backwater	118
A10U	A-10 Backwater, Upper Section	114
A10L	A-10 Backwater, Lower Section	114
C7	C-7 Backwater	114
C10	C-10 Backwater	110
MC_CIB	Main Channel, Cibola	100
OXREC	Oxbow Recreational Area	100
HIPPIE	Hippie Hole / Sandy Cove	99
PVID	Palo Verde Irrigation District Lagoon/Canal	-
WALTER	Cibola NWR, Walter's Camp / Palo Verde Outfall Drain / Old River Channel	89
3FINGER	Cibola NWR, Three Finger Lake	88
CIBLAKE	Cibola NWR, Cibola Lake	88
ADOBE	Adobe Lake	71
INWR	Imperial NWR	69
CLEAR	Clear Lake	62
YUMAWASH	Yuma Wash	62
MC_IMP	Main Channel, Imperial	60
MARTINEZ	Martinez Lake	57
FISHER	Fisher's Landing	56
AB16	AB-16 / Face Lake	55

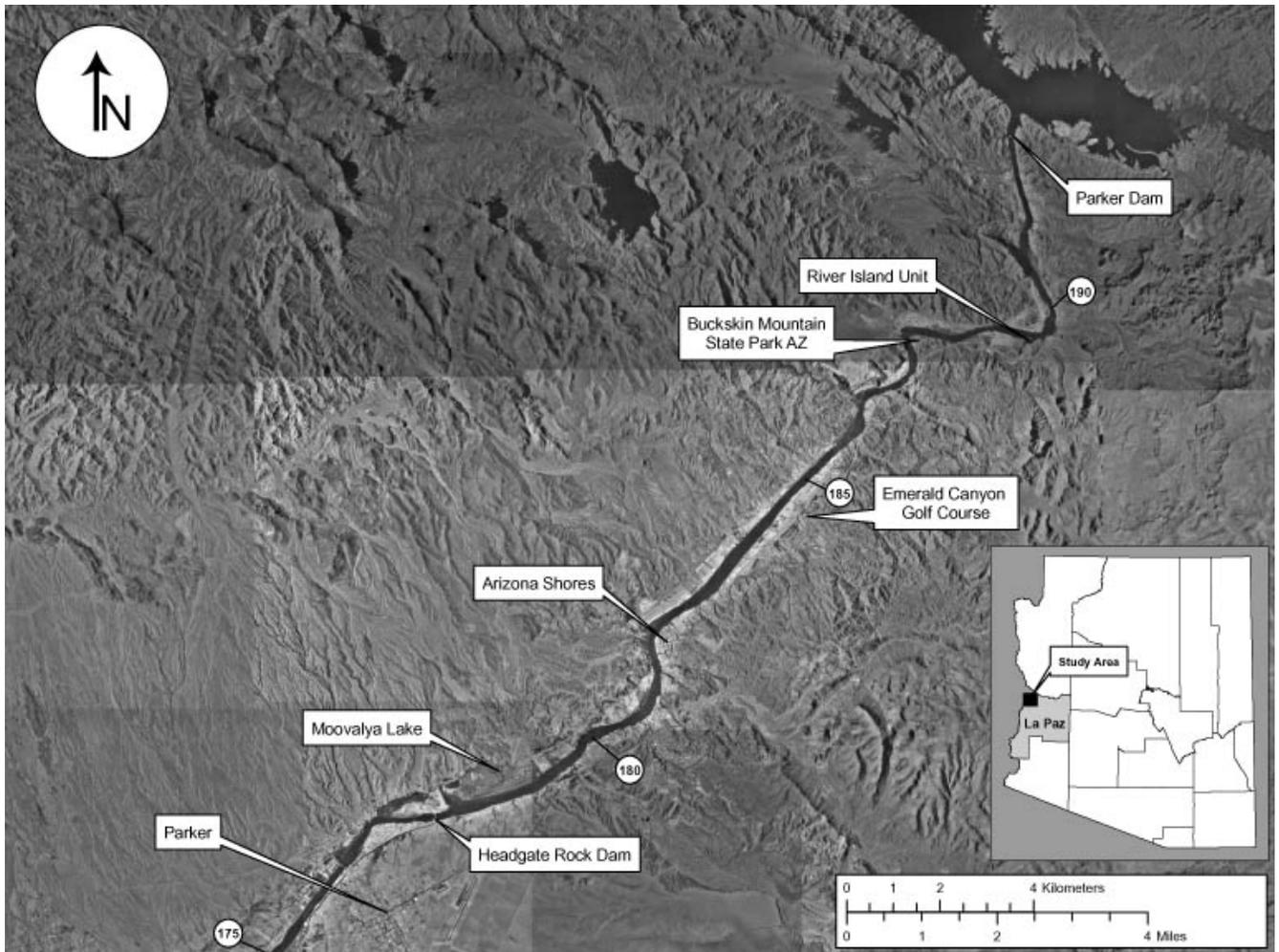
¹ River miles are measured upstream from the Southerly International Boundary near San Luis, Arizona.



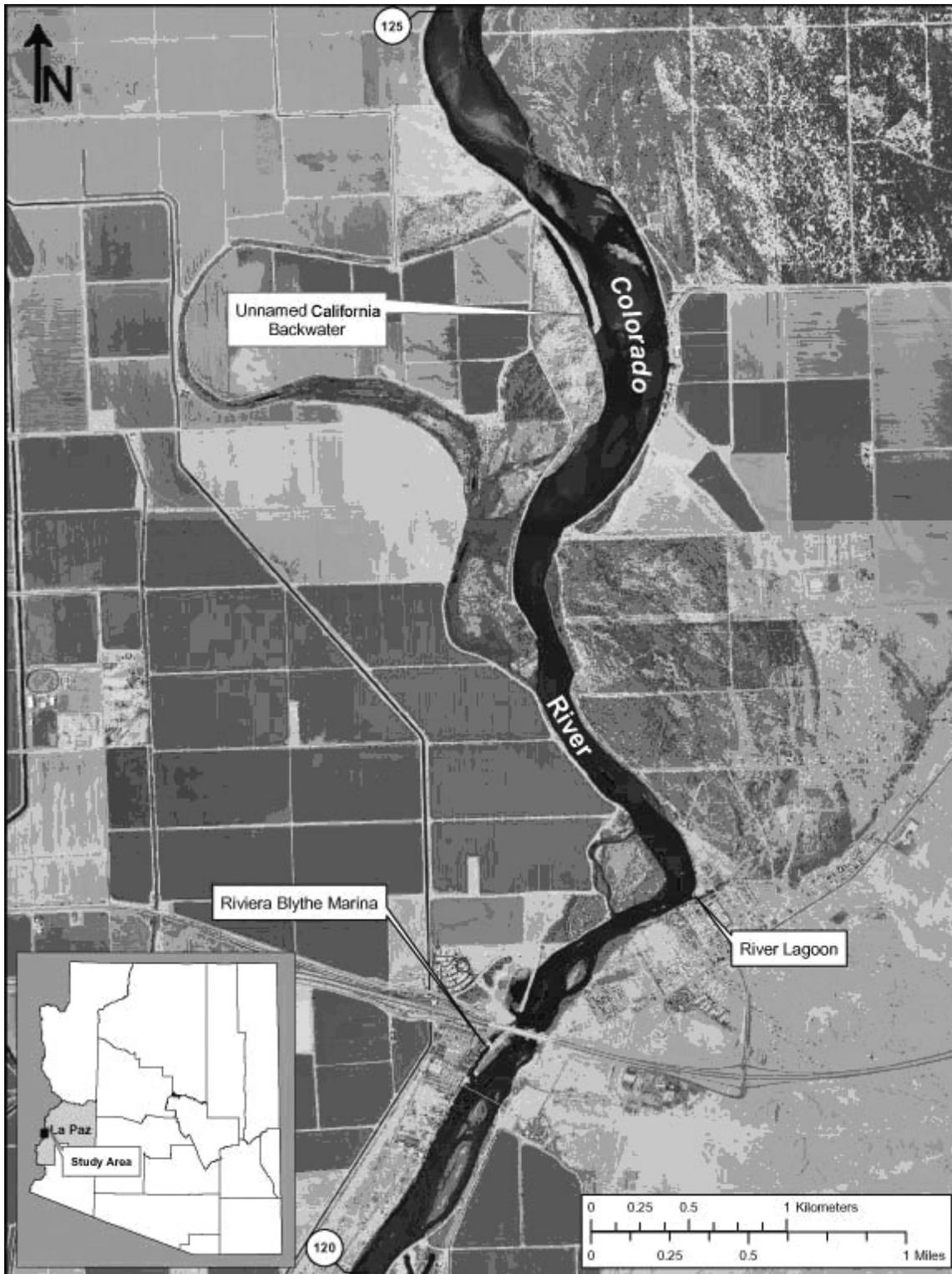
Map 1. Map of lower Colorado River, below Parker Dam, depicting stocking location and stocking zone. (Adapted from USBR, 1976)



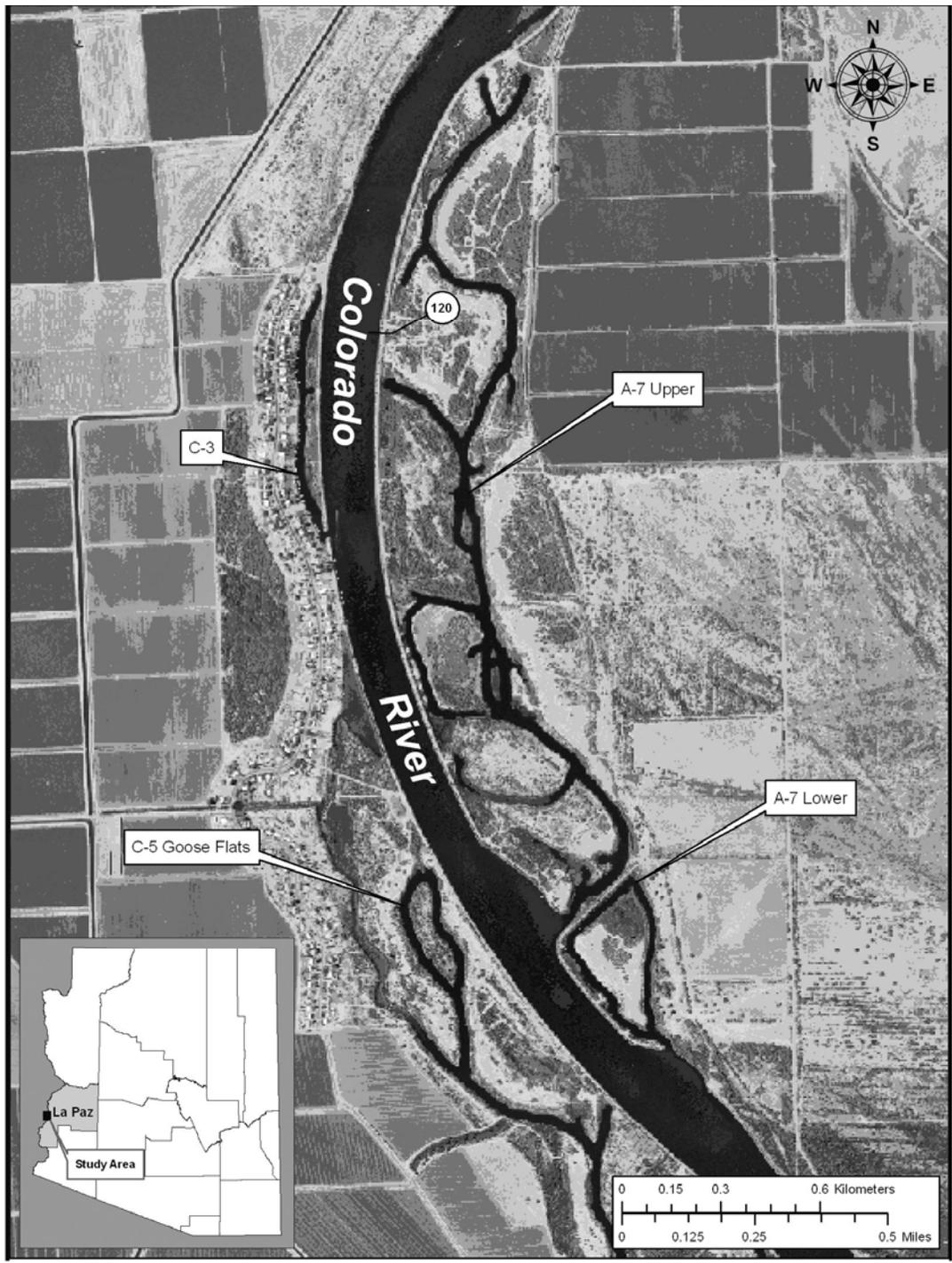
Map 2. Portion of lower Colorado River, USBR Palo Verde Division (depicting stocking zone and associated backwaters), Riverside Co., California and La Paz Co., Arizona.



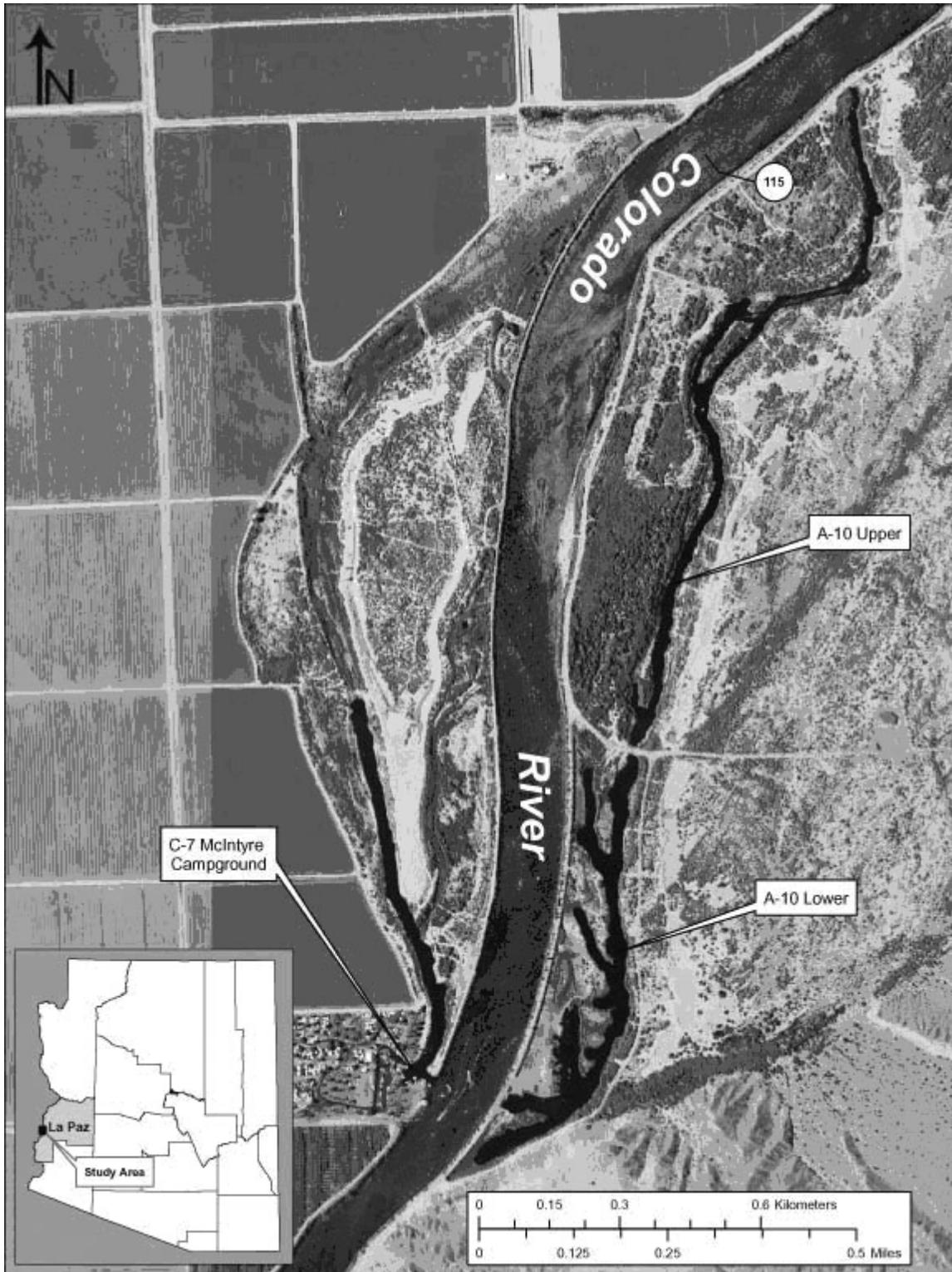
Map 3. Portion of lower Colorado River, USBR Havasu Division (depicting a portion of the Parker Strip- a 23 km reach of river between Parker and Headgate Rock dams.), San Bernardino Co., California and La Paz Co., Arizona.



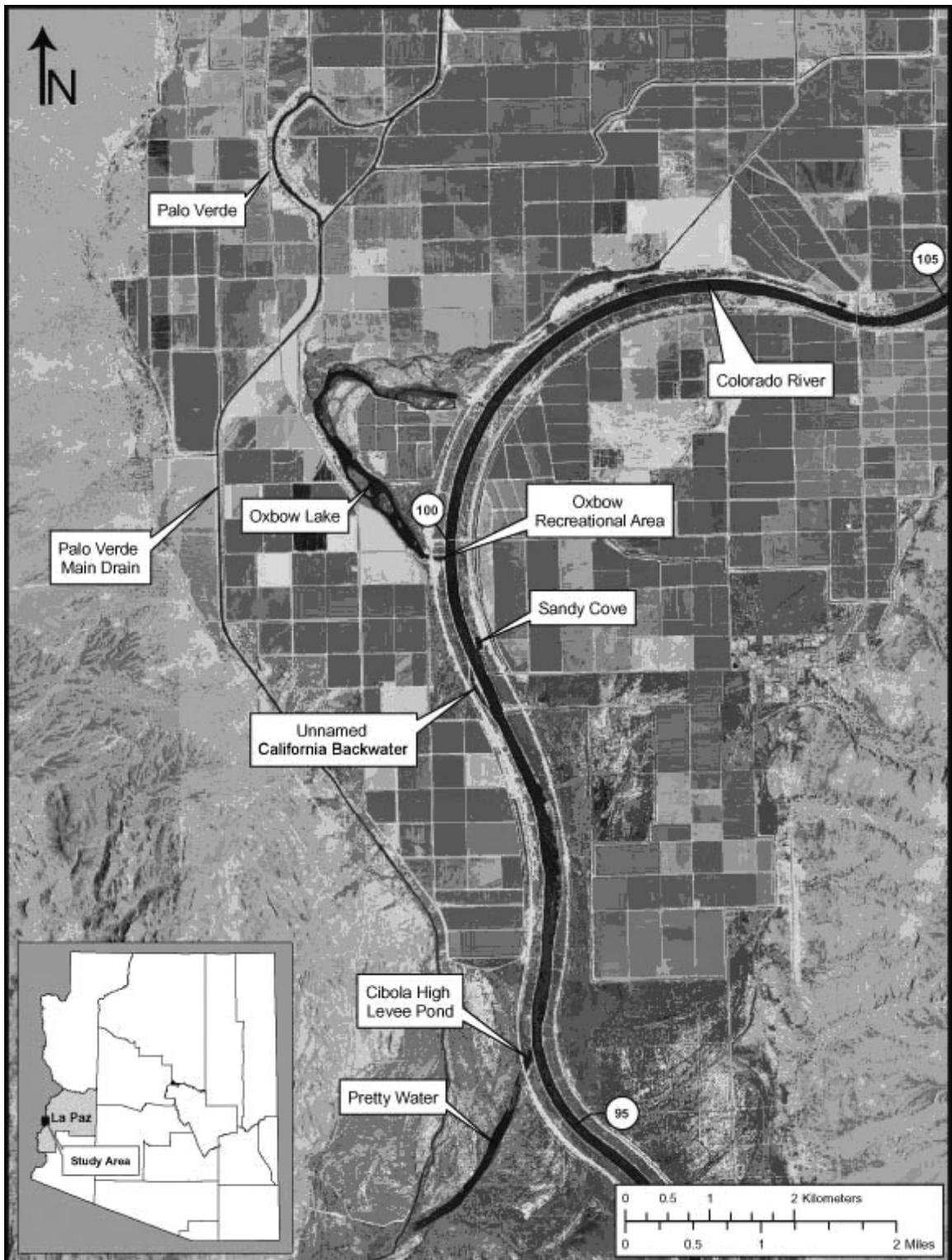
Map 4. Portion of lower Colorado River, USBR Palo Verde Division, Riverside Co., California and La Paz Co., Arizona. River crossing is Interstate 10 bridge.



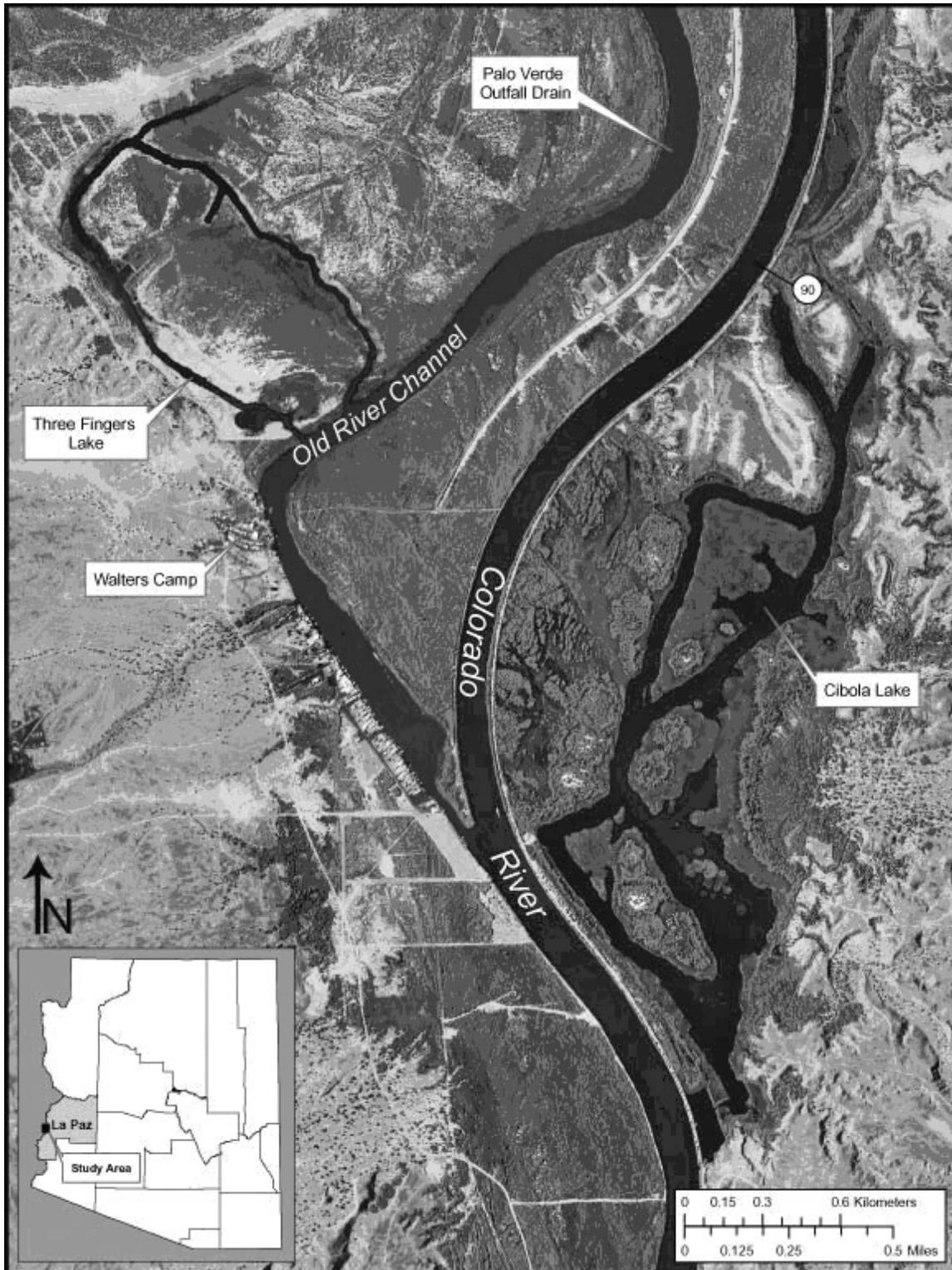
Map 5. Portion of lower Colorado River, USBR Palo Verde Division, Riverside Co., California and La Paz Co., Arizona.



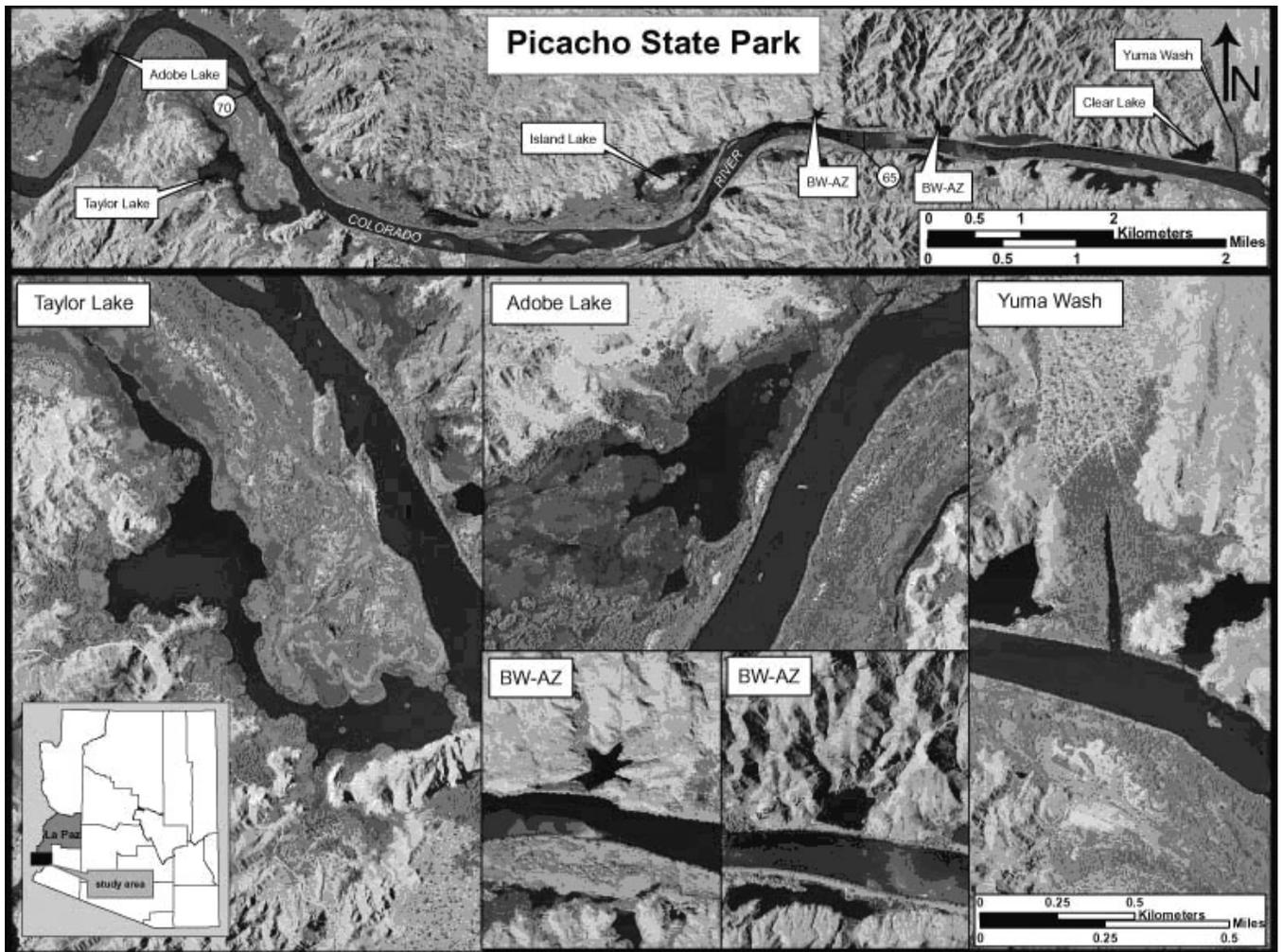
Map 6. Portion of lower Colorado River, USBR Palo Verde Division, Riverside Co., California and La Paz Co., Arizona.



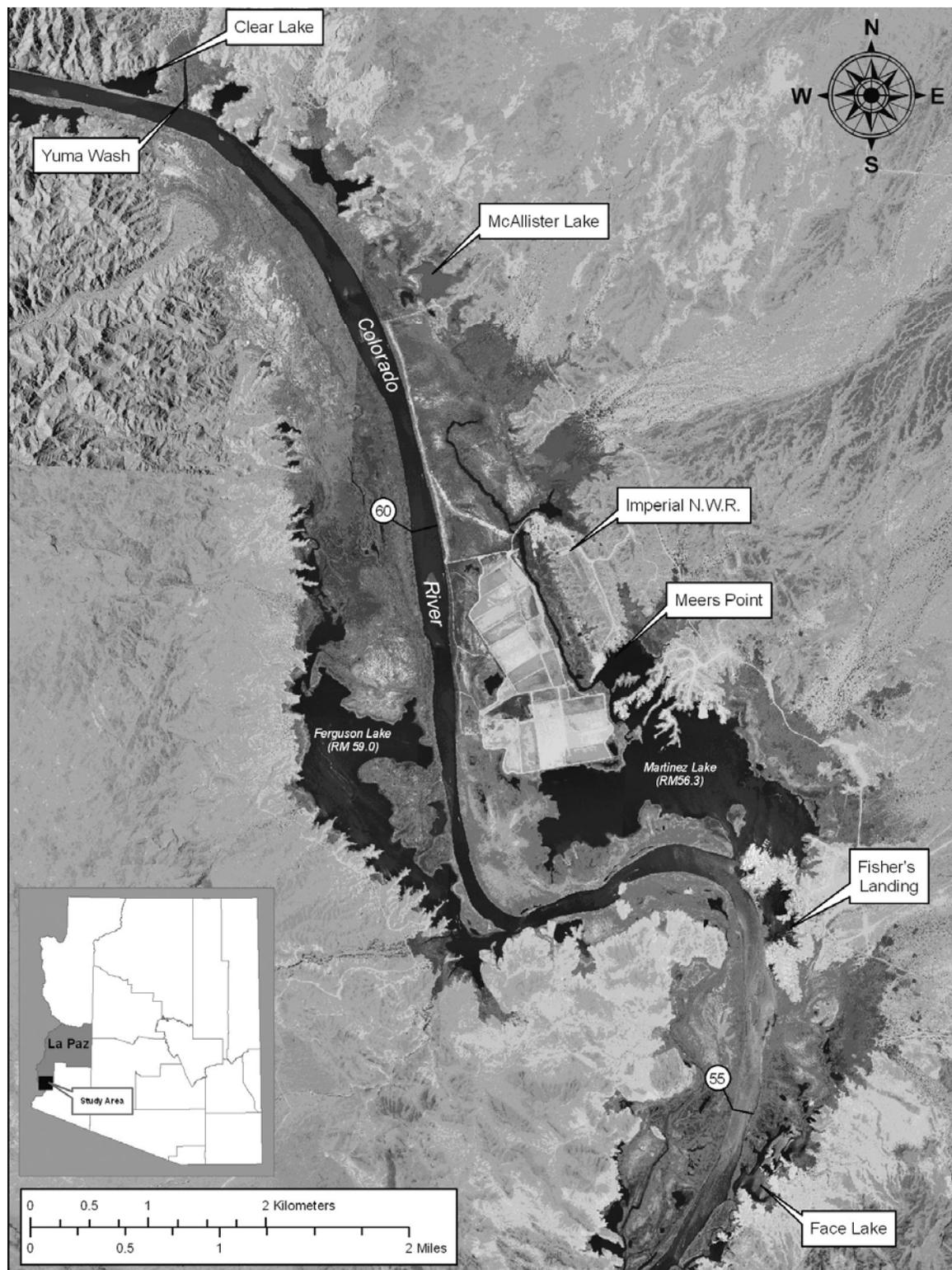
Map 7. Portion of lower Colorado River, USBR Palo Verde and Cibola divisions, Imperial Co., California and La Paz Co., Arizona.



Map 8. Portion of lower Colorado River, USBR Cibola Division, Imperial Co., California and La Paz Co., Arizona.



Map 9. Portion of lower Colorado River, USBR Imperial Division, Imperial Co., California and La Paz Co., Arizona.



Map 10. Portion of lower Colorado River, USBR Imperial Division, Imperial Co., California and Yuma Co., Arizona.

Appendix B: Razorback Sucker Capture Data

Date	Easting	Northing	PIT	Sex	TL(cm)	Weight (g)	Wire Tag Location	Mark/Recapture	Ripe?	Gear Type	Condition	Health/Notes
10/17/2004	712860	3696664	422D6D020D	Juvenile	35.4		518 L Dorsal	M	N	TN	Good	abrasions, healed descaled mark on Lside, GC
10/17/2004	713280	3695728	407F423E12	Unknown	42		822 L Dorsal	M	N	TN	Good	abrasion, GC
10/17/2004	713297	3695646	407F5B6448	Juvenile	39		704 L Dorsal	M	N	TN	Excellent	EC
10/17/2004	713297	3695646	407F425234	Juvenile	36.7		594 L Dorsal	M	N	TN	Excellent	EC, few abrasions
10/17/2004	713297	3695646	410F186A5E	Juvenile	36.3		0 None Detected	M	N	TN	Excellent	EC, Lernaea scar on V and CP
10/17/2004	713297	3695646	407F3E0B17	Male	41.5		764 R Dorsal	M	Y	TN	Good	TB, ripe, GC, some marks/abrasions
10/17/2004	712860	3696664	423960212C	Male	45.1		1045 L Dorsal	M	N	TN	Good	GC , a few NM, lernaea mark on Rp1
11/08/2004	729287	3725073	407F54124A	Unknown	41.5		0 L Dorsal	M	N	TN	Fair	D & LP1 fins tattered/nearly absent, 2 scars L of D, Caud fin frayed
12/03/2004	721546	3705632	407F606968	Juvenile	38		0 None Detected	M	N	TN	Good	7+ lernaea, NM, GC
12/06/2004	764116	3794692	422D5E6746	Female	64		0 None Detected	M	N	EF	Excellent	EC, healed nickel-sized abrasion on RCP
01/10/2005	728301	3717064	42370F3F45	Juvenile	36.3		512 L Dorsal	R	N	TN	Excellent	EC
01/10/2005	728750	3716760	407F633A0B	Juvenile	33.4		376 L Dorsal	M	N	TN	Good	one Lern, GC
01/11/2005	728944	3716315	407F515308	Unknown	41.4		740 L Dorsal	M	N	TN	Excellent	EC, C frayed
01/11/2005	729182	3715788	42373F3156	Male	41.7		828 L Dorsal	M	Y	TN	Excellent	TB, ripe, 2 Lern LP2, EC
01/11/2005	729421	3715712	410F137F3D	Female	46.9		1226 L Dorsal	M	N	EF	Excellent	EC
01/12/2005	729234	3716481	407F533967	Unknown	41		744 L Dorsal	M	N	EF	Fair	6 Lern., AVP D and V
01/12/2005	729278	3715709	407F5E4667	Female	42.3		882 L Dorsal	M	N	TN	Good	Lern, scars D fin
01/12/2005	729512	3715893	410F137F3D	Female	47		1220 L Dorsal	STR	N	EF	Excellent	Scratch on CP, EC
01/12/2005	729512	3715893	407F655D17	Male	39		560 L Dorsal	M	Y	EF	Good	TB, ripe, D frayed, GC
01/12/2005	729509	3715609	407F655D17	Male	37.1		610 L Dorsal	STR	Y	TN	Good	TB, ripe, split D, tag site good, GC
01/12/2005	729278	3715709	407F467C53	Unknown	42.2		864 L Dorsal	M	N	TN	Good	scars L V R D, GC
01/12/2005	729278	3715709	42370F3F45	Juvenile	35.5		512 L Dorsal	STR	N	TN	Good	GC, scar R lat., bleeding from tag site
01/12/2005	729509	3715609	42335B7109	Juvenile	30.5		354 L Dorsal	M	N	TN	Good	D and C frayed, GC
01/13/2005	728594	3719264	407F4C095E	Male	38.6		604 L Dorsal	M	Y	TN	Excellent	TB, ripe, EC
01/13/2005	728438	3718800	4237162E37	Female	45.6		1082 L Dorsal	M	N	EF	Good	black mark on dors near keel
01/13/2005	728438	3718800	4232321964	Female	60		2220 None Detected	M	N	EF	Fair	fungus posterior to D, bloodshot
01/13/2005	728438	3718800	422E2C7441	Female	44.6		1032 L Dorsal	R	N	EF	Good	dors scratches, CP abraded
01/13/2005	728438	3718800	422F1C420D	Female	44.4		916 None Detected	M	N	EF	Excellent	EC
01/13/2005	728438	3718800	42334F4F7C	Male	44.5		976 L Dorsal	R	Y	EF	Good	TB, ripe, 2 lern., abrasions (avian)
01/13/2005	728438	3718800	422F047C23	Unknown	40.1		756 L Dorsal	M	N	EF	Excellent	1 lern., EC
01/13/2005	728438	3718800	422E507E72	Female	47.2		1140 L Dorsal	M	N	EF	Fair	sore on R D, abrasions on lateral, RP2 split
01/13/2005	728416	3718854	407A0C6C44	Female	47.9		1230 L Dorsal	M	N	TN	Good	scar on RCP, 1 lern
01/13/2005	728416	3718854	407F534006	Male	39.1		732 L Dorsal	M	Y	TN	Good	TB, ripe, scar on L lat
01/13/2005	728416	3718854	407F65363C	Unknown	40.2		690 L Dorsal	M	N	TN	Good	scratches on D, D and C frayed
01/13/2005	728267	3719301	407F600B26	Unknown	43.2		850 None Detected	M	N	TN	Good	head wounds, scars
01/13/2005	728438	3718800	4236651435	Female	44.8		1060 L Dorsal	STR	N	EF	Excellent	lern on D, EC
01/13/2005	728594	3719264	407F3F1D53	Male	41.1		724 L Dorsal	M	Y	TN	Good	TB, ripe, Lern. On P1, abrasions
01/13/2005	728471	3719731	407F5D3329	Juvenile	28.2		248 L Dorsal	M	N	TN	Good	split C, blunt nose
01/13/2005	728267	3719301	407F5A6F0D	Female	57.9		2370 L Dorsal	R	N	TN	Excellent	old bite wound on CP, EC

Date	Easting	Northing	PIT	Sex	TL(cm)	Weight (g)	Wire Tag Location	Mark/Recapture	Ripe?	Gear Type	Condition	Health/Notes
01/13/2005	728594	3719264	407F60265A	Male	39.8		692 None Detected	M	Y	TN	Good	TB, ripe, scars on lateral
01/13/2005	728594	3719264	422D461C28	Juvenile	38		560 L Dorsal	R	N	TN	Good	Few scars, C frayed, D split, GC
01/13/2005	728594	3719264	407F597C17	Female	58.2		2370 L Dorsal	M	N	TN	Excellent	EC
01/13/2005	728594	3719264	407F5C5A22	Female	44.5		1010 None Detected	M	N	TN	Good	Lern., scar by RP1
01/13/2005	728594	3719264	407F52037C	Juvenile	33.1		360 None Detected	M	N	TN	Fair	wound on LCP with fungus, L side abraded
01/13/2005	728594	3719264	4236651435	Female	44.2		1026 L Dorsal	R	N	TN	Excellent	Lern on D and P1, EC
01/13/2005	728267	3719301	407F644B53	Male	48.7		1245 L Dorsal	M	Y	TN	Excellent	TB ripe, EC
01/14/2005	728517	3718299	4239473E71	Male	38.8		614 L Dorsal	M	Y	TN	Excellent	TB, ripe, EC
01/14/2005	728517	3718299	42370E6710	Male	37		562 None Detected	R	Y	TN	Good	TB, ripe, C split, GC
01/14/2005	728517	3718299	422D501916	Female	43.4		830 L Dorsal	M	N	TN	Excellent	1 lernaea, EC
01/14/2005	728517	3718299	407F3F1D53	Male	45		750 L Dorsal	STR	Y	TN	Good	TB, ripe, few scars, GC
01/14/2005	728485	3718531	407F597C17	Female	58.2		2370 L Dorsal	STR	N	TN	Poor	tag site is hemorrhaging, PC
01/14/2005	728485	3718531	42324B3B0A	Male	54		1822 L Dorsal	M	Y	TN	Good	TB, ripe, part of A missing, GC
01/14/2005	728485	3718531	422E7B1F18	Female	43.5		950 L Dorsal	M	N	TN	Good	Lernaea, few NM, GC
01/14/2005	728608	3717960	422D23576E	Juvenile	37		500 L Dorsal	R	N	TN	Good	some descalation, GC
01/14/2005	728452	3718702	422D612F2A	Male	45.3		906 L Dorsal	M	Y	EF	Good	TB, ripe, D damaged, C split
01/14/2005	728608	3717960	407F611978	Juvenile	32.3		350 L Dorsal	STR	N	TN	Good	C split, LP1 scar, NM, captured in net and tagged 1.5 hrs prior
01/14/2005	728452	3718702	4237561E2B	Male	45.9		994 L Dorsal	M	Y	EF	Good	TB, ripe, lern on D and A, GC
01/14/2005	728485	3718531	42334B620C	Juvenile	38.5		624 L Dorsal	M	N	TN	Fair	infected wound on L keel, D and C split
01/14/2005	728759	3717812	422F197D23	Juvenile	36.5		488 None Detected	M	N	TN	Good	lern scars, C split
01/14/2005	728759	3717812	422E59581C	Juvenile	35.4		438 L Dorsal	M	N	TN	Good	top lobe of C missing
01/14/2005	728759	3717812	4236282B2D	Female	45.5		1010 L Dorsal	M	N	TN	Good	C frayed, few scars
01/14/2005	728759	3717812	422D764531	Male	40.2		674 L Dorsal	M	Y	TN	Good	TB, ripe, scar on L lateral
01/14/2005	728759	3717812	4236303F72	Juvenile	36.9		512 L Dorsal	M	N	TN	Good	C split, some descalation
01/14/2005	728759	3717812	4237335D2B	Juvenile	30		268 L Dorsal	M	N	TN	Good	CP scratch, C split
01/14/2005	728759	3717812	4233592C16	Juvenile	38.5		630 L Dorsal	R	N	TN	Fair	multiple scars
01/14/2005	728866	3717508	407F501E1A	Male	43.1		794 L Dorsal	M	Y	TN	Excellent	TB, ripe, perfect condition
01/14/2005	728866	3717508	407F46000B	Juvenile	37.2		504 L Dorsal	M	N	TN	Excellent	C split, EC
01/14/2005	728866	3717508	407F611978	Juvenile	32.3		350 L Dorsal	M	N	TN	Good	C split, LP1 scar, NM
01/14/2005	728866	3717508	407F5B2431	Male	41.1		736 None Detected	M	Y	TN	Good	TB, ripe, scars on L keel and CP, lernaea, C split, GC
01/14/2005	728517	3718299	422D5B294F	Unknown	40		644 L Dorsal	M	N	TN	Good	scars on R lateral, C split, GC
01/14/2005	728608	3717960	422E7C6D57	Juvenile	33		344 L Dorsal	M	N	TN	Good	C split, few scars, GC
01/15/2005	726721	3711311	422D6F2F16	Male	43.5		900 L Dorsal	M	Y	TN	Excellent	TB, ripe, EC, photo
01/15/2005	726589	3711058	407F4E5178	Female	53.1		1716 L Dorsal	M	N	EF	Excellent	EC
01/16/2005	726555	3711106	407F4B2E2F	Male	35		440 L Dorsal	M	Y	TN	Good	TB, ripe, C split, GC
01/17/2005	726094	3712378	422E655C26	Juvenile	33.1		370 L Dorsal	M	N	TN	Excellent	C split, EC
01/17/2005	726290	3712743	422E765B34	Male	54.1		1686 L Dorsal	M	Y	TN	Excellent	TB, ripe, EC
01/17/2005	726490	3712823	422D293D56	Juvenile	36.8		600 L Dorsal	M	N	EF	Excellent	EC
01/17/2005	726490	3712823	423C13151A	Juvenile	38.2		634 None Detected	R	N	EF	Excellent	few Lernaea, EC
01/17/2005	726490	3712823	4237191A78	Female	41		840 L Dorsal	R	N	EF	Excellent	few Lernaea, EC
01/17/2005	726490	3712823	4237265B71	Female	42.4		916 L Dorsal	R	N	EF	Excellent	few Lernaea, EC

Date	Easting	Northing	PIT	Sex	TL(cm)	Weight (g)	Wire Tag Location	Mark/Recapture	Ripe?	Gear Type	Condition	Health/Notes
01/17/2005	726490	3712823	423333212F	Unknown	41.6	1075	L Dorsal	M	N	EF	Excellent	some WG, EC
01/17/2005	726490	3712823	422D753B2E	Unknown	40	728	L Dorsal	M	N	EF	Excellent	few scars, EC
01/17/2005	726490	3712823	4237206D49	Juvenile	30.9	330	L Dorsal	M	N	EF	Poor	PC, held overnight, condition did not improve
01/17/2005	726490	3712823	22412A510E	Juvenile	34.5	444	L Dorsal	R	N	EF	Excellent	EC
01/17/2005	726290	3712743	422D5D557C	Female	42.8	862	L Dorsal	R	N	TN	Good	Lernaea, WG, GC
01/17/2005	726290	3712743	4236202605	Juvenile	34	394	L Dorsal	M	N	TN	Good	C and D frayed, AVP, photo
01/17/2005	726259	3711596	422F137909	Juvenile	30.5	302	L Dorsal	M	N	TN	Excellent	C frayed, EC
01/17/2005	726094	3712378	422D5A7D46	Female	40.8	806	L Dorsal	R	N	TN	Excellent	snub nose, Lernaea, EC
01/17/2005	726290	3711504	422F162C2F	Male	37.4	626	L Dorsal	M	N	TN	Good	Lernaea, GC
01/17/2005	726259	3711596	423358343A	Juvenile	38.7	698	L Dorsal	M	N	TN	Excellent	few abrasions, EC
01/17/2005	726236	3711718	422E5D0568	Male	39.2	656	L Dorsal	M	Y	TN	Good	TB, ripe, bloodshot belly, GC
01/17/2005	726236	3711718	42365E0E66	Female	42.9	760	L Dorsal	R	N	TN	Excellent	C split, EC
01/17/2005	726236	3711718	42371E0D74	Juvenile	34.5	444	L Dorsal	R	N	TN	Good	C and D frayed, GC
01/17/2005	726490	3712823	4237125B06	Juvenile	28.9	318	L Dorsal	M	N	EF	Excellent	EC
01/17/2005	726236	3711718	422E7F743F	Juvenile	35.2	504	L Dorsal	M	N	TN	Good	few scars, GC
01/17/2005	726290	3711504	422D5A645D	Juvenile	32.2	320	L Dorsal	M	N	TN	Good	P1 [damaged?], GC
01/17/2005	726236	3711718	422E7D545B	Male	43.1	906	L Dorsal	M	Y	TN	Good	TB, ripe, fungus, abrasions, GC
01/17/2005	726094	3712378	4233535E16	Unknown	40.3	740	L Dorsal	R	N	TN	Good	few abrasions, D split, GC
01/17/2005	726290	3711504	422D6D3802	Juvenile	35.7	530	L Dorsal	M	N	TN	Good	C frayed, GC
01/18/2005	726447	3712154	423B76153B	Male	39.2	696	L Dorsal	R	Y	EF	Good	TB, ripe, Lernaea, puncture in D, GC
01/18/2005	726447	3712154	422E5A4811	Juvenile	29.7	300	L Dorsal	M	N	EF	Good	bleeding from tag site, GC
01/18/2005	726467	3711743	407F4B6878	Juvenile	34.2	400	L Dorsal	M	N	TN	Good	Lernaea on chin, abrasions on sides, CP descaled, C tattered, GC
01/18/2005	726467	3711743	422D5B7948	Juvenile	31.4	346	L Dorsal	STR	N	TN	Excellent	EC, also captured in net #1
01/18/2005	726447	3712154	422F1C2D3C	Juvenile	29.9	302	L Dorsal	M	N	TN	Excellent	net abrasions, EC
01/18/2005	726447	3712154	42362C2836	Female	43.5	942	None Detected	M	N	EF	Excellent	Lernaea, EC
01/18/2005	726447	3712154	4237283252	Juvenile	29.2	244	L Dorsal	M	N	EF	Good	some descalation, abrasions, GC
01/18/2005	726447	3712154	422D5B7948	Juvenile	31.6	376	L Dorsal	M	N	EF	Excellent	EC
01/18/2005	726447	3712154	4236362602	Juvenile	31.8	354	L Dorsal	M	N	EF	Excellent	shocked hard, EC
01/18/2005	726447	3712154	423333212F	Unknown	42	1000	L Dorsal	STR	N	EF	Excellent	part of C missing, EC
01/18/2005	726447	3712154	422E533975	Juvenile	36.7	528	L Dorsal	R	N	EF	Excellent	tag site good, EC
01/18/2005	726437	3711574	407F45707C	Juvenile	36.3	466	L Dorsal	M	N	TN	Good	Fungus on sides, C split, abrasions, GC
01/18/2005	726447	3712154	422D6D3802	Juvenile	35.5	488	L Dorsal	STR	N	EF	Excellent	EC
01/18/2005	726362	3711473	422D727079	Juvenile	36.2	490	L Dorsal	M	N	TN	Excellent	abrasions, C frayed, EC
01/18/2005	726447	3712154	422F07446B	Juvenile	29.7	296	L Dorsal	M	N	EF	Excellent	EC
01/18/2005	726362	3711473	422E7A295F	Female	44.5	982	L Dorsal	M	N	TN	Excellent	EC
01/18/2005	726362	3711473	422D612F2A	Male	44.4	960	L Dorsal	MORT/STR	N	TN	MORT	MORT, buried
01/18/2005	726362	3711473	4239483877	Unknown	44.3	922	L Dorsal	M	N	TN	Excellent	C split, some Lernaea, EC
01/18/2005	726362	3711473	42367A5408	Juvenile	35.3	570	None Detected	R	N	TN	Excellent	C and A split, EC
01/18/2005	726362	3711473	422D5B7948	Juvenile	31.4	376	L Dorsal	STR	N	TN	Excellent	EC
01/18/2005	726362	3711473	422D73776D	Juvenile	32.8	386	L Dorsal	M	N	TN	Excellent	A split, C tattered, EC
01/18/2005	726362	3711473	423B76153B	Male	39.1	660	L Dorsal	STR	Y	TN	Excellent	TB, ripe, missing D ray, EC

Date	Easting	Northing	PIT	Sex	TL(cm)	Weight (g)	Wire Tag Location	Mark/Recapture	Ripe?	Gear Type	Condition	Health/Notes
01/18/2005	726437	3711574	422F162C2F	Juvenile	37.6		604 L Dorsal	STR	N	TN	Excellent	Lernaea at D base, sore on bottom lip, C tattered, EC
01/18/2005	726362	3711473	4237283252	Juvenile	29		250 L Dorsal	STR	N	TN	Excellent	sides abraded, EC
01/18/2005	726362	3711473	4236782548	Juvenile	32.3		374 L Dorsal	M	N	TN	Excellent	L oper abrasion, C split, EC
01/18/2005	726362	3711473	422F07446B	Juvenile	30.2		304 L Dorsal	STR	N	TN	Excellent	net abrasions, EC
01/18/2005	726362	3711473	423C13151A	Juvenile	38.7		618 None Detected	STR	N	TN	Excellent	WG RP2, EC
01/18/2005	726362	3711473	422D703A15	Juvenile	36.1		506 L Dorsal	M	N	TN	Excellent	C frayed, EC
01/18/2005	726362	3711473	4236790820	Juvenile	32.2		344 L Dorsal	M	N	TN	Excellent	C split, Lernaea at D base, EC
01/18/2005	726362	3711473	422D58005A	Male	33.5		382 None Detected	M	N	TN	Good	net abrasions
02/05/2005	715651	3680156	422D495B74	Juvenile	27.6		230 L Dorsal	M	N	EF	Good	GC
02/07/2005	715203	3680957	42363C1C3D	Juvenile	34.3		430 L Dorsal	M	N	TN	Good	Lernaea, some desc., GC
02/07/2005	715573	3681278	423C201F60	Male	39.4		708 L Dorsal	R	N	TN	Good	C split, snubnose, few scars, GC
02/08/2005	715831	3680082	42325B4875	Juvenile	34.9		522 L Dorsal	R	N	TN	Poor	PC, scar LP2, Lernaea
02/08/2005	715897	3680036	423717173B	Juvenile	35		490 L Dorsal	M	N	TN	Good	scars on lateral surface, C frayed, descaled, GC
02/08/2005	715831	3680082	422D354E72	Juvenile	32.2		320 L Dorsal	M	N	TN	Poor	PC, descaled, scars on R lateral
02/09/2005	712796	3696675	422D261E6A	Female	35		500 None Detected	R	N	TN	Fair	FC, C frayed, abrasions, fungus L lateral
02/09/2005	712796	3696675	422E284E42	Female	35.8		524 L Dorsal	M	N	TN	Good	some descalation, C split, GC
02/09/2005	712782	3696701	422E5C6B6E	Juvenile	33.1		446 L Dorsal	M	N	TN	Good	Lernaea marks, C split, GC., NM
02/12/2005	715937	3679739	422D252C50	Male	43		854 L Dorsal	M	N	TN	Good	few abr., some descal., C frayed, Lernaea on D, GC
02/12/2005	715836	3679934	MORTALIT12	Juvenile	31		348 L Dorsal	MORTALITY	N	TN	MORT	Mortality, gilled in net next to ~15 lb PYOL, preserved
03/01/2005	726628	3711109	422D557D6E	Juvenile	31.5		300 RCP	M	N	TN	Good	C frayed, NM, GC
03/01/2005	726740	3711790	407F4E5178	Female	54		1758 L Dorsal	R	N	EF	Excellent	scar on CP, tag site visible, EC
03/02/2005	727044	3712737	4233421839	Juvenile	33.2		430 RCP	M	N	TN	Fair	round fish pred scar on sides (bite mark), D split, FC
03/02/2005	727044	3712737	42356D563C	Juvenile	35.8		532 RCP	M	N	TN	Fair	NM, AVP, FC
03/02/2005	727044	3712737	407F532652	Juvenile	29.9		312 RCP	STR	N	TN	Poor	TW good, NM, AVP, desc., PC
03/02/2005	727044	3712737	407F526D6E	Juvenile	30.2		312 RCP	STR	N	TN	Good	NM, GC
03/02/2005	727044	3712737	422E260A1D	Juvenile	39.8		760 RCP	M	N	TN	Excellent	BS, EC
03/02/2005	727044	3712737	422E271B54	Juvenile	30.9		362 RCP	M	N	TN	Good	NM, desc, GC
03/02/2005	727044	3712737	422E775548	Juvenile	35		534 RCP	M	N	TN	Good	NM, BS, GC
03/02/2005	727044	3712737	422E3E4514	Juvenile	35.2		542 RCP	M	N	TN	Fair	C and D split, NM, AVP, FC
03/02/2005	727044	3712737	422D594203	Male	31		336 RCP	M	N	TN	Excellent	EC
03/02/2005	727044	3712737	422D6A403F	Juvenile	35.9		540 RCP	M	N	TN	Good	open wound near A fin, GC
03/02/2005	727044	3712737	423C19640D	Juvenile	35.6		504 RCP	M	N	TN	Good	head scars, scar by LP2, GC
03/02/2005	727044	3712737	407F45507F	Juvenile	35.2		458 RCP	M	N	TN	Good	C frayed, AVP, GC
03/02/2005	726996	3712701	45791E6615	Unknown	40.9		848 RCP	R	N	EF	Good	much AVP, Lernaea on L lateral, GC
03/02/2005	727245	3712842	422E29187F	Juvenile	33.2		418 RCP	M	N	TN	Good	C split, desc, GC
03/02/2005	727245	3712842	422E6A4F67	Juvenile	31		290 RCP	M	N	TN	Fair	AVP, C split, A split, FC
03/02/2005	727245	3712842	422E761F57	Male	31.1		354 RCP	M	Y	TN	Good	Some milt, C frayed, BS, GC
03/02/2005	727245	3712842	422E2C0348	Juvenile	31.5		336 RCP	M	N	TN	Excellent	EC
03/02/2005	727245	3712842	422E37137E	Juvenile	31.1		298 RCP	M	N	TN	Good	desc. R lat, C split, GC
03/02/2005	727044	3712737	4236203F1E	Juvenile	38.5		624 RCP	M	N	TN	Good	AVP, D and C split, GC
03/02/2005	726996	3712701	407F526D6E	Juvenile	30.7		320 RCP	M	N	EF	Excellent	EC

Date	Easting	Northing	PIT	Sex	TL(cm)	Weight (g)	Wire Tag Location	Mark/Recapture	Ripe?	Gear Type	Condition	Health/Notes
03/02/2005	727245	3712842	42365B6F27	Juvenile	33.9	466	RCP	M	N	TN	Fair	C lobe missing, AVP R lat, open wound LCP, FC
03/02/2005	727290	3712974	422F196F69	Juvenile	32.2	400	RCP	M	N	TN	Good	NM, GC
03/02/2005	726996	3712701	422D784E5C	Juvenile	32.1	414	RCP	M	N	EF	Excellent	WG LP1, EC
03/02/2005	726996	3712701	423A166719	Juvenile	35.2	550	RCP	M	N	EF	Good	AVP, old wound on C, GC
03/02/2005	726996	3712701	407F582C04	Juvenile	33.4	410	RCP	M	N	EF	Excellent	EC
03/02/2005	726996	3712701	4233596F78	Juvenile	33.9	428	None Detected	M	N	EF	Good	AVP, GC
03/02/2005	726996	3712701	4233570E1D	Juvenile	28.5	245	RCP	M	N	EF	Fair	scars, FC
03/02/2005	726996	3712701	422D5D5045	Juvenile	33	424	RCP	M	N	EF	Excellent	EC
03/02/2005	726996	3712701	4232573476	Juvenile	32.2	418	RCP	M	N	EF	Excellent	EC
03/02/2005	726996	3712701	460424505A	Juvenile	37.5	702	RCP	R	N	EF	Good	AVP, TW is red, GC
03/02/2005	726996	3712701	422D59161E	Juvenile	35.4	586	RCP	M	N	EF	Good	minimal scarring, GC
03/02/2005	726996	3712701	4603606231	Juvenile	36.6	588	RCP	R	N	EF	Good	avp.desc on sides, GC
03/02/2005	726996	3712701	407F645C20	Juvenile	36.6	575	RCP	M	N	EF	Good	desc, scars, GC
03/02/2005	726996	3712701	407F656853	Juvenile	35.2	518	RCP	M	N	EF	Good	AVP, GC
03/02/2005	726996	3712701	4239690809	Juvenile	31.8	360	RCP	M	N	EF	Excellent	EC
03/02/2005	726996	3712701	422E583C68	Male	35.9	588	RCP	M	N	EF	Good	desc lat, slightly TB, GC
03/02/2005	726996	3712701	422D522B38	Juvenile	35.5	566	RCP	M	N	EF	Good	AVP L keel, GC
03/02/2005	726996	3712701	407F463913	Juvenile	34.4	550	RCP	M	N	EF	Good	AVP, GC
03/02/2005	726996	3712701	422E612917	Juvenile	30.3	336	RCP	M	N	EF	Good	D frayed, scars on lat, GC
03/02/2005	727248	3713179	422F0E216B	Juvenile	34.5	474	RCP	M	N	TN	Fair	Covered in AVP, FC (photo)
03/02/2005	727290	3712974	422F121F49	Juvenile	32	330	LCP	M	N	TN	Good	C frayed, GC
03/02/2005	727290	3712974	422D5D5D3A	Juvenile	31.5	362	LCP	M	N	TN	Fair	C split, BS, FC
03/02/2005	727290	3712974	42334C1160	Juvenile	31	442	RCP	M	N	TN	Good	spinal deformity, TW bleeding, GC
03/02/2005	727290	3712974	422F205370	Male	33.4	436	LCP	M	Y	TN	Good	lightly TB, ripe, BS, GC
03/02/2005	727290	3712974	407F532652	Juvenile	30.3	306	RCP	M	N	TN	Good	BS, psrt of C fin missing, GC
03/02/2005	727290	3712974	407F4F704C	Juvenile	32.8	368	RCP	M	N	TN	Good	AVP, GC
03/02/2005	727290	3712974	407F4C2B69	Juvenile	29.9	266	RCP	M	N	TN	Fair	BS, C split, CP open wound, WG, FC
03/02/2005	727290	3712974	4236657261	Male	39	622	RCP	M	Y	TN	Good	TB ripe, open AVP, GC
03/02/2005	727248	3713179	422D424465	Juvenile	32.6	326	RCP	M	N	TN	Good	C split, Descaled, GC
03/02/2005	727290	3712974	422D554642	Juvenile	30.4	276	RCP	M	N	TN	Good	BS, GC
03/02/2005	727248	3713179	422E30282D	Male	32.5	400	RCP	M	Y	TN	Good	BS, TB ripe, GC
03/02/2005	727248	3713179	4237114A28	Juvenile	35.1	468	RCP	STR	N	TN	Poor	RP2 destroyed, C split, PC (belly up)
03/02/2005	727248	3713179	407F492337	Juvenile	31.1	330	RCP	M	N	TN	Poor	lg open wound near RP2, BS, AVP, PC
03/02/2005	727248	3713179	42366F0A13	Juvenile	32.6	360	RCP	M	N	TN	Good	BS, C split, GC
03/02/2005	727248	3713179	422D507009	Juvenile	30.8	314	RCP	M	N	TN	Good	BS, GC
03/02/2005	727290	3712974	422D6A395E	Juvenile	33.9	470	RCP	M	N	TN	Good	open AVP L lat, GC
03/02/2005	727245	3712842	422E5F3572	Juvenile	30	294	RCP	M	N	TN	Good	C frayed, 1 AVP, GC
03/02/2005	727290	3712974	4236135213	Juvenile	36.1	472	LCP	M	N	TN	Good	BS, C frayed, AVP, GC
03/02/2005	727245	3712842	407F631F31	Juvenile	32.7	388	RCP	M	N	TN	Good	AVP, C frayed, GC
03/02/2005	727245	3712842	422D2E2B79	Juvenile	34.4	436	RCP	M	N	TN	Good	C frayed, AVP, GC
03/02/2005	727290	3712974	42375B5D0A	Juvenile	32.2	356	RCP	M	N	TN	Good	C frayed, GC

Date	Easting	Northing	PIT	Sex	TL(cm)	Weight (g)	Wire Tag Location	Mark/Recapture	Ripe?	Gear Type	Condition	Health/Notes
03/02/2005	727245	3712842	422E48617C	Juvenile	30.1		304 RCP	M	N	TN	Good	AVP L lat, C split, BS, GC
03/02/2005	727290	3712974	42375C5707	Juvenile	36.1		485 RCP	M	N	TN	Excellent	EC
03/02/2005	727245	3712842	42333F0F1F	Male	33.6		430 RCP	M	Y	TN	Excellent	TB ripe, EC
03/02/2005	727245	3712842	422F136226	Male	33.1		374 RCP	M	Y	TN	Fair	TB ripe, AVP, C split, FC
03/02/2005	727245	3712842	422F1D4B7C	Juvenile	31.1		274 RCP	M	N	TN	Good	C split, LD abraded, GC
03/02/2005	727245	3712842	407F657471	Juvenile	33.1		370 RCP	M	N	TN	Good	WG, C split, GC
03/02/2005	727245	3712842	422E5E3F14	Juvenile	35		476 RCP	M	N	TN	Good	AVP, GC
03/02/2005	727245	3712842	4237114A28	Juvenile	34.9		450 RCP	M	N	TN	Fair	C split, AVP, RP2 destroyed, FC
03/02/2005	727248	3713179	422F0C4C09	Juvenile	32.6		348 RCP	M	N	TN	Good	net stress, BS, C split, GC
03/02/2005	727245	3712842	4236046A3B	Male	36		434 RCP	M	Y	TN	Good	TB ripe, few scars, GC
03/02/2005	727290	3712974	407F5F0024	Juvenile	32.1		388 None Detected	M	N	TN	Good	NM, BS, GC
03/02/2005	727290	3712974	423250652D	Juvenile	32.8		464 RCP	M	N	TN	Good	NM, desc., GC
03/02/2005	727290	3712974	422E510E62	Juvenile	30.9		352 RCP	M	N	TN	Good	NM, few scars, GC
03/02/2005	727290	3712974	407F47164F	Juvenile	32		480 RCP	M	N	TN	Good	few scars on CP, GC
03/02/2005	727290	3712974	407F633540	Juvenile	29.8		318 RCP	M	N	TN	Poor	C split, desc., NM, few scars, PC
03/02/2005	727245	3712842	4602760525	Juvenile	31.8		332 RCP	R	N	TN	Good	AVP, TW good, GC
03/03/2005	726791	3711885	4579252524	Male	32.5		410 RCP	R	Y	EF	Good	AVP, TB ripe, GC
03/03/2005	726926	3712332	42334C1160	Male	31.6		426 RCP	STR	N	TN	Good	A and C frayed, spinal deformity, GC
03/03/2005	726854	3712089	422E294A4C	Juvenile	31.5		342 RCP	M	N	TN	Good	BS, NM, GC
03/03/2005	726926	3712332	460479285A	Juvenile	33.7		470 RCP	R	N	TN	Fair	BS, min AVP, FC
03/03/2005	726926	3712332	422E5F3572	Juvenile	29.9		328 RCP	STR	N	TN	Fair	L eye sunken in, C split, FC
03/03/2005	726926	3712332	423730105E	Juvenile	35.8		560 RCP	M	N	TN	Good	BS, C split, GC
03/03/2005	726926	3712332	4236744050	Male	32.7		402 RCP	M	Y	TN	Good	TB ripe, C split, scratches
03/03/2005	726854	3712089	422E2F033B	Juvenile	33.3		480 RCP	M	N	TN	Good	C frayed, GC
03/03/2005	726926	3712332	422E2F1052	Male	30.9		324 RCP	M	Y	TN	Excellent	TB ripe, EC
03/03/2005	726854	3712089	422E72582F	Male	34.4		516 RCP	M	N	TN	Fair	lightly TB, D and C frayed, puncture wound on V, FC
03/03/2005	726854	3712089	4235787B34	Juvenile	31.2		360 RCP	M	N	TN	Good	C frayed, GC
03/03/2005	726791	3711885	407F657471	Juvenile	32.3		370 RCP	STR	N	EF	Excellent	TW good, EC
03/03/2005	726957	3712534	423618391C	Juvenile	31.8		370 RCP	M	N	TN	Poor	BS, AVP, PC
03/03/2005	726791	3711885	4603106308	Juvenile	36.2		570 RCP	R	N	EF	Good	AVP, GC
03/03/2005	726791	3711885	422E48617C	Male	29.9		320 RCP	STR	Y	EF	Poor	TB ripe, AVP, open wound L lat, bloated, PC
03/03/2005	726791	3711885	407F582C04	Male	33.1		388 RCP	STR	N	EF	Excellent	TB, TW food, EC
03/03/2005	726791	3711885	422D594203	Male	30.9		338 RCP	STR	N	EF	Excellent	NM, TW good, EC
03/03/2005	726791	3711885	45772B3650	Juvenile	35.9		476 RCP	R	N	EF	Excellent	EC
03/03/2005	726917	3712689	422E6E7C01	Juvenile	33.8		384 RCP	M	N	TN	Good	C and A frayed, AVP, GC
03/03/2005	726791	3711885	422E731D7B	Juvenile	32.2		444 RCP	M	N	EF	Poor	AVP, shocked hard, PC (belly up)
03/03/2005	726957	3712534	422F205370	Female	33.7		414 RCP	STR	Y	TN	Fair	TB ripe, FC
03/03/2005	726917	3712689	4236203F1E	Juvenile	39		619 RCP	STR	N	TN	Good	AVP, D frayed, C split, GC
03/03/2005	726917	3712689	423642511D	Juvenile	37.7		612 RCP	M	N	TN	Excellent	EC
03/03/2005	726917	3712689	422F215F38	Male	38		624 RCP	M	Y	TN	Excellent	ripe, EC
03/03/2005	726917	3712689	423B7F166F	Juvenile	31.9		374 RCP	M	N	TN	Good	BS, C split, GC

Date	Easting	Northing	PIT	Sex	TL(cm)	Weight (g)	Wire Tag Location	Mark/Recapture	Ripe?	Gear Type	Condition	Health/Notes
03/03/2005	726917	3712689	42371B552D	Juvenile	31.2	350	None Detected	M	N	TN	Fair	hole in CP, C frayed, FC
03/03/2005	726917	3712689	423B782D3C	Male	32.6	392	RCP	M	N	TN	Good	C split, GC
03/03/2005	726917	3712689	422E3C5C68	Juvenile	31	326	RCP	M	N	TN	Fair	C frayed, NM, FC
03/03/2005	726917	3712689	422F121F49	Juvenile	32.1	426	RCP	STR	N	TN	Good	TW open, NM, GC
03/03/2005	726917	3712689	46046F355C	Female	43.5	920	RCP	R	N	TN	Fair	Radio tag 40661, tag ripped out, open wounds, FC
03/03/2005	726917	3712689	4237126109	Male	33.2	376	RCP	M	N	TN	Good	C frayed, GC
03/03/2005	726917	3712689	423C1B4F38	Male	37	484	RCP	M	Y	TN	Good	TB ripe, AVP scars, GC
03/03/2005	726917	3712689	4236203F1E	Female	39	646	RCP	MORT/STRN		TN	MORT	Mortality, preserved
03/03/2005	726957	3712534	4579045523	Female	39	722	RCP	R	N	TN	Fair	Radio tag 40651, back tag attachment ripped out, photo, FC
03/03/2005	726957	3712534	4579023625	Male	33.5	400	RCP	R	N	TN	Good	C split, GC
03/03/2005	726957	3712534	4579137A78	Juvenile	31.8	338	RCP	R	N	TN	Good	C frayed, BS, GC
03/03/2005	726957	3712534	4233421839	Juvenile	33.5	422	RCP	STR	N	TN	Fair	descaled, NM, fish pred. bite mark
03/03/2005	726917	3712689	4236046A3B	Male	36	396	RCP	STR	Y	TN	Good	TB ripe, AVP, GC, TW bleeding
03/06/2005	729016	3717054	422E730159	Male	42.1	796	L Dorsal	STR	Y	TN	Good	TB ripe, TW good, scars posterior of D, GC
03/06/2005	728937	3717496	42371F001F	Female	46	1092	L Dorsal	M	N	TN	Good	scar on R lat, GC
03/06/2005	728996	3717119	422E730159	Male	42.1	816	L Dorsal	M	Y	EF	Good	TB ripe, Lernaea by LP2, scarring posterior to D, GC
03/06/2005	728937	3717496	422E482212	Male	41	796	L Dorsal	M	N	TN	Good	scar on side, GC
03/06/2005	728937	3717496	422E38587E	Male	43	872	L Dorsal	M	Y	TN	Excellent	TB ripe, C split, EC
03/06/2005	729016	3717054	42364F2B24	Female	46.4	1296	L Dorsal	M	Y	TN	Excellent	Ripe, EC
03/06/2005	728937	3717496	422D40413B	Female	44.5	980	L Dorsal	M	Y	TN	Excellent	ripe, C split, EC
03/06/2005	728855	3717166	4236703755	Male	45.7	1232	None Detected	M	N	TN	Excellent	old fish bite mark on hump, EC
03/07/2005	728446	3718696	422E57422C	Male	33	438	RCP	M	N	EF	Excellent	EC
03/07/2005	728317	3718961	422E4B6436	Female	45.9	1030	None Detected	R	N	TN	Good	C frayed, Lernaea by LP2 and A, GC
03/07/2005	728317	3718961	423C105029	Female	46	1130	L Dorsal	R	Y	TN	Good	ripe, snubnose, underbite, Lernaea by D, C split, GC
03/07/2005	728446	3718696	4579781B73	Juvenile	38.4	706	L Dorsal	R	N	EF	Fair	radio tagged (40121), tag is half ripped out, scars on laterals
03/07/2005	728446	3718696	422E7B1F18	Female	44.5	1048	L Dorsal	R	N	EF	Good	minor scratches, C split, TW good, good, cond.
03/08/2005	728536	3718203	422D703A15	Juvenile	37	650	L Dorsal	R	N	EF	Good	TW good, Lernaea mark L lateral, C finray missing, GC
03/08/2005	728503	3718196	422D6B6511	Unknown	44.3	972	L Dorsal	M	N	TN	Fair	C frayed, A split, scars, FC
03/08/2005	728525	3718036	423C1F2005	Female	35.7	506	RCP	M	Y	TN	Fair	ripe, C frayed, scars, FC
03/08/2005	728536	3718203	4579781B73	Juvenile	38.2	698	L Dorsal	STR	N	EF	Fair	Radio tag 40121, condition is same(FC), released at site of capture
03/08/2005	728536	3718203	422E3F4617	Unknown	44.9	1060	L Dorsal	M	N	EF	Excellent	EC
03/08/2005	728536	3718203	422D3C5E4F	Female	43.4	1010	L Dorsal	M	Y	EF	Good	ripe, small scars, GC
03/08/2005	728536	3718203	422E536851	Female	40.1	715	L Dorsal	M	N	EF	Good	"7" shaped scar on L lat, scars CP, GC
03/08/2005	728525	3718036	4236032F04	Juvenile	31.5	350	RCP	M	N	TN	Fair	part of C missing, AVP, FC
03/08/2005	728536	3718203	423713045E	Male	44.2	970	L Dorsal	M	Y	EF	Good	TB ripe, AVP, GC
03/08/2005	728914	3717688	422E605141	Juvenile	32.2	454	L Dorsal	M	N	TN	Good	NM, C frayed, GC
03/08/2005	728525	3718036	4236675031	Female	45.3	1078	L Dorsal	M	N	TN	Good	C split, fish pred. scar, GC
03/08/2005	728503	3718196	42370A6528	Female	36	520	None Detected	M	N	TN	Poor	C frayed, Lernaea on D, PC
03/08/2005	728802	3717450	4237304B08	Juvenile	33.5	430	RCP	M	N	TN	Fair	C frayed, desc, FC
03/08/2005	728914	3717688	407F412831	Female	50.5	1374	L Dorsal	R	N	TN	Good	old wound L lat, WG, C split, GC
03/08/2005	728914	3717688	422E503257	Female	44.4	1150	L Dorsal	R	N	TN	Poor	scar LCP, C frayed, bloated, PC

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03/08/2005	728738	3717767	4237332347	Male	40.8		770 L Dorsal	M	N	TN	Good	C split, Lernaea on D, GC
03/08/2005	728679	3717946	422E304B40	Male	42.5		878 L Dorsal	M	Y	TN	Excellent	TB ripe, EC
03/08/2005	728679	3717946	422E765900	Female	45		1242 L Dorsal	M	N	TN	Good	C frayed, ABR R lat, GC
03/08/2005	728525	3718036	422D501916	Female	45.6		1050 L Dorsal	STR	N	TN	Excellent	EC
03/08/2005	728802	3717450	4236651435	Female	45		1220 L Dorsal	R	N	TN	Good	C frayed, R eye cloudy, Lernaea on D, GC
04/06/2005	736464	3651438	422E362C5C	Male	43.9		968 L Dorsal	M	N	TN	Excellent	EC
05/09/2005	726398	3711468	42366B214D	Unknown	40.2		674 L Dorsal	M	N	EF	Good	L opercle damaged, GC
05/09/2005	726398	3711468	42365E0E66	Female	47.8		1158 L Dorsal	R	N	EF	Good	C frayed, GC
05/09/2005	726398	3711468	422D476B35	Male	42.9		856 L Dorsal	M	N	EF	Excellent	D split, EC
05/09/2005	726398	3711468	422E263226	Juvenile	38		636 L Dorsal	M	N	EF	Excellent	EC
05/09/2005	726398	3711468	422E283723	Juvenile	39.9		698 L Dorsal	M	N	EF	Excellent	2 lern., EC
05/09/2005	726398	3711468	422E3B7D37	Male	42.3		800 L Dorsal	M	N	EF	Excellent	speckled, EC
05/09/2005	726448	3712157	423C061811	Male	48		1196 L Dorsal	R	N	TN	Excellent	EC
05/09/2005	726448	3712157	42371C3A63	Unknown	40.5		710 L Dorsal	M	N	TN	Good	Lern on D, C split, GC
05/09/2005	726398	3711468	4233535E16	Female	47.1		1348 L Dorsal	R	N	EF	Excellent	stout, EC
05/11/2005	729334	3716384	407F655D17	Male	42.2		945 L Dorsal	R	N	EF	Excellent	D split, TW visible but healthy, EC
05/12/2005	726911	3712616	422E475410	Juvenile	33		414 RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	727266	3712856	4577653F68	Male	35		396 RCP	R	N	TN	Excellent	EC
05/12/2005	727266	3712856	422E28275D	Juvenile	33.5		356 RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	727266	3712856	4578574369	Female	44		858 RCP	R	N	TN	Good	C frayed, scar on R D, GC
05/12/2005	727016	3712777	422E450C36	Juvenile	39.5		678 RCP	M	N	TN	Good	C split, BS, GC
05/12/2005	727016	3712777	4577713F08	Female	41.5		818 RCP	R	N	TN	Excellent	C frayed, EC
05/12/2005	727016	3712777	423C1E2C4D	Juvenile	37		490 RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	727016	3712777	422D4D2720	Male	38.5		602 RCP	M	N	TN	Good	part of C & A missing, GC
05/12/2005	726911	3712616	422E42271B	Juvenile	34		380 RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	727244	3713226	422E4F6214	Male	36.5		562 RCP	M	N	TN	Fair	BS, C split, desc. FC
05/12/2005	726911	3712616	422D6A5807	Male	32		338 RCP	M	N	TN	Good	C frayed, BS, GC
05/12/2005	727266	3712856	4237026046	Male	37		516 RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	727016	3712777	422D4D175D	Female	45.5		936 RCP	M	N	TN	Excellent	EC
05/12/2005	727266	3712856	42357C0D12	Juvenile	34.5		468 RCP	M	N	TN	Good	C frayed, desc., GC
05/12/2005	727266	3712856	422E350915	Male	42.5		802 RCP	M	N	TN	Excellent	EC
05/12/2005	727266	3712856	4236484915	Male	42		834 RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	727266	3712856	422E4B421B	Male	38		590 RCP	M	N	TN	Good	C frayed, BS, GC
05/12/2005	727266	3712856	42356D3646	Male	33		344 RCP	M	N	TN	Good	C frayed, BS, GC
05/12/2005	727266	3712856	4606384147	Unknown	40		632 RCP	R	N	TN	Excellent	C frayed, EC
05/12/2005	727244	3713226	422E373D15	Male	42.5		906 RCP	M	N	TN	Excellent	EC
05/12/2005	727244	3713226	4604004E57	Male	42		718 RCP	R	N	TN	Good	desc., GC
05/12/2005	727244	3713226	42366B7D16	Male	40		734 RCP	M	N	TN	Excellent	EC
05/12/2005	727244	3713226	4606070454	Male	42.5		904 RCP	R	N	TN	Good	C split, GC
05/12/2005	727244	3713226	42370C253A	Male	41		846 RCP	M	N	TN	Excellent	EC
05/12/2005	726911	3712616	4606255617	Male	40		558 RCP	R	N	TN	Good	C split, part of D missing, BS, GC

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05/12/2005	727244	3713226	4236055519	Male	40.5		728 RCP	M	N	TN	Excellent	c split, EC
05/12/2005	726785	3711954	4237255B02	Juvenile	32		350 RCP	M	N	EF	Good	top of C missing, GC
05/12/2005	726785	3711954	422D3F6A5B	Male	35		526 RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	423574166A	Juvenile	33.2		396 RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	423B206559	Juvenile	30.2		294 RCP	M	N	EF	Fair	C frayed, FC
05/12/2005	726785	3711954	4236735B00	Juvenile	33.9		400 RCP	M	N	EF	Excellent	top lobe of C missing, EC
05/12/2005	726785	3711954	42367C0547	Juvenile	33.7		434 RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	422D445C36	Juvenile	33		370 RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	42367A4C30	Juvenile	32.8		396 RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	4236476562	Juvenile	39.2		644 RCP	M	N	EF	Good	C frayed, lern, GC
05/12/2005	726785	3711954	422D36063E	Juvenile	34.9		454 RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	422E49116C	Juvenile	35.6		488 RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	422D26591E	Male	39.2		704 RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	423B2B3459	Male	33.1		478 RCP	M	N	EF	Excellent	C split, EC
05/12/2005	726785	3711954	46061E0F2A	Male	37.5		508 RCP	R	N	EF	Excellent	EC
05/12/2005	726785	3711954	46060E4C28	Male	38		640 RCP	R	N	EF	Good	mouth deformed, GC
05/12/2005	726785	3711954	42371F4E0E	Juvenile	34		410 RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	4236676C10	Juvenile	37		512 RCP	M	N	EF	Good	C and A frayed, GC
05/12/2005	726785	3711954	46060E084B	Male	39		534 RCP	R	N	EF	Excellent	part of C missing, EC
05/12/2005	726785	3711954	4239690809	Male	38		644 RCP	R	N	EF	Excellent	EC
05/12/2005	726785	3711954	4606426E25	Male	37.5		480 RCP	R	N	EF	Excellent	EC
05/12/2005	726785	3711954	422E576522	Juvenile	38		600 RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	45791E6615	Female	46		1130 RCP	R	N	EF	Excellent	EC
05/12/2005	726785	3711954	422E3C2030	Juvenile	35.5		432 RCP	M	N	EF	Good	BS, GC
05/12/2005	726785	3711954	4236617560	Male	36		530 RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	423C021178	Female	43		910 RCP	M	N	EF	Good	part of C missing, GC
05/12/2005	726785	3711954	422E252E77	Juvenile	37		610 RCP	M	N	EF	Excellent	top lobe of C missing, EC
05/12/2005	726785	3711954	42372C637A	Juvenile	32		398 RCP	M	N	EF	Excellent	EC
05/12/2005	726911	3712616	422E3A4944	Juvenile	32.5		338 RCP	M	N	TN	Good	C frayed, BS, GC
05/12/2005	726785	3711954	4606227045	Male	46.3		912 RCP	R	N	EF	Poor	PC.
05/12/2005	726785	3711954	MORTALIT16	Juvenile	36.4		530 RCP	MORTALITY	N	EF	MORT	mort, preserved
05/12/2005	726785	3711954	MORTALIT15	Juvenile	33		364 RCP	MORTALITY	N	EF	MORT	mort, preserved
05/12/2005	726785	3711954	422E3F620E	Juvenile	33		360 RCP	M	N	EF	Poor	PC
05/12/2005	726785	3711954	MORTALIT14	Juvenile	33		396 RCP	MORTALITY	N	EF	MORT	mort, preserved
05/12/2005	726785	3711954	423B763847	Juvenile	33		350 RCP	M	N	EF	Good	C split, BS, GC
05/12/2005	726785	3711954	422E2E7208	Juvenile	33.2		388 RCP	M	N	EF	Fair	abrasion on L operc, FC
05/12/2005	726785	3711954	422D586F6B	Juvenile	35.5		520 RCP	M	N	EF	Poor	PC
05/12/2005	726785	3711954	422D451B56	Unknown	41.5		860 RCP	M	N	EF	Poor	PC
05/12/2005	726785	3711954	422D311F5A	Juvenile	33.9		436 RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	423648012A	Male	33.4		454 RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	42370D1C36	Male	33.2		420 RCP	M	N	EF	Excellent	top lobe of C damaged, EC

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05/12/2005	726785	3711954	422E790F01	Juvenile	33.1	368	RCP	M	N	EF	Good	top lobe of C damaged, GC
05/12/2005	726785	3711954	422E5A4D28	Male	38.1	540	RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	422E2B426D	Juvenile	33.5	436	RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	MORTALIT13	Juvenile	33	374	RCP	MORTALITY	N	EF	MORT	mort, inadvertently returned to the water
05/12/2005	726785	3711954	422E594F6F	Juvenile	32.9	382	RCP	M	N	EF	Fair	scratch on R lateral, FC
05/12/2005	726785	3711954	422E2A1A38	Juvenile	32.4	374	RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	422D2A760D	Juvenile	33.9	416	RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	422D27037F	Juvenile	34.4	412	RCP	M	N	EF	Excellent	top lobe of C damaged, EC
05/12/2005	726785	3711954	42370B583E	Juvenile	31.4	336	RCP	M	N	EF	Excellent	snub nose, EC
05/12/2005	726785	3711954	422D451124	Juvenile	33.8	412	RCP	M	N	EF	Excellent	scratch on L lateral, EC
05/12/2005	726785	3711954	4236783849	Unknown	40.8	746	RCP	M	N	EF	Excellent	EC
05/12/2005	726785	3711954	422E2A692B	Juvenile	33.5	376	RCP	M	N	EF	Excellent	EC, abrasion on L operc
05/12/2005	726923	3712552	422D43182A	Juvenile	36	470	RCP	M	N	TN	Excellent	C split, EC
05/12/2005	726825	3712007	42367F446E	Juvenile	33	404	RCP	M	N	TN	Excellent	C split, EC
05/12/2005	726825	3712007	4236637C62	Juvenile	32	342	RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	726825	3712007	457753142A	Male	34.9	434	RCP	R	N	TN	Excellent	top lobe of C damaged, EC
05/12/2005	726825	3712007	423C032428	Juvenile	32.5	336	RCP	M	N	TN	Good	C frayed, BS, GC
05/12/2005	726887	3712284	42360D384B	Juvenile	32	386	RCP	M	N	TN	Good	C frayed, BS, GC
05/12/2005	726887	3712284	422D400255	Juvenile	31	324	RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	726887	3712284	4237005939	Juvenile	32.4	392	RCP	M	N	TN	Good	C frayed, GC
05/12/2005	726923	3712552	422E742F4D	Juvenile	34	410	None Detected	M	N	TN	Excellent	top lobe of C damaged, EC
05/12/2005	726923	3712552	422E2C2446	Juvenile	32.4	342	RCP	M	N	TN	Excellent	EC
05/12/2005	726923	3712552	422E400A00	Juvenile	33.1	368	RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	726923	3712552	422E783F68	Juvenile	32.6	396	RCP	M	N	TN	Excellent	C frayed, exc. Cond
05/12/2005	726825	3712007	42370E1F52	Juvenile	33.7	404	RCP	M	N	TN	Good	missing part of C, GC
05/12/2005	726923	3712552	422E334B33	Male	34	472	RCP	M	N	TN	Good	C split, GC
05/12/2005	726911	3712616	4237293151	Juvenile	33	370	RCP	M	N	TN	Good	C split, desc, GC
05/12/2005	726923	3712552	4577653B72	Male	42.5	628	RCP	R	N	TN	Excellent	EC
05/12/2005	726923	3712552	422E2B5F6C	Male	35	460	RCP	M	N	TN	Excellent	snub nose, EC
05/12/2005	726923	3712552	4236404F6C	Male	39.5	712	RCP	M	N	TN	Excellent	EC
05/12/2005	726923	3712552	4236476562	Female	39.5	626	RCP	STR	N	TN	Excellent	C frayed, EC
05/12/2005	726923	3712552	42372E5659	Juvenile	36	468	RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	726923	3712552	42370A340C	Juvenile	39	536	RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	726923	3712552	422D6E027E	Juvenile	34	382	RCP	M	N	TN	Good	C split, BS, GC
05/12/2005	726923	3712552	4237105C6C	Male	33.5	372	RCP	M	N	TN	Good	C frayed, BS, good
05/12/2005	726785	3711954	423764743F	Male	34	424	RCP	M	N	EF	Excellent	EC
05/12/2005	726911	3712616	423A134849	Unknown	41.5	836	RCP	M	N	TN	Excellent	EC
05/12/2005	726785	3711954	422E300B39	Juvenile	33.5	424	RCP	M	N	EF	Excellent	EC
05/12/2005	726911	3712616	422D22254A	Male	40	690	RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	726923	3712552	422E3C1D32	Juvenile	32.7	332	RCP	M	N	TN	Good	C frayed, GC
05/12/2005	726825	3712007	42365E1C2C	Juvenile	33.6	372	RCP	M	N	TN	Excellent	C frayed, EC

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05/12/2005	726785	3711954	45772B3650	Female	43		806 RCP	R	N	EF	Excellent	EC
05/12/2005	726797	3711948	42366B1B42	Juvenile	32.4		344 RCP	M	N	TN	Excellent	C split, EC
05/12/2005	726797	3711948	422E223F55	Juvenile	32		446 RCP	M	N	TN	Good	C frayed, RP1 split, GC
05/12/2005	726797	3711948	423B76462B	Juvenile	33		362 RCP	M	N	TN	Excellent	BS, C frayed, EC
05/12/2005	726797	3711948	42367D4409	Juvenile	32.6		348 RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	726797	3711948	423C08740B	Juvenile	34.7		470 RCP	M	N	TN	Excellent	BS, EC
05/12/2005	726797	3711948	422D667403	Male	33.1		400 RCP	M	N	TN	Excellent	EC
05/12/2005	726797	3711948	422E5D1B7E	Juvenile	32		358 RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	726825	3712007	423C02181D	Juvenile	33.2		402 RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	726825	3712007	422E350153	Juvenile	31.1		318 RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	726825	3712007	422E433652	Juvenile	31.9		366 RCP	M	N	TN	Excellent	EC
05/12/2005	726825	3712007	4236512940	Juvenile	33.8		348 RCP	M	N	TN	Excellent	C split, EC
05/12/2005	726825	3712007	422D29602E	Female	32		414 RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	726785	3711954	46064C4365	Male	40.5		686 RCP	R	N	EF	Excellent	EC
05/12/2005	726797	3711948	42366A236D	Juvenile	34.7		406 RCP	M	N	TN	Excellent	C split, BS, EC
05/12/2005	726825	3712007	422D2A6673	Juvenile	32.2		366 RCP	M	N	TN	Good	C frayed, GC
05/12/2005	726825	3712007	422D3C4C05	Juvenile	32.5		376 RCP	M	N	TN	Good	C frayed, BS, GC
05/12/2005	726825	3712007	422E5C1118	Juvenile	31		292 RCP	M	N	TN	Excellent	C split, BS, EC
05/12/2005	726825	3712007	422E796509	Juvenile	32.8		382 RCP	M	N	TN	Excellent	EC
05/12/2005	726825	3712007	422D3A004B	Juvenile	33.2		426 RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	726825	3712007	423B7F7A49	Juvenile	33.2		408 RCP	M	N	TN	Excellent	C frayed, EC
05/12/2005	726825	3712007	422D41054C	Juvenile	32.8		362 RCP	M	N	TN	Excellent	C split, EC
05/12/2005	726825	3712007	422E454E7B	Juvenile	38.1		528 RCP	M	N	TN	Excellent	C frayed, BS, EC
05/12/2005	726825	3712007	423B7A405E	Juvenile	34.1		412 RCP	M	N	TN	Excellent	C split, EC
09/14/2005	727241	3713209	46064D447C	Unknown	44.2		0 RCP	M	N	EF		lernaea, white grubs, good condition
09/14/2005	727241	3713209	4606434757	Unknown	40.5		0 RCP	R	N	EF		lernaea, good condition
09/14/2005	727280	3712881	4577593E6B	Unknown	40		0 RCP	M	N	TN		Lernaea, good condition
09/14/2005	727241	3713209	4578115A78	Unknown	40.2		0 RCP	M	N	EF		lernaea, good condition, fungus on dorsal surface
09/14/2005	727241	3713209	457773281C	Unknown	40.7		0 RCP	R	N	EF		bite mark, lernaea, good condition
09/14/2005	727241	3713209	45776E3F4C	Unknown	40.2		0 RCP	M	N	EF		lernaea, good condition
09/14/2005	727241	3713209	45776F4972	Juvenile	39.1		0 RCP	M	N	EF		lernaea, good condition
09/14/2005	726951	3712362	46061D263F	Male	42.5		0 RCP	M	N	TN		lernaea, good condition
09/14/2005	726951	3712362	45773E0077	Juvenile	37.4		0 RCP	M	N	TN		lernaea, good condition
09/14/2005	726912	3712653	4577700513	Unknown	41.9		0 RCP	M	N	TN		lernaea, good condition
09/14/2005	727031	3712735	4606257503	Unknown	40.8		0 RCP	M	N	TN		lernaea, good condition
09/14/2005	726951	3712362	4577466D3F	Juvenile	39.9		0 RCP	M	N	TN		lernaea, good condition, caudal frayed
09/14/2005	727031	3712735	46063D5844	Unknown	42		0 RCP	M	N	TN		net abrasions, lernaea, yellow grubs, good health
09/14/2005	727280	3712881	4606571613	Unknown	41.6		0 RCP	M	N	TN		Lernaea, good condition
09/16/2005	726256	3711569	4237022E57	Female	44.5		958 L Dorsal	STR	N	TN		Excellent condition
09/16/2005	726340	3711365	4237022E57	Male	42.7		984 L Dorsal	M	N	EF		Tuberculate, lernaea, good condition, yellow grubs
09/16/2005	726233	3711777	42367A5854	Female	52.4		1606 L Dorsal	R	N	TN		lernaea, bloodshot, abrasions on lateral surface, good condition

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09/16/2005	726233	3711777	46061D7B47	Male	48.3		1246 L Dorsal	M	N	TN		Excellent condition, caudal tattered
09/18/2005	728262	3719299	4606457741	Unknown	44		880 L Dorsal	M	N	TN		Fair, ventral abrasions, split caudal
09/18/2005	728261	3718994	4606525D23	Female	53.3		1700 L Dorsal	MORTALITY		TN	MORT	Mortality, preserved
09/18/2005	728436	3718834	457764150D	Unknown	45.1		926 L Dorsal	M	N	TN		Yellow grubs, good condition caudal frayed
09/18/2005	728436	3718834	46064F224F	Female	50.9		1500 None Detected	M	N	TN		Excellent condition
09/18/2005	728618	3719894	4606570160	Male	42.2		1004 L Dorsal	M	N	EF		Yellow grubs, good condition
09/18/2005	728613	3719852	4577582A1B	Female	46		1200 L Dorsal	M	N	TN		Good condition, caudal frayed
09/19/2005	728531	3717991	46061E101F	Female	46.8		0 L Dorsal	M	N	TN		Excellent condition
09/19/2005	728492	3718460	45776B5900	Male	41.2		0 L Dorsal	M	N	TN		Caudal frayed, good condition
09/19/2005	728867	3717760	46064E1F59	Unknown	46.5		0 L Dorsal	M	N	TN		Lateral surfaces abraided, caudal split, good condition
09/19/2005	728492	3718460	46061F046F	Female	47.8		0 L Dorsal	M	N	TN		Excellent condition
09/19/2005	728407	3718668	4606012860	Female	53.7		2062 None Detected	M	N	TN		net abrasions, frayed caudal, good condition
09/19/2005	728770	3717406	460626792C	Male	44.5		0 L Dorsal	M	N	TN		torn caudal, white grubs, good condition
09/19/2005	728492	3718460	4606303114	Female	47.8		0 L Dorsal	M	N	TN		Net abrasions, anal split, good condition
09/20/2005	729010	3717259	46061B1007	Male	49.8		1430 L Dorsal	M	N	TN		Good condition, net abrasions, scoliosis
09/20/2005	728950	3717501	4606394549	Male	44.8		1160 L Dorsal	M	N	TN		Lernaea, good condition, frayed caudal
09/20/2005	728950	3717501	460638797C	Male	46		1048 L Dorsal	M	N	TN		Excellent condition
09/20/2005	729010	3717259	460642050E	Female	52.2		1690 L Dorsal	M	N	TN		Good condition, frayed caudal, left dorsal wound
09/20/2005	729006	3717155	46060C7474	Male	46		1020 L Dorsal	M	N	TN		Net abrasions, frayed caudal, good condition
09/20/2005	729033	3717011	4606492856	Female	46.7		1054 L Dorsal	M	N	TN		net abrasions, good condition
09/20/2005	728950	3717501	4606156C63	Male	46		1038 None Detected	M	N	TN		Caudal frayed, net abrasions, good condition, wound
09/21/2005	726791	3711898	45776B5372	Unknown	42.5		830 RCP	M	N	EF		Good condition, lernaea
09/21/2005	726791	3711898	46062A5A63	Female	46.4		950 RCP	M	N	EF		Excellent condition
09/21/2005	726801	3711950	42367A4C30	Female	42.2		800 RCP	R	N	TN		Good condition, caudal split
09/21/2005	726956	3712427	460626673A	Unknown	40.4		676 RCP	M	N	TN		Good condition, lernaea
09/21/2005	726801	3711950	4606171565	Juvenile	39.4		612 RCP	M	N	TN		Good condition, caudal frayed
09/21/2005	726801	3711950	46056C6F3E	Juvenile	39.3		610 RCP	R	N	TN		Good condition, caudal frayed
09/21/2005	726801	3711950	4606564A5C	Juvenile	39.9		596 RCP	M	N	TN		Good condition, caudal frayed
09/21/2005	726791	3711898	4606236722	Male	39.4		602 RCP	R	N	EF		Excellent condition
09/21/2005	726791	3711898	46060C1E7C	Unknown	40		656 RCP	M	N	EF		Good condition, lernaea
09/21/2005	726791	3711898	422E551656	Juvenile	38.8		644 RCP	M	N	EF		Good condition, lernaea
09/21/2005	726791	3711898	4237255B02	Juvenile	39.5		714 RCP	R	N	EF		Good condition, lernaea, bloodshot belly
09/21/2005	726956	3712427	45775A7E61	Juvenile	39.8		620 RCP	M	N	TN		Good condition, caudal split
09/21/2005	726791	3711898	45773B725F	Female	45.4		938 RCP	R	N	EF		Good condition, lernaea
09/21/2005	726922	3712697	457758214A	Juvenile	39.4		620 RCP	M	N	TN		Good condition, caudal frayed
09/21/2005	726791	3711898	46064A5067	Unknown	40.9		708 RCP	M	N	EF		Poor condition
09/21/2005	727253	3713168	46062C4E6C	Male	39.6		694 RCP	M	N	TN		Good condition, lernaea
09/21/2005	727242	3712840	45776A4621	Unknown	45.6		940 RCP	M	N	TN		Good, caudal frayed, lernaea, abrasions
09/21/2005	727010	3712779	460626361E	Unknown	43.7		840 RCP	R	N	TN		Good condition, caudal frayed, abrasions
09/21/2005	726922	3712697	4605726940	Unknown	43.2		816 RCP	M	N	TN		Good condition, caudal frayed, abrasions
09/21/2005	726922	3712697	4606212F78	Male	40		644 RCP	M	N	TN		Good condition, caudal frayed, lernaea

Date	Easting	Northing	PIT	Sex	TL(cm)	Weight (g)	Wire Tag Location	Mark/Recapture	Ripe?	Gear Type	Condition	Health/Notes
09/21/2005	726956	3712427	4577673C18	Male	39.5		658 RCP	R	N	TN		Good Condition, lernaea, caudal frayed
09/21/2005	726956	3712427	4577771C77	Unknown	40		604 RCP	M	N	TN		Good condition, caudal split
09/21/2005	726956	3712427	4236744050	Unknown	43.4		916 RCP	R	N	TN		Good condition, lernaea
09/21/2005	726956	3712427	4606225E2E	Male	40.4		770 RCP	M	N	TN		Good condition, caudal frayed
09/21/2005	726956	3712427	4604004E57	Female	45.8		880 RCP	R	N	TN		Good condition, caudal split, right opercle deformed
09/21/2005	726956	3712427	4606504045	Unknown	40.1		648 RCP	M	N	TN		Fair condition, lernaea, caudal split
09/21/2005	726956	3712427	4606322868	Juvenile	35.9		528 RCP	R	N	TN		Fair, pit tag wound good, dorsal and caudal frayed
09/21/2005	726922	3712697	4236572B1F	Unknown	44.2		888 RCP	M	N	TN		Good condition, caudal frayed, abrasions
11/08/2005	721456	3705811	4577405056	Unknown	47		1162 L Dorsal	M	N	TN		good, abrasions on left lateral surface
11/10/2005	712779	3696694	4606064C7F	Juvenile	39		626 L Dorsal	M	N	TN		fair-lernia-caudled fraied-blood shot
11/10/2005	713336	3695475	4606170D5D	Juvenile	32		310 RCP	M	N	TN		good
12/06/2005	726450	3712140	45775F4B3D	Male	38		606 L Dorsal	M	Y	TN	Fair	abrasions, lernaea, scar, caudal and dorsal frayed
12/06/2005	726372	3711299	460600542C	Male	31.5		366 L Dorsal	M	Y	TN	Good	net abrasions
12/06/2005	726347	3711243	45776D7C51	Male	37.1		590 None Detected	M	N	EF	Fair	red wounds (ventral)
12/06/2005	726451	3712009	460641487B	Male	41.1		832 None Detected	R	Y	TN	Good	tuberculate, caudal split, net abrasions
12/06/2005	726436	3711872	4577511174	Male	37.3		586 L Dorsal	M	Y	TN	Fair	caudal split, net abrasions, scars
12/06/2005	726451	3712009	45780C3815	Female	40.9		745 L Dorsal	R	N	TN	Excellent	
12/07/2005	726259	3711592	4606246173	Unknown	42.2		836 None Detected	R	N	TN	Good	fins somewhat tattered
12/07/2005	726169	3712062	4606174178	Unknown	39.9		700 L Dorsal	M	N	TN	Good	L, tattered fins
12/09/2005	726899	3712265	4577436B09	Juvenile	32.7		318 RCP	M	N	TN	Good	abrasions on sides
12/09/2005	726917	3712691	46056A2F2C	Male	35.7		428 RCP	M	N	TN	Good	tuberculate, split caudal
12/09/2005	726899	3712265	460561487F	Male	37.9		554 RCP	M	Y	TN	Excellent	tuberculate, split caudal, net marks
12/09/2005	726899	3712265	46062B615B	Juvenile	35.4		452 RCP	M	Y	TN	Excellent	split caudal
12/09/2005	726899	3712265	4577486B2D	Male	39		580 RCP	R	Y	TN	Excellent	tuberculate, frayed caudal
12/09/2005	726899	3712265	46062A5A63	Female	47.3		1020 RCP	R	N	TN	Good	split caudal, Lernaea marks
12/09/2005	726899	3712265	4606245219	Juvenile	36.5		462 RCP	M	N	TN	Good	split caudal, sescaled left side, Lernaea
12/09/2005	726899	3712265	46057E4B2C	Juvenile	36		480 RCP	M	N	TN	Good	wound-left side, lernaea, split pectoral, caudal, dorsal fins
12/09/2005	726899	3712265	4606632D48	Juvenile	37.9		564 RCP	R	N	TN	Good	Lernaea, split caudal
12/09/2005	726899	3712265	4606184C2F	Juvenile	37.8		520 RCP	M	N	TN	Fair	abrasions on sides, good, right eye wounded
12/09/2005	726899	3712265	4606541577	Juvenile	36.1		442 RCP	M	N	TN	Good	split caudal, lernaea
12/09/2005	726917	3712691	4606454326	Male	32.6		287 RCP	M	Y	TN	Excellent	tuberculate, split caudal
12/09/2005	726899	3712265	4606402170	Male	39.1		632 RCP	M	Y	TN	Good	tuberculate, abrasions on sides, wound on L side, PIT wound bleeding
12/09/2005	726917	3712691	4579416858	Male	41.4		632 RCP	R	Y	TN	Good	wounds on sides, frayed caudal, tuberculate
12/09/2005	726917	3712691	46060B040F	Male	42.3		760 RCP	M	Y	TN	Good	tuberculate, wounds sides, frayed dorsal and caudal
12/09/2005	726917	3712691	46061F3D77	Female	44.9		848 RCP	M	N	TN	Good	split caudal, wounds on sides
12/09/2005	726917	3712691	46064F6F49	Male	40.6		670 RCP	M	Y	TN	Good	tuberculate, split caudal, wounds on sides
12/09/2005	726917	3712691	457771374E	Juvenile	37.8		472 RCP	M	N	TN	Excellent	split caudal
12/09/2005	726917	3712691	MORTALIT17	Female	42.1		642 RCP	MORTALITY	N	TN	MORT	Poor condition on release, was not tagged, probably dead
12/09/2005	726917	3712691	4606414427	Juvenile	33.6		472 RCP	M	N	TN	Excellent	split caudal and dorsal
12/09/2005	726917	3712691	4606374741	Male	35.4		466 RCP	M	Y	TN		split caudal, lernaea, tubercuate
12/09/2005	726917	3712691	4606274A52	Male	43.5		852 RCP	M	Y	TN	Excellent	tuberculate, split caudal

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12/09/2005	726917	3712691	4606134B06	Male	34		406 RCP	M	Y	TN	Excellent	tuberculate, split caudal
12/09/2005	726899	3712265	4606184F38	Juvenile	38.9		572 RCP	M	N	TN	Excellent	split caudal
12/09/2005	726917	3712691	45796B4119	Male	34.8		440 RCP	R	Y	TN	Excellent	tuberculate, frayed caudal
12/09/2005	726777	3711987	46062B2964	Male	39.2		692 RCP	M	Y	TN	Excellent	tuberculate, caudal frayed, damaged dorsal
12/09/2005	727036	3712764	46061E301C	Male	35.3		458 RCP	M	Y	TN	Excellent	tuberculate
12/09/2005	726917	3712691	457745080F	Juvenile	34.4		402 RCP	M	N	TN	Good	split c, abrasions
12/09/2005	726799	3711921	4606461748	Female	45.7		842 RCP	M	N	EF	Good	L, scar
12/09/2005	726799	3711921	457766675A	Juvenile	31.9		360 RCP	M	N	EF	Excellent	
12/09/2005	726799	3711921	4577747A50	Male	34.7		412 RCP	M	N	EF	Good	L (x3), white grubs
12/09/2005	726799	3711921	460642616E	Juvenile	38.9		550 RCP	M	N	EF	Fair	talon marks on both sides
12/09/2005	726799	3711921	4606096626	Juvenile	35.8		414 RCP	M	N	EF	Excellent	
12/09/2005	726799	3711921	45770C3016	Juvenile	39.2		696 RCP	R	N	EF	Good	salt/pepper, larnia
12/09/2005	726799	3711921	46055D3E75	Female	40.5		654 RCP	M	N	EF	Good	abrasions lateral, larnia
12/09/2005	726799	3711921	46061C2C59	Male	36.8		434 RCP	M	N	EF	Excellent	
12/09/2005	726799	3711921	4606615260	Female	42.9		778 RCP	R	N	EF	Excellent	
12/09/2005	726799	3711921	4606212F78	Male	41		676 RCP	R	Y	EF	Good	tuberculate, few scars
12/09/2005	726799	3711921	457A243E0C	Female	41.7		750 RCP	R	N	EF	Good	salt/pepper belly
12/09/2005	726799	3711921	4605733115	Juvenile	38.5		542 RCP	M	N	EF	Excellent	
12/09/2005	726799	3711921	4606345807	Male	37.9		535 RCP	M	Y	EF	Fair	tuberculate, open wound, 3/4 dorsal gone
12/09/2005	726777	3711987	42367A4C30	Female	43.3		866 RCP	R	N	TN	Excellent	
12/09/2005	726799	3711921	460618512E	Juvenile	32.3		312 RCP	M	Y	EF	Good	good condition
12/09/2005	726899	3712265	423C1C7366	Male	42.6		786 RCP	M	Y	TN	Excellent	tuberculate, split caudal
12/09/2005	726777	3711987	4577511679	Juvenile	32.2		332 RCP	M	N	TN	Excellent	caudal and dorsal split
12/09/2005	727036	3712764	460635494E	Juvenile	33.5		444 RCP	M	N	TN	Good	dorsal damaged, lernaea, caudal split
12/09/2005	726777	3711987	45776C5717	Juvenile	29.8		334 None Detected	M	N	TN	Excellent	
12/09/2005	726777	3711987	4578123237	Male	38.9		594 RCP	M	Y	TN	Good	tuberculate
12/09/2005	726777	3711987	4577545C6A	Female	41.1		755 RCP	R	N	TN	Excellent	
12/09/2005	726777	3711987	46063B2259	Juvenile	36.8		510 RCP	M	N	TN	Excellent	caudal split
12/09/2005	726777	3711987	4577680B40	Male	33.6		362 RCP	M	Y	TN	Excellent	tuberculate
12/09/2005	726777	3711987	46063E2241	Juvenile	30.9		296 RCP	M	N	TN	Excellent	caudal frayed
12/09/2005	726777	3711987	46064B612D	Juvenile	32.4		352 RCP	M	N	TN	Excellent	caudal split
12/09/2005	726777	3711987	4606523860	Juvenile	33.3		430 RCP	M	N	TN	Excellent	
12/09/2005	726899	3712265	423C16057C	Male	42		686 RCP	M	Y	TN	Fair	tuberculate, split caudal, abrasions, lernaea, missing left eye
12/09/2005	726899	3712265	4606296C43	Male	31.8		274 RCP	M	Y	TN	Fair	tuberculate, abrasions on side
12/09/2005	726899	3712265	4606666678	Juvenile	37.6		480 RCP	R	N	TN	Fair	scrapes on side, puncture wound right, lernaea
12/09/2005	726799	3711921	46061A082B	Juvenile	30.4		262 RCP	M	N	EF	Good	caudal splint
12/09/2005	727260	3713101	4605773C66	Juvenile	38		532 RCP	M	N	TN	Good	wound left side
12/09/2005	727265	3712854	45775B4905	Female	36.6		474 RCP	M	N	TN	Good	salt and pepper belly, caudal damaged, lernaea
12/09/2005	727265	3712854	46063F5065	Male	44.5		850 RCP	M	Y	TN	Excellent	tuberculate
12/09/2005	727265	3712854	42366C4645	Juvenile	33.2		392 RCP	M	N	TN	Excellent	snub nose, torn caudal
12/09/2005	727265	3712854	4577594629	Male	40.1		680 RCP	R	Y	TN	Good	tuberculate, lernaea

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12/09/2005	727260	3713101	46061D052B	Female	44.4	890	RCP	M	N	TN	Good	scar left lateral
12/09/2005	727260	3713101	46064C6C2D	Male	35	450	RCP	M	Y	TN	Good	tuberculate, frayed caudal, wounds around head, lernaea
12/09/2005	727260	3713101	4606200F6D	Male	36.8	540	RCP	M	Y	TN	Good	tuberculate, scar right ventral, split caudal
12/09/2005	727260	3713101	45771C4B2F	Female	40	550	RCP	R	N	TN	Excellent	
12/09/2005	727260	3713101	457749771B	Male	37.5	528	RCP	M	Y	TN	Good	tuberculate, split caudal
12/09/2005	727260	3713101	457770475E	Male	32.4	295	RCP	M	N	TN	Fair	L, TB, surface wounds, C split, could be # 577770475E
12/09/2005	727260	3713101	4577660A5F	Male	44	856	RCP	M	N	TN	Good	tuberculate, scar (right side)
12/09/2005	727036	3712764	46062C6962	Juvenile	33.1	358	RCP	M	N	TN	Excellent	caudal split
12/09/2005	727265	3712854	4577704449	Male	34	382	RCP	M	Y	TN	Excellent	tuberculate, deformed caudal, caudal split
12/09/2005	726917	3712691	4236782C2D	Juvenile	36	412	RCP	M	N	TN	Excellent	frayed caudal
12/09/2005	727260	3713101	4606265169	Female	45.3	940	RCP	M	Y	TN	Good	Lernaea, net marks
12/09/2005	727260	3713101	4606510028	Juvenile	36.2	526	RCP	M	N	TN	Fair	scars left and right lateral, caudal and anal fin split, scars
12/09/2005	727260	3713101	46062C1F48	Male	33	348	RCP	M	Y	TN	Good	tuberculate, split caudal and pectoral fins, salt and pepper
12/09/2005	727260	3713101	4577754572	Juvenile	32.4	334	RCP	M	N	TN	Good	L, caudal split
12/09/2005	727260	3713101	4577401F64	Female	40.1	650	RCP	R	N	TN	Excellent	caudal split
12/09/2005	727260	3713101	46064F6418	Female	37.3	600	RCP	M	N	TN	Good	scar left lateral, caudal split
12/09/2005	727260	3713101	457773281C	Male	41.5	775	RCP	R	Y	TN	Good	tuberculate, larnia, left lateral scars
12/09/2005	727260	3713101	4606113951	Juvenile	30.7	272	RCP	M	N	TN	Excellent	caudal frayed
12/09/2005	727260	3713101	4606481E11	Female	48.2	1275	RCP	M	N	TN	Excellent	caudal split
12/09/2005	727260	3713101	460633511D	Juvenile	33	350	RCP	M	N	TN	Excellent	snub nose, caudal split
12/09/2005	727260	3713101	45775A7E61	Female	40.2	616	RCP	R	Y	TN	Good	lateral surface beak scar, caudal split
12/09/2005	727260	3713101	4606530661	Female	36.8	506	RCP	M	N	TN	Excellent	white grubs, caudal split
12/09/2005	727260	3713101	4606581F5E	Juvenile	37.8	560	RCP	M	N	TN	Good	caudal split, lernaea, circular wound right operculs
12/09/2005	727260	3713101	423642174A	Male	32.5	360	RCP	M	Y	TN	Excellent	tuberculate (mort recovered 12/15)
12/09/2005	727036	3712764	460656386C	Juvenile	31.1	328	RCP	M	N	TN	Good	caudal frayed
12/09/2005	727260	3713101	4577717B6B	Juvenile	32.4	340	RCP	M	N	TN	Good	torn caudal, lernaea, scratched
12/09/2005	727265	3712854	45776E3E6F	Male	35.8	442	RCP	M	N	TN	Good	tuberculate, wound near right eye, lernaea
12/09/2005	727036	3712764	46064D522C	Juvenile	32.7	344	RCP	M	N	TN	Fair	wounds lateral surface, frayed caudal
12/09/2005	727036	3712764	42360F3644	Juvenile	34	372	RCP	M	N	TN	Good	frayed caudal, lernaea
12/09/2005	727036	3712764	4606402344	Juvenile	35.5	452	RCP	M	N	TN	Excellent	frayed caudal and dorsal fins
12/09/2005	727036	3712764	45775B0019	Male	42.9	816	RCP	R	Y	TN	Fair	wound left lateral, tuberculate, scratches
12/09/2005	727036	3712764	4577516A21	Juvenile	33.4	370	RCP	M	N	TN	Excellent	frayed caudal and right pectoral fins
12/09/2005	727036	3712764	4606273A56	Male	34.5	395	RCP	M	Y	TN	Good	tuberculate, frayed caudal, missing part of dorsal fin
12/09/2005	727036	3712764	45775C2B34	Male	36	450	RCP	M	Y	TN	Excellent	tuberculate, frayed caudal
12/09/2005	727036	3712764	460651356C	Juvenile	31.1	280	RCP	M	N	TN	Excellent	frayed caudal
12/09/2005	727036	3712764	4577710610	Juvenile	33.6	346	RCP	M	N	TN	Excellent	frayed caudal
12/09/2005	727036	3712764	46064B1533	Female	42.2	690	RCP	M	N	TN	Good	scar left lateral, split r pectoral fin and caudal
12/09/2005	727036	3712764	4577622E4A	Female	39.5	692	RCP	M	N	TN	Good	Lernaea, caudal frayed, wound near eye
12/09/2005	727036	3712764	4606523608	Juvenile	34.2	422	RCP	M	N	TN	Good	scars lateral surface
12/09/2005	727036	3712764	4606315443	Juvenile	36.2	504	RCP	M	N	TN	Good	scars lateral
12/09/2005	727265	3712854	45776F3976	Male	32	334	RCP	M	Y	TN	Excellent	tuberculate, frayed caudal

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12/09/2005	727265	3712854	423C100434	Juvenile	30.8		290 RCP	M	N	TN	Good	L
12/09/2005	727265	3712854	4606324054	Female	46		980 RCP	M	N	TN	Good	L, caudal frayed
12/09/2005	727265	3712854	4578046C5F	Male	36		460 RCP	M	Y	TN	Excellent	tuberculate, torn caudal
12/09/2005	727036	3712764	45773B4016	Male	36.2		475 RCP	M	Y	TN	Excellent	tuberculate, caudal split
12/09/2005	727036	3712764	422E393933	Female	39.8		652 RCP	M	N	TN	Good	scars on left and right lateral
12/09/2005	727036	3712764	46063A5918	Juvenile	34.2		402 RCP	M	N	TN	Good	catfish bite
12/09/2005	727036	3712764	4606467879	Juvenile	31.2		302 RCP	M	N	TN	Good	L
12/09/2005	727036	3712764	4606181E1C	Male	31.1		336 RCP	M	Y	TN	Good	tuberculate, scar right lateral near lump
12/09/2005	727036	3712764	4578163E67	Female	36.6		586 RCP	M	N	TN	Good	L
12/09/2005	727036	3712764	423C08740B	Female	41.1		625 RCP	R	N	TN	Excellent	caudal split
12/09/2005	727036	3712764	4577394366	Male	33.2		406 RCP	M	Y	TN	Good	tuberculate, lernaea
12/09/2005	727036	3712764	4577530359	Male	32.1		348 RCP	M	Y	TN	Excellent	tuberculate
12/09/2005	727036	3712764	45776A396E	Juvenile	32.7		342 RCP	M	N	TN	Good	white grubs, lernaea
12/10/2005	728454	3718334	45776F7A18	Female	41		744 L Dorsal	R	N	TN	Good	bite mark on both sides
12/10/2005	728529	3718237	4605701923	Juvenile	37.1		482 L Dorsal	M	N	EF	Good	wound rt side
12/10/2005	728529	3718237	4577567E3A	Male	44.4		1056 L Dorsal	M	Y	EF	Excellent	tuberculate
12/10/2005	728387	3718889	4606505615	Male	45.6		1050 L Dorsal	M	Y	TN	Good	tuberculate, mark on L side
12/10/2005	728596	3719265	460566287A	Female	53		1594 L Dorsal	M	N	TN	Excellent	split caudal
12/10/2005	728492	3718478	45776F3855	Female	43.4		840 L Dorsal	M	N	TN	Good	old bite mark, Lernaea, caudal split
12/12/2005	728867	3717509	MORTALIT18	Female	41.5		666 L Dorsal	MORTALIT	N	TN	MORT	mortality
12/12/2005	728765	37117837	4578103064	Female	52		1445 L Dorsal	M	N	TN	Excellent	
12/12/2005	728581	3718067	45774F6419	Female	39.8		572 L Dorsal	M	N	TN	Fair	bite marks, Lernaea, frayed caudal
12/12/2005	728501	3718371	457761494E	Male	35.6		506 None Detected	M	Y	EF	Poor	tuberculate, bite mark, scars
12/13/2005	729188	3715788	46063E1C54	Male	50.2		1580 L Dorsal	M	Y	TN	Good	tuberculate, caudal split, Lernaea
12/14/2005	726852	3712089	46062C4E6C	Male	41		658 RCP	R	N	TN	Fair	wound on left side, tuberculate
12/14/2005	726779	3711998	46055E7639	Juvenile	30.6		252 RCP	M	N	TN	Fair	split caudal, wounds on opercal, eye, head
12/14/2005	726779	3711998	460633511D	Juvenile	33		350 RCP	STR	N	TN	Poor	
12/14/2005	727067	3712804	45775A7F42	Juvenile	32		272 RCP	M	N	TN	Excellent	Caudal split
12/14/2005	726852	3712089	46060E0D72	Female	45		906 RCP	M	N	TN	Good	scar on caudal peduncle and both sides, Lernaea
12/14/2005	727067	3712804	4577680B40	Male	34		298 RCP	STR	Y	TN	Good	tuberculate, wound right side
12/14/2005	727036	3712766	4577720663	Female	38.9		532 RCP	M	N	TN	Good	scarring on head and left opercle, caudal split
12/14/2005	727067	3712804	457757557C	Female	37.2		448 RCP	M	N	TN	Excellent	caudal split
12/14/2005	726852	3712089	46056A2F2C	Male	35.7		428 RCP	MORT/STR	N	TN	MORT	Mortality
12/14/2005	726852	3712089	46061E0F2A	Male	42.1		810 RCP	R	N	TN	Excellent	tuberculate
12/14/2005	726852	3712089	460650787E	Male	40.2		638 RCP	M	N	TN	Good	tuberculate, L
12/14/2005	727067	3712804	46064C7C53	Male	32.8		374 RCP	M	N	TN	Excellent	tuberculate, caudal split
12/14/2005	726907	3712655	46057A012B	Female	44.9		810 RCP	M	N	TN	Good	scar on left side
12/14/2005	727036	3712766	460654380B	Male	38.6		566 RCP	M	N	TN	Good	tuberculate, scars on side, caudal split
12/14/2005	727036	3712766	46064C4151	Female	42.1		654 RCP	M	N	TN	Good	dorsal split and talon scars on both sides, Lernaea
12/14/2005	727277	3712881	46061D740C	Male	32.2		294 RCP	M	N	TN	Good	talon mark behind dorsal
12/14/2005	726852	3712089	4606057948	Male	34.2		458 RCP	M	N	TN	Excellent	

Appendix C: Fish Catch and Effort for Sampling Localities

The following pages provide collection totals and catch per unit effort (CPUE) data for razorback sucker surveys performed by ASU Native Fish Lab on the lower Colorado River.

Data include total catch by species, sampling gear, and locality. Lower Colorado River sampling localities include main channel, backwaters, lakes, and sloughs visited during the contract period October 1, 2004 to December 31, 2005.

Locality codes are included parenthetically after location names and refer to maps in Appendix B. Tables are presented in order of locality organized upstream to downstream.

Standardized units-effort are as follows:

Electrofishing- number of fish captured per 1,000 seconds

Trammel netting- number of fish captured per 100 m² of net per 12 hours

Hoop netting- number of fish captured per net per 12 hours

Main Channel Havasu Division / Parker Strip (MC_PS)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Cyprinella lutrensis</i>	17	0.7%	0	0.0%	0	0.0%	17	0.6%
<i>Cyprinus carpio</i>	260	10.9%	100	29.2%	0	0.0%	360	13.0%
<i>Dorosoma petenense</i>	14	0.6%	0	0.0%	0	0.0%	14	0.5%
<i>Ictalurus punctatus</i>	21	0.9%	31	9.0%	0	0.0%	52	1.9%
<i>Lepomis cyanellus</i>	246	10.3%	0	0.0%	10	27.0%	256	9.2%
<i>Lepomis macrochirus</i>	135	5.7%	39	11.4%	0	0.0%	174	6.3%
<i>Lepomis microlophus</i>	180	7.5%	40	11.7%	0	0.0%	220	7.9%
<i>Lepomis sp.</i> ¹	246	10.3%	0	0.0%	18	48.6%	264	9.5%
<i>Micropterus dolomieu</i>	639	26.7%	57	16.6%	1	2.7%	697	25.2%
<i>Micropterus salmoides</i>	567	23.7%	9	2.6%	8	21.6%	584	21.1%
<i>Morone saxatilis</i>	48	2.0%	13	3.8%	0	0.0%	61	2.2%
<i>Pomoxis nigromaculatus</i>	2	0.1%	2	0.6%	0	0.0%	4	0.1%
<i>Pylodictis olivaris</i>	13	0.5%	52	15.2%	0	0.0%	65	2.3%
<i>Xyrauchen texanus</i>	1	<0.1%	0	0.0%	0	0.0%	1	<0.1%
Total	2,389		343		37		2,769	
CPUE	95.35		0.53		0.24			
Effort	25,056 sec.		26 nets		9 nets			
			358.95 hours		204.58 hours			

Unnamed Backwater CA RM 124 / Squatter Backwater (SQUATTER)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Carassius auratus</i>	0	-	1	2.8%	0	-	1	2.8%
<i>Cyprinus carpio</i>	0	-	3	8.3%	0	-	3	8.3%
<i>Ictalurus punctatus</i>	0	-	3	8.3%	0	-	3	8.3%
<i>Lepomis macrochirus</i>	0	-	13	36.1%	0	-	13	36.1%
<i>Lepomis microlophus</i>	0	-	5	13.9%	0	-	5	13.9%
<i>Micropterus salmoides</i>	0	-	10	27.8%	0	-	10	27.8%
<i>Xyrauchen texanus</i>	0	-	1	2.8%	0	-	1	2.8%
Total	0		36		0		36	
CPUE	0.00		2.44		0.00			
Effort	0 sec.		4 nets		0 nets			
			53.35 hours		0 hours			

¹ Differentiation between *L. macrochirus* and *L. microlophus* is often quite difficult. Therefore, the two species are grouped as *Lepomis sp.* When possible, young-of-year are categorized by species.

Main Channel Palo Verde Division (MC_PV)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Cyprinella lutrensis</i>	1	0.8%	0	0.0%	0	0.0%	1	0.5%
<i>Cyprinus carpio</i>	18	14.3%	13	20.6%	0	0.0%	31	16.1%
<i>Ictalurus punctatus</i>	19	15.1%	17	27.0%	0	0.0%	36	18.8%
<i>Lepomis macrochirus</i>	18	14.3%	20	31.7%	0	0.0%	38	19.8%
<i>Lepomis microlophus</i>	2	1.6%	2	3.2%	0	0.0%	4	2.1%
<i>Lepomis sp.</i>	34	27.0%	0	0.0%	2	66.7%	36	18.8%
<i>Micropterus dolomieu</i>	8	6.3%	3	4.8%	0	0.0%	11	5.7%
<i>Micropterus salmoides</i>	6	4.8%	1	1.6%	1	33.3%	8	4.2%
<i>Morone saxatilis</i>	16	12.7%	0	0.0%	0	0.0%	16	8.3%
<i>Poecilia latipinna</i>	1	0.8%	0	0.0%	0	0.0%	1	0.5%
<i>Pylodictis olivaris</i>	3	2.4%	7	11.1%	0	0.0%	10	5.2%
Total	126		63		3		192	
CPUE	37.38		0.82		0.03			
Effort	3,371	sec.	10	nets	4	nets		
			111.38	hours	285.75	hours		

A-7 Backwater, Upper Section (A7U)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Carassius auratus</i>	6	0.4%	0	0.0%	0	-	6	0.3%
<i>Cyprinus carpio</i>	272	20.3%	185	24.2%	0	-	457	21.8%
<i>Dorosoma petenense</i>	118	8.8%	1	0.1%	0	-	119	5.7%
<i>Ictalurus punctatus</i>	30	2.2%	81	10.6%	0	-	111	5.3%
<i>Lepomis gulosus</i>	2	0.1%	1	0.1%	0	-	3	0.1%
<i>Lepomis macrochirus</i>	186	13.9%	233	30.5%	0	-	419	19.9%
<i>Lepomis microlophus</i>	31	2.3%	50	6.5%	0	-	81	3.9%
<i>Lepomis sp.</i>	101	7.6%	1	0.1%	0	-	102	4.9%
<i>Micropterus dolomieu</i>	3	0.2%	2	0.3%	0	-	5	0.2%
<i>Micropterus salmoides</i>	547	40.9%	84	11.0%	0	-	631	30.0%
<i>Morone saxatilis</i>	10	0.7%	12	1.6%	0	-	22	1.0%
<i>Mugil cephalus</i>	0	0.0%	1	0.1%	0	-	1	<0.1%
<i>Pylodictis olivaris</i>	2	0.1%	9	1.2%	0	-	11	0.5%
Tilapiine fishes ²	6	0.4%	31	4.1%	0	-	37	1.8%
<i>Xyrauchen texanus</i>	23	1.7%	73	9.6%	0	-	96	4.6%
Total	1,337		764		0		2,101	
CPUE	68.85		0.44		0.00			
Effort	19,419	sec.	45	nets	0	nets		
			562.23	hours	0	hours		

² On the lower Colorado River, numerous feral populations of Tilapiine fishes can be found (Barrett 1983, Moyle 2002, Costa-Pierce, 2003). For simplicity, here they are grouped due to high levels of hybridization and the lack of standardized, local taxonomic information on the fish.

A-7 Backwater, Lower Section (A7L)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Carassius auratus</i>	3	1.1%	1	0.6%	0	-	4	0.9%
<i>Cyprinus carpio</i>	47	16.7%	21	11.9%	0	-	68	14.8%
<i>Dorosoma petenense</i>	72	25.5%	0	0.0%	0	-	72	15.7%
<i>Ictalurus punctatus</i>	0	0.0%	9	5.1%	0	-	9	2.0%
<i>Lepomis macrochirus</i>	37	13.1%	94	53.1%	0	-	131	28.5%
<i>Lepomis microlophus</i>	2	0.7%	11	6.2%	0	-	13	2.8%
<i>Lepomis sp.</i>	29	10.3%	0	0.0%	0	-	29	6.3%
<i>Micropterus salmoides</i>	89	31.6%	21	11.9%	0	-	110	24.0%
<i>Morone saxatilis</i>	2	0.7%	1	0.6%	0	-	3	0.7%
<i>Pylodictis olivaris</i>	0	0.0%	5	2.8%	0	-	5	1.1%
<i>Xyrauchen texanus</i>	1	0.4%	14	7.9%	0	-	15	3.3%
Total	282		177		0		459	
CPUE	66.79		1.97		0.00			
Effort	4,222	sec.	12	nets	0	nets		
			108.5	hours	0	hours		

C-5 Backwater (C5)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Carassius auratus</i>	1	<0.1%	1	0.1%	0	-	2	0.1%
<i>Cyprinella lutrensis</i>	30	1.4%	0	0.0%	0	-	30	1.0%
<i>Cyprinus carpio</i>	247	11.5%	120	12.2%	0	-	367	11.7%
<i>Dorosoma petenense</i>	346	16.1%	0	0.0%	0	-	346	11.1%
<i>Ictalurus punctatus</i>	8	0.4%	19	1.9%	0	-	27	0.9%
<i>Lepomis gulosus</i>	27	1.3%	6	0.6%	0	-	33	1.1%
<i>Lepomis macrochirus</i>	386	18.0%	381	38.7%	0	-	767	24.5%
<i>Lepomis microlophus</i>	157	7.3%	200	20.3%	0	-	357	11.4%
<i>Lepomis sp.</i>	345	16.1%	0	0.0%	0	-	345	11.0%
<i>Micropterus dolomieu</i>	1	<0.1%	2	0.2%	0	-	3	0.1%
<i>Micropterus salmoides</i>	555	25.9%	122	12.4%	0	-	677	21.6%
<i>Morone saxatilis</i>	10	0.5%	62	6.3%	0	-	72	2.3%
<i>Pomoxis nigromaculatus</i>	21	1.0%	5	0.5%	0	-	26	0.8%
<i>Pylodictis olivaris</i>	3	0.1%	20	2.0%	0	-	23	0.7%
Tilapiine fishes	3	0.1%	37	3.8%	0	-	40	1.3%
<i>Xyrauchen texanus</i>	5	0.2%	10	1.0%	0	-	15	0.5%
Total	2,145		985		0		3,130	
CPUE	116.94		0.65		0.00			
Effort	18,343	sec.	48	nets	0	nets		
			457.75	hours	0	hours		

A-10 Backwater, Upper Section (A10U)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Cyprinus carpio</i>	115	12.7%	88	12.6%	0	-	203	12.6%
<i>Dorosoma petenense</i>	29	3.2%	0	0.0%	0	-	29	1.8%
<i>Gambusia affinis</i>	2	0.2%	0	0.0%	0	-	2	0.1%
<i>Ictalurus punctatus</i>	3	0.3%	7	1.0%	0	-	10	0.6%
<i>Lepomis gulosus</i>	21	2.3%	11	1.6%	0	-	32	2.0%
<i>Lepomis macrochirus</i>	72	7.9%	177	25.3%	0	-	249	15.5%
<i>Lepomis microlophus</i>	12	1.3%	21	3.0%	0	-	33	2.1%
<i>Lepomis sp.</i>	126	13.9%	0	0.0%	0	-	126	7.8%
<i>Micropterus dolomieu</i>	3	0.3%	7	1.0%	0	-	10	0.6%
<i>Micropterus salmoides</i>	409	45.0%	51	7.3%	0	-	460	28.6%
<i>Pylodictis olivaris</i>	0	0.0%	11	1.6%	0	-	11	0.7%
Tilapiine fishes	6	0.7%	15	2.1%	0	-	21	1.3%
<i>Xyrauchen texanus</i>	111	12.2%	311	44.5%	0	-	422	26.2%
Total	909		699		0		1,608	
CPUE	50.13		0.50		0.00			
Effort	18,132	sec.	46	nets	0	nets		
			441.73	hours	0	hours		

A-10 Backwater, Lower Section (A10L)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Carassius auratus</i>	1	0.1%	1	0.2%	0	-	2	0.1%
<i>Cyprinus carpio</i>	66	4.9%	46	9.9%	0	-	112	6.2%
<i>Gambusia affinis</i>	1	0.1%	0	0.0%	0	-	1	0.1%
<i>Ictalurus punctatus</i>	0	0.0%	3	0.6%	0	-	3	0.2%
<i>Lepomis cyanellus</i>	1	0.1%	0	0.0%	0	-	1	0.1%
<i>Lepomis gulosus</i>	31	2.3%	3	0.6%	0	-	34	1.9%
<i>Lepomis macrochirus</i>	194	14.4%	231	49.8%	0	-	425	23.5%
<i>Lepomis microlophus</i>	57	4.2%	123	26.5%	0	-	180	9.9%
<i>Lepomis sp.</i>	518	38.5%	0	0.0%	0	-	518	28.6%
<i>Micropterus dolomieu</i>	1	0.1%	0	0.0%	0	-	1	0.1%
<i>Micropterus salmoides</i>	441	32.8%	41	8.8%	0	-	482	26.6%
<i>Pomoxis nigromaculatus</i>	0	0.0%	1	0.2%	0	-	1	0.1%
<i>Pylodictis olivaris</i>	4	0.3%	7	1.5%	0	-	11	0.6%
Tilapiine fishes	29	2.2%	5	1.1%	0	-	34	1.9%
<i>Xyrauchen texanus</i>	2	0.1%	3	0.6%	0	-	5	0.3%
Total	1,346		464		0		1,810	
CPUE	114.13		0.36		0.00			
Effort	11,794	sec.	39	nets	0	nets		
			480.88	hours	0	hours		

McIntyre Park / C-7 Backwater (C7)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Carassius auratus</i>	5	0.3%	0	0.0%	0	-	5	0.2%
<i>Cyprinus carpio</i>	118	6.4%	58	6.7%	0	-	176	6.4%
<i>Dorosoma petenense</i>	417	22.4%	0	0.0%	0	-	417	15.3%
<i>Ictalurus punctatus</i>	5	0.3%	39	4.5%	0	-	44	1.6%
<i>Lepomis gulosus</i>	16	0.9%	0	0.0%	0	-	16	0.6%
<i>Lepomis macrochirus</i>	515	27.7%	487	55.8%	0	-	1,002	36.7%
<i>Lepomis microlophus</i>	56	3.0%	85	9.7%	0	-	141	5.2%
<i>Lepomis sp.</i>	53	2.9%	0	0.0%	0	-	53	1.9%
<i>Micropterus dolomieu</i>	5	0.3%	0	0.0%	0	-	5	0.2%
<i>Micropterus salmoides</i>	605	32.6%	49	5.6%	0	-	654	24.0%
<i>Morone saxatilis</i>	11	0.6%	54	6.2%	0	-	65	2.4%
<i>Pomoxis nigromaculatus</i>	2	0.1%	2	0.2%	0	-	4	0.1%
<i>Pylodictis olivaris</i>	3	0.2%	6	0.7%	0	-	9	0.3%
Tilapiine fishes	19	1.0%	44	5.0%	0	-	63	2.3%
<i>Xyrauchen texanus</i>	28	1.5%	48	5.5%	0	-	76	2.8%
Total	1,858		872		0		2,730	
CPUE	107.70		0.61		0.00			
Effort	17,251	sec.	40	nets	0	nets		
			520.75	hours	0	hours		

C-10 Backwater (C10)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Carassius auratus</i>	1	0.1%	0	0.0%	0	0.0%	1	0.1%
<i>Cyprinus carpio</i>	87	7.6%	34	9.4%	0	0.0%	121	8.0%
<i>Dorosoma petenense</i>	137	12.0%	1	0.3%	0	0.0%	138	9.2%
<i>Ictalurus punctatus</i>	8	0.7%	29	8.0%	0	0.0%	37	2.5%
<i>Lepomis gulosus</i>	55	4.8%	5	1.4%	1	25.0%	61	4.1%
<i>Lepomis macrochirus</i>	203	17.8%	112	30.9%	1	25.0%	316	21.0%
<i>Lepomis microlophus</i>	94	8.3%	38	10.5%	0	0.0%	132	8.8%
<i>Lepomis sp.</i>	108	9.5%	0	0.0%	0	0.0%	108	7.2%
<i>Micropterus salmoides</i>	431	37.9%	74	20.4%	1	25.0%	506	33.6%
<i>Morone saxatilis</i>	5	0.4%	14	3.9%	0	0.0%	19	1.3%
<i>Pomoxis nigromaculatus</i>	1	0.1%	1	0.3%	0	0.0%	2	0.1%
<i>Pylodictis olivaris</i>	0	0.0%	22	6.1%	0	0.0%	22	1.5%
Tilapiine fishes	8	0.7%	30	8.3%	1	25.0%	39	2.6%
<i>Xyrauchen texanus</i>	0	0.0%	2	0.6%	0	0.0%	2	0.1%
Total	1,138		362		4		1,504	
CPUE	113.38		0.57		1.16			
Effort	10,037	sec.	24	nets	1	nets		
			382.10	hours	41.42	hours		

Palo Verde Irrigation Drain (PVID)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Carassius auratus</i>	23	1.1%	0	-	0	0.0%	23	1.1%
<i>Cyprinella lutrensis</i>	923	45.1%	0	-	0	0.0%	923	45.0%
<i>Cyprinus carpio</i>	166	8.1%	0	-	0	0.0%	166	8.1%
<i>Dorosoma petenense</i>	569	27.8%	0	-	0	0.0%	569	27.7%
<i>Ictalurus punctatus</i>	38	1.9%	0	-	1	33.3%	39	1.9%
<i>Lepomis gulosus</i>	2	0.1%	0	-	0	0.0%	2	0.1%
<i>Lepomis macrochirus</i>	40	2.0%	0	-	2	66.7%	42	2.0%
<i>Lepomis microlophus</i>	10	0.5%	0	-	0	0.0%	10	0.5%
<i>Micropterus salmoides</i>	148	7.2%	0	-	0	0.0%	148	7.2%
<i>Morone saxatilis</i>	28	1.4%	0	-	0	0.0%	28	1.4%
<i>Pimephales promelas</i>	1	<0.1%	0	-	0	0.0%	1	<0.1%
<i>Poecilia latipinna</i>	2	0.1%	0	-	0	0.0%	2	0.1%
<i>Pylodictis olivaris</i>	21	1.0%	0	-	0	0.0%	21	1.0%
Tilapiine fishes	77	3.8%	0	-	0	0.0%	77	3.8%
Total	2,048		0		3		2,051	
CPUE	107.72		0.00		1.48			
Effort	19,012	sec.	0	nets	1	nets		
			0	hours	24.25	hours		

Oxbow Recreational Area (OXREC)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Cyprinus carpio</i>	14	4.3%	9	9.6%	0	-	23	5.5%
<i>Dorosoma petenense</i>	167	51.5%	1	1.1%	0	-	168	40.2%
<i>Ictalurus punctatus</i>	0	0.0%	6	6.4%	0	-	6	1.4%
<i>Lepomis gulosus</i>	1	0.3%	0	0.0%	0	-	1	0.2%
<i>Lepomis macrochirus</i>	15	4.6%	30	31.9%	0	-	45	10.8%
<i>Lepomis microlophus</i>	10	3.1%	23	24.5%	0	-	33	7.9%
<i>Lepomis sp.</i>	79	24.4%	0	0.0%	0	-	79	18.9%
<i>Micropterus salmoides</i>	33	10.2%	10	10.6%	0	-	43	10.3%
<i>Morone saxatilis</i>	0	0.0%	1	1.1%	0	-	1	0.2%
<i>Pomoxis nigromaculatus</i>	0	0.0%	1	1.1%	0	-	1	0.2%
<i>Pylodictis olivaris</i>	0	0.0%	4	4.3%	0	-	4	1.0%
Tilapiine fishes	5	1.5%	2	2.1%	0	-	7	1.7%
<i>Xyrauchen texanus</i>	0	0.0%	7	7.4%	0	-	7	1.7%
Total	324		94		0		418	
CPUE	391.78		3.71		0.00			
Effort	827	sec.	6	nets	0	nets		
			57.27	hours	0	hours		

Sandy Cove / Hippie Hole (HIPPIE)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Cyprinus carpio</i>	20	6.2%	42	23.0%	0	-	62	12.3%
<i>Dorosoma petenense</i>	181	56.2%	0	0.0%	0	-	181	35.8%
<i>Ictalurus punctatus</i>	0	0.0%	11	6.0%	0	-	11	2.2%
<i>Lepomis gulosus</i>	1	0.3%	3	1.6%	0	-	4	0.8%
<i>Lepomis macrochirus</i>	30	9.3%	68	37.2%	0	-	98	19.4%
<i>Lepomis microlophus</i>	5	1.6%	11	6.0%	0	-	16	3.2%
<i>Lepomis sp.</i>	46	14.3%	0	0.0%	0	-	46	9.1%
<i>Micropterus salmoides</i>	39	12.1%	16	8.7%	0	-	55	10.9%
<i>Pomoxis nigromaculatus</i>	0	0.0%	7	3.8%	0	-	7	1.4%
<i>Pylodictis olivaris</i>	0	0.0%	5	2.7%	0	-	5	1.0%
Tilapiine fishes	0	0.0%	15	8.2%	0	-	15	3.0%
<i>Xyrauchen texanus</i>	0	0.0%	5	2.7%	0	-	5	1.0%
Total	322		183		0		505	
CPUE	193.28		3.66		0.00			
Effort	1,666	sec.	9	nets	0	nets		
			80.57	hours	0	hours		

Main Channel Cibola Division (MC_CIB)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Cyprinus carpio</i>	72	20.3%	2	15.4%	0	0.0%	74	20.0%
<i>Dorosoma petenense</i>	1	0.3%	0	0.0%	0	0.0%	1	0.3%
<i>Ictalurus punctatus</i>	46	13.0%	1	7.7%	0	0.0%	47	12.7%
<i>Lepomis gulosus</i>	4	1.1%	0	0.0%	0	0.0%	4	1.1%
<i>Lepomis macrochirus</i>	108	30.5%	3	23.1%	1	33.3%	112	30.3%
<i>Lepomis microlophus</i>	5	1.4%	1	7.7%	0	0.0%	6	1.6%
<i>Lepomis sp.</i>	37	10.5%	0	0.0%	1	33.3%	38	10.3%
<i>Micropterus dolomieu</i>	13	3.7%	1	7.7%	0	0.0%	14	3.8%
<i>Micropterus salmoides</i>	31	8.8%	2	15.4%	1	33.3%	34	9.2%
<i>Morone saxatilis</i>	9	2.5%	1	7.7%	0	0.0%	10	2.7%
<i>Pomoxis nigromaculatus</i>	2	0.6%	0	0.0%	0	0.0%	2	0.5%
<i>Pylodictis olivaris</i>	22	6.2%	1	7.7%	0	0.0%	23	6.2%
Tilapiine fishes	4	1.1%	1	7.7%	0	0.0%	5	1.4%
Total	354		13		3		370	
CPUE	45.65		0.14		0.02			
Effort	7,754	sec.	12	nets	10	nets		
			161.7	hours	218.95	hours		

Palo Verde Outfall Drain, Walters' Camp (WALTER)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Ameiurus natalis</i>	0	0.0%	1	0.1%	0	-	1	<0.1%
<i>Carassius auratus</i>	7	0.3%	20	1.4%	0	-	27	0.7%
<i>Cyprinella lutrensis</i>	61	2.3%	0	0.0%	0	-	61	1.5%
<i>Cyprinus carpio</i>	212	8.1%	412	28.6%	0	-	624	15.4%
<i>Dorosoma petenense</i>	162	6.2%	3	0.2%	0	-	165	4.1%
<i>Gambusia affinis</i>	8	0.3%	0	0.0%	0	-	8	0.2%
<i>Ictalurus punctatus</i>	45	1.7%	170	11.8%	0	-	215	5.3%
<i>Lepomis gulosus</i>	160	6.1%	6	0.4%	0	-	166	4.1%
<i>Lepomis macrochirus</i>	762	29.2%	86	6.0%	0	-	848	21.0%
<i>Lepomis microlophus</i>	146	5.6%	62	4.3%	0	-	208	5.1%
<i>Lepomis sp.</i>	369	14.2%	0	0.0%	0	-	369	9.1%
<i>Micropterus dolomieu</i>	8	0.3%	0	0.0%	0	-	8	0.2%
<i>Micropterus salmoides</i>	547	21.0%	86	6.0%	0	-	633	15.6%
<i>Morone saxatilis</i>	22	0.8%	52	3.6%	0	-	74	1.8%
<i>Poecilia latipinna</i>	2	0.1%	0	0.0%	0	-	2	<0.1%
<i>Pomoxis nigromaculatus</i>	43	1.7%	76	5.3%	0	-	119	2.9%
<i>Pylodictis olivaris</i>	17	0.7%	111	7.7%	0	-	128	3.2%
Tilapiine fishes	34	1.3%	349	24.2%	0	-	383	9.5%
<i>Xyrauchen texanus</i>	1	<0.1%	7	0.5%	0	-	8	0.2%
Total	2,606		1,441		0		4,047	
CPUE	89.04		0.19		0.00			
Effort	29,269	sec.	92	nets	0	nets		
			1,187.28	hours	0	hours		

Cibola Lake (CIBLAKE)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Ameiurus natalis</i>	1	0.3%	0	0.0%	0	-	1	0.2%
<i>Carassius auratus</i>	15	3.8%	3	1.6%	0	-	18	3.1%
<i>Cyprinus carpio</i>	93	23.3%	107	56.9%	0	-	200	34.0%
<i>Dorosoma petenense</i>	53	13.3%	0	0.0%	0	-	53	9.0%
<i>Ictalurus punctatus</i>	0	0.0%	9	4.8%	0	-	9	1.5%
<i>Lepomis gulosus</i>	21	5.3%	3	1.6%	0	-	24	4.1%
<i>Lepomis macrochirus</i>	67	16.8%	0	0.0%	0	-	67	11.4%
<i>Lepomis microlophus</i>	18	4.5%	0	0.0%	0	-	18	3.1%
<i>Lepomis sp.</i>	8	2.0%	0	0.0%	0	-	8	1.4%
<i>Micropterus dolomieu</i>	0	0.0%	1	0.5%	0	-	1	0.2%
<i>Micropterus salmoides</i>	116	29.0%	17	9.0%	0	-	133	22.6%
<i>Pomoxis nigromaculatus</i>	6	1.5%	27	14.4%	0	-	33	5.6%
<i>Pylodictis olivaris</i>	2	0.5%	21	11.2%	0	-	23	3.9%
Total	400		188		0		588	
CPUE	88.85		1.73		0.00			
Effort	4,502	sec.	10	nets	0	nets		
			157.83	hours	0	hours		

Adobe Lake (ADOBE)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Ameiurus natalis</i>	2	0.6%	0	0.0%	0	-	2	0.5%
<i>Carassius auratus</i>	1	0.3%	0	0.0%	0	-	1	0.2%
<i>Cyprinus carpio</i>	25	8.1%	18	15.4%	0	-	43	10.1%
<i>Dorosoma petenense</i>	98	31.6%	0	0.0%	0	-	98	23.0%
<i>Ictalurus punctatus</i>	3	1.0%	17	14.5%	0	-	20	4.7%
<i>Lepomis gulosus</i>	4	1.3%	4	3.4%	0	-	8	1.9%
<i>Lepomis macrochirus</i>	0	0.0%	5	4.3%	0	-	5	1.2%
<i>Lepomis microlophus</i>	20	6.5%	28	23.9%	0	-	48	11.2%
<i>Lepomis sp.</i>	41	13.2%	0	0.0%	0	-	41	9.6%
<i>Micropterus salmoides</i>	115	37.1%	13	11.1%	0	-	128	30.0%
<i>Morone saxatilis</i>	0	0.0%	13	11.1%	0	-	13	3.0%
<i>Pomoxis nigromaculatus</i>	0	0.0%	4	3.4%	0	-	4	0.9%
<i>Pylodictis olivaris</i>	1	0.3%	13	11.1%	0	-	14	3.3%
Tilapiine fishes	0	0.0%	2	1.7%	0	-	2	0.5%
Total	310		117		0		427	
CPUE	116.54		12.47		0.00			
Effort	2,660 sec.		3 nets		0 nets			
			45.33 hours		0 hours			

Imperial NWR / Imperial Reservoir (INWR)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Ameiurus natalis</i>	1	0.1%	3	0.9%	0	-	4	0.3%
<i>Carassius auratus</i>	1	0.1%	0	0.0%	0	-	1	0.1%
<i>Cyprinus carpio</i>	52	6.0%	59	17.9%	0	-	111	9.3%
<i>Dorosoma petenense</i>	1	0.1%	0	0.0%	0	-	1	0.1%
<i>Ictalurus punctatus</i>	5	0.6%	11	3.3%	0	-	16	1.3%
<i>Lepomis gulosus</i>	50	5.8%	1	0.3%	0	-	51	4.3%
<i>Lepomis macrochirus</i>	164	18.9%	20	6.1%	0	-	184	15.4%
<i>Lepomis microlophus</i>	286	32.9%	126	38.3%	0	-	412	34.4%
<i>Lepomis sp.</i>	122	14.1%	0	0.0%	0	-	122	10.2%
<i>Micropterus salmoides</i>	157	18.1%	70	21.3%	0	-	227	19.0%
<i>Morone saxatilis</i>	1	0.1%	11	3.3%	0	-	12	1.0%
<i>Pomoxis nigromaculatus</i>	21	2.4%	14	4.3%	0	-	35	2.9%
<i>Pylodictis olivaris</i>	5	0.6%	4	1.2%	0	-	9	0.8%
Tilapiine fishes	2	0.2%	10	3.0%	0	-	12	1.0%
Total	868		329		0		1,197	
CPUE	197.95		1.28		0.00			
Effort	4,385 sec.		16 nets		0 nets			
			232.90 hours		0 hours			

Clear Lake (CLEAR)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Cyprinus carpio</i>	0	-	76	49.7%	0	-	76	49.7%
<i>Ictalurus punctatus</i>	0	-	4	2.6%	0	-	4	2.6%
<i>Lepomis gulosus</i>	0	-	6	3.9%	0	-	6	3.9%
<i>Lepomis macrochirus</i>	0	-	20	13.1%	0	-	20	13.1%
<i>Lepomis microlophus</i>	0	-	32	20.9%	0	-	32	20.9%
<i>Micropterus salmoides</i>	0	-	11	7.2%	0	-	11	7.2%
<i>Pylodictis olivaris</i>	0	-	4	2.6%	0	-	4	2.6%
Total	0		153		0		153	
CPUE	0.00		6.50		0.00			
Effort	0 sec.		5 nets		0 nets			
			68.25 hours		0 hours			

Yuma Wash (YUMAWASH)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Ameiurus natalis</i>	1	0.2%	0	0.0%	0	-	1	0.2%
<i>Cyprinus carpio</i>	34	6.9%	7	12.3%	0	-	41	7.5%
<i>Dorosoma petenense</i>	282	57.4%	0	0.0%	0	-	282	51.5%
<i>Ictalurus punctatus</i>	5	1.0%	4	7.0%	0	-	9	1.6%
<i>Lepomis gulosus</i>	21	4.3%	0	0.0%	0	-	21	3.8%
<i>Lepomis macrochirus</i>	38	7.7%	8	14.0%	0	-	46	8.4%
<i>Lepomis microlophus</i>	43	8.8%	13	22.8%	0	-	56	10.2%
<i>Lepomis sp.</i>	11	2.2%	0	0.0%	0	-	11	2.0%
<i>Micropterus salmoides</i>	49	10.0%	12	21.1%	0	-	61	11.1%
<i>Morone saxatilis</i>	0	0.0%	4	7.0%	0	-	4	0.7%
<i>Pomoxis nigromaculatus</i>	5	1.0%	4	7.0%	0	-	9	1.6%
<i>Pylodictis olivaris</i>	1	0.2%	1	1.8%	0	-	2	0.4%
Tilapiine fishes	1	0.2%	4	7.0%	0	-	5	0.9%
Total	491		57		0		548	
CPUE	279.45		6.30		0.00			
Effort	1,757 sec.		3 nets		0 nets			
			43.70 hours		0 hours			

Martinez Lake (MARTINEZ)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Ameiurus natalis</i>	0	0.0%	2	0.1%	0	-	2	0.1%
<i>Carassius auratus</i>	4	0.3%	0	0.0%	0	-	4	0.1%
<i>Cyprinella lutrensis</i>	3	0.2%	0	0.0%	0	-	3	0.1%
<i>Cyprinus carpio</i>	185	12.4%	670	48.2%	0	-	855	29.6%
<i>Dorosoma petenense</i>	77	5.2%	0	0.0%	0	-	77	2.7%
<i>Ictalurus punctatus</i>	22	1.5%	116	8.4%	0	-	138	4.8%
<i>Lepomis gulosus</i>	5	0.3%	7	0.5%	0	-	12	0.4%
<i>Lepomis macrochirus</i>	207	13.8%	131	9.4%	0	-	338	11.7%
<i>Lepomis microlophus</i>	263	17.6%	183	13.2%	0	-	446	15.5%
<i>Lepomis sp.</i>	216	14.4%	0	0.0%	0	-	216	7.5%
<i>Micropterus salmoides</i>	412	27.6%	75	5.4%	0	-	487	16.9%
<i>Morone saxatilis</i>	49	3.3%	56	4.0%	0	-	105	3.6%
<i>Notemigonus crysoleucas</i>	1	0.1%	0	0.0%	0	-	1	<0.1%
<i>Pomoxis nigromaculatus</i>	20	1.3%	31	2.2%	0	-	51	1.8%
<i>Pylodictis olivaris</i>	3	0.2%	26	1.9%	0	-	29	1.0%
Tilapiine fishes	28	1.9%	91	6.6%	0	-	119	4.1%
<i>Xyrauchen texanus</i>	0	0.0%	1	0.1%	0	-	1	<0.1%
Total	1,495		1,389		0		2,884	
CPUE	74.45		0.68		0.00			
Effort	20,080	sec.	46	nets	0	nets		
			640.27	hours	0	hours		

Fishers' Landing (FISHER)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Carassius auratus</i>	1	0.1%	0	0.0%	0	-	1	0.1%
<i>Cyprinus carpio</i>	23	3.1%	57	36.8%	0	-	80	9.0%
<i>Dorosoma petenense</i>	67	9.1%	0	0.0%	0	-	67	7.5%
<i>Ictalurus punctatus</i>	3	0.4%	11	7.1%	0	-	14	1.6%
<i>Lepomis gulosus</i>	4	0.5%	1	0.6%	0	-	5	0.6%
<i>Lepomis macrochirus</i>	150	20.4%	19	12.3%	0	-	169	18.9%
<i>Lepomis microlophus</i>	123	16.7%	33	21.3%	0	-	156	17.5%
<i>Lepomis sp.</i>	176	23.9%	0	0.0%	0	-	176	19.7%
<i>Micropterus dolomieu</i>	1	0.1%	0	0.0%	0	-	1	0.1%
<i>Micropterus salmoides</i>	158	21.4%	19	12.3%	0	-	177	19.8%
<i>Morone saxatilis</i>	17	2.3%	6	3.9%	0	-	23	2.6%
<i>Pomoxis nigromaculatus</i>	3	0.4%	3	1.9%	0	-	6	0.7%
<i>Pylodictis olivaris</i>	7	0.9%	1	0.6%	0	-	8	0.9%
Tilapiine fishes	4	0.5%	5	3.2%	0	-	9	1.0%
Total	737		155		0		892	
CPUE	180.02		2.56		0.00			
Effort	4,094	sec.	8	nets	0	nets		
			109.68	hours	0	hours		

Face Lake (AB16)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Carassius auratus</i>	1	0.2%	1	0.7%	0	-	2	0.3%
<i>Cyprinus carpio</i>	27	5.1%	65	42.5%	0	-	92	13.5%
<i>Dorosoma petenense</i>	67	12.6%	0	0.0%	0	-	67	9.8%
<i>Ictalurus punctatus</i>	2	0.4%	7	4.6%	0	-	9	1.3%
<i>Lepomis gulosus</i>	6	1.1%	3	2.0%	0	-	9	1.3%
<i>Lepomis macrochirus</i>	111	20.9%	9	5.9%	0	-	120	17.6%
<i>Lepomis microlophus</i>	134	25.3%	47	30.7%	0	-	181	26.5%
<i>Lepomis sp.</i>	103	19.4%	0	0.0%	0	-	103	15.1%
<i>Micropterus salmoides</i>	65	12.3%	6	3.9%	0	-	71	10.4%
<i>Morone saxatilis</i>	6	1.1%	1	0.7%	0	-	7	1.0%
<i>Pomoxis nigromaculatus</i>	7	1.3%	1	0.7%	0	-	8	1.2%
<i>Pylodictis olivaris</i>	1	0.2%	8	5.2%	0	-	9	1.3%
Tilapiine fishes	0	0.0%	5	3.3%	0	-	5	0.7%
Total	530		153		0		683	
CPUE	113.05		1.66		0.00			
Effort	4,688 sec.		10 nets		0 nets			
			133.20 hours		0 hours			

Main Channel Imperial Division (MC_IMP)

Species	Electrofishing		Trammel Netting		Hoop Netting		Total	%
	Catch	%	Catch	%	Catch	%		
<i>Lepomis macrochirus</i>	0	-	0	-	5	25.0%	5	25.0%
<i>Lepomis microlophus</i>	0	-	0	-	7	35.0%	7	35.0%
<i>Lepomis sp.</i>	0	-	0	-	5	25.0%	5	25.0%
<i>Micropterus salmoides</i>	0	-	0	-	1	5.0%	1	5.0%
<i>Pomoxis nigromaculatus</i>	0	-	0	-	1	5.0%	1	5.0%
Tilapiine fishes	0	-	0	-	1	5.0%	1	5.0%
Total	0		0		20		20	
CPUE	0.00		0.00		0.47			
Effort	0 sec.		0 nets		4 nets			
			0 hours		127.02 hours			