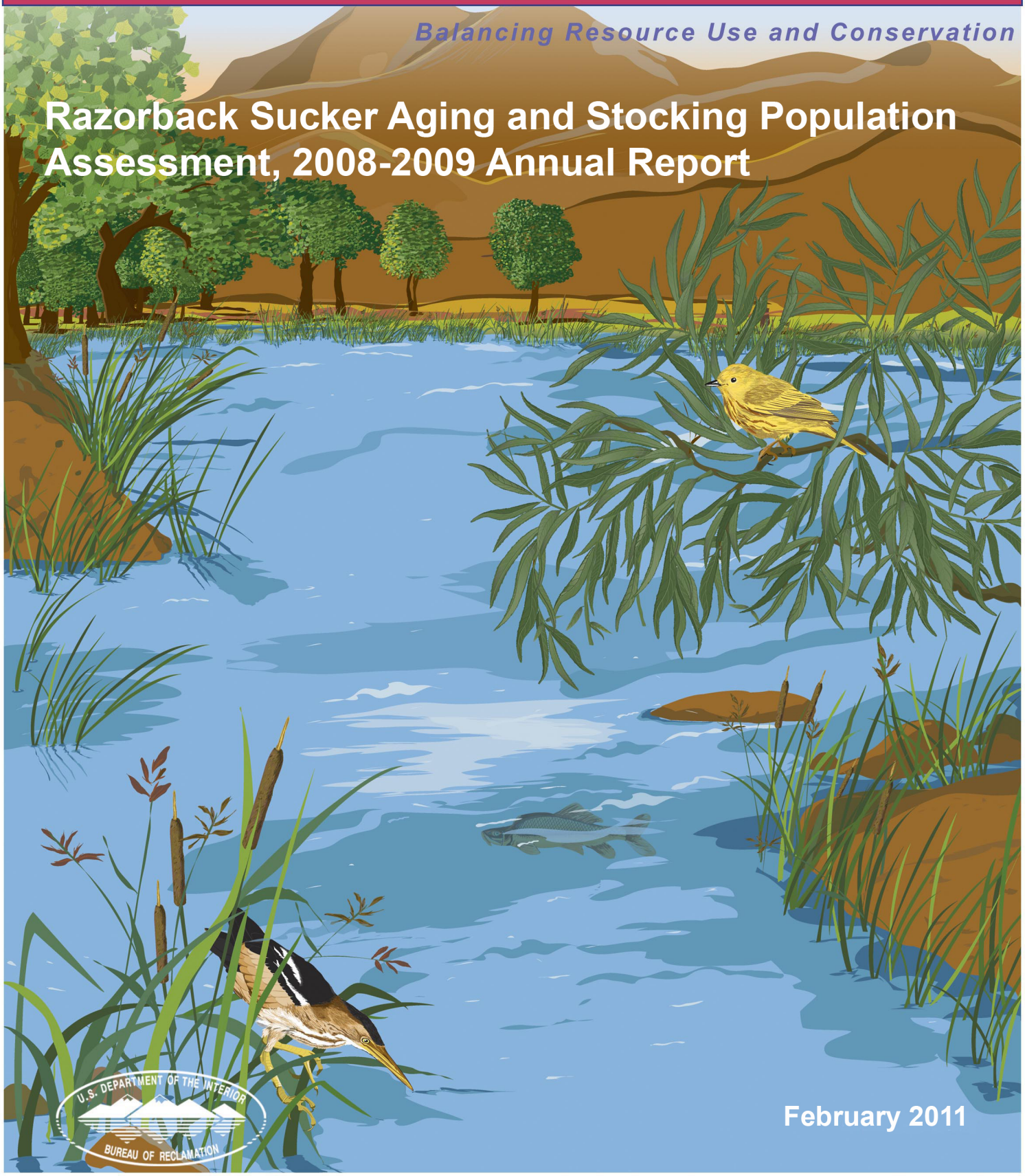
Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

Razorback Sucker Aging and Stocking Population Assessment, 2008-2009 Annual Report



February 2011

Lower Colorado River Multi-Species Conservation Program Steering Committee Members

Federal Participant Group

Bureau of Reclamation
U.S. Fish and Wildlife Service
National Park Service
Bureau of Land Management
Bureau of Indian Affairs
Western Area Power Administration

Arizona Participant Group

Arizona Department of Water Resources
Arizona Electric Power Cooperative, Inc.
Arizona Game and Fish Department
Arizona Power Authority
Central Arizona Water Conservation District
Cibola Valley Irrigation and Drainage District
City of Bullhead City
City of Lake Havasu City
City of Mesa
City of Somerton
City of Yuma
Electrical District No. 3, Pinal County, Arizona
Golden Shores Water Conservation District
Mohave County Water Authority
Mohave Valley Irrigation and Drainage District
Mohave Water Conservation District
North Gila Valley Irrigation and Drainage District
Town of Fredonia
Town of Thatcher
Town of Wickenburg
Salt River Project Agricultural Improvement and Power District
Unit "B" Irrigation and Drainage District
Wellton-Mohawk Irrigation and Drainage District
Yuma County Water Users' Association
Yuma Irrigation District
Yuma Mesa Irrigation and Drainage District

Other Interested Parties Participant Group

QuadState County Government Coalition
Desert Wildlife Unlimited

California Participant Group

California Department of Fish and Game
City of Needles
Coachella Valley Water District
Colorado River Board of California
Bard Water District
Imperial Irrigation District
Los Angeles Department of Water and Power
Palo Verde Irrigation District
San Diego County Water Authority
Southern California Edison Company
Southern California Public Power Authority
The Metropolitan Water District of Southern California

Nevada Participant Group

Colorado River Commission of Nevada
Nevada Department of Wildlife
Southern Nevada Water Authority
Colorado River Commission Power Users
Basic Water Company

Native American Participant Group

Hualapai Tribe
Colorado River Indian Tribes
Chemehuevi Indian Tribe

Conservation Participant Group

Ducks Unlimited
Lower Colorado River RC&D Area, Inc.
The Nature Conservancy

Lower Colorado River
Multi-Species Conservation Program

Razorback Sucker Aging and Stocking Population Assessment, 2008-2009 Annual Report

Prepared by: Donald E. Portz and Rebecca Siegle, USBR Technical Service Center, and Jeff Lantow, LCR MSCP Fisheries Group

Lower Colorado River
Multi-Species Conservation Program
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada
http://www.lcrmscp.gov

February 2011

TABLE OF CONTENTS

Introduction 1

Methods 2

Results and Discussion 6

Recommendations 11

Acknowledgments 11

References 12

TABLES

Table *Page*

1 Rearing location percent occurrence of 318 sampled razorback suckers. 7
2 Stocking location percent occurrence of the 318 sampled razorback suckers..... 8
3 Hatchery origins, stocking dates, and stocking locations for the most successful razorback stocking efforts based on known information of fish captured (n=127)..... 9
4 Percent occurrence of stocking locations for fish stocked during 2006–2008 (3–8 years old) of sampled razorback suckers. 10

FIGURES

Figure *Page*

1 Map of the Colorado River between Lakes Mohave and Havasu where sampling occurred during spring and fall surveys 2008–2009 2
2 Reclamation and Fish and Wildlife Service biologists electrofishing for population monitoring and tissue sample collection..... 3
3 Reclamation biologists retrieve trammel nets to obtain fish population data for endangered Colorado River fishes and to obtain fin ray samples for aging 3
4 Sampling a razorback sucker pectoral fin ray by severing the second pectoral fin ray, perpendicularly to the ray, approximately 1 centimeter from the base with specialized fin ray chisel clippers. 4
5 Bio-West, Inc., biologists sectioned, polished, and mounted fin ray cross-sections to microscope slides before age determination under a microscope.. 5
6 Cross-section of a razorback sucker fin ray viewed under a microscope depicting annuli growth rings. 5

Table of Contents – continued

Figure *Page*

7 Age distribution of razorback suckers captured. Percent age of the total fish capture is depicted by the histograms and number of individual is provided above each bar..... 6

8 Year class for fin ray sampled razorback suckers and recapture rates. Fish stocked more recently in 2007 and 2008 are recaptured (red line) more often than fish stocked years past..... 7

APPENDIX

Appendix 1 – Age, Origin, Stocking, and Capture Information of Razorback Suckers

INTRODUCTION

Fish stocking programs are used to compensate for limited natural reproduction, reintroduction, recovery of threatened and endangered species, and to reach management population objectives in waterways. Fisheries managers have stocked millions of small razorback suckers (*Xyrauchen texanus*) in the mainstream and larger tributaries of the Colorado River with little or no success for three decades (Mueller 2006, Schooley and Marsh 2007). More recently, managers have adopted a repatriation program to introduce larger suckers (30–50 cm) to improve post-stocking survival rates (Mueller 2003). Stock augmentation of subadult and adult razorbacks may decrease the risk of predation and increase the spawning success of these individuals. Mueller (2003) indicates that stocking returns are less than 12% and stocking efforts are inadequate for species recovery. One of the primary challenges in measuring stocking success is to locate and recapture adequate numbers of fish after release. Unfortunately, this has been difficult due to poor post-stocking survival. Stocking success seems to vary among cohorts and some year classes are more prevalent during population sampling. Quality of hatchery fish, stocking size and densities, stocking-related effects, release site location, and river conditions might all play a role in the survival of some year classes over others. Hatchery production and stocking protocols have been generally determined by logistics, politics, and convenience. Past stocking efforts have been greatly affected by predation and seemingly poor conditioning and quality of fish upon release (Marsh and Brooks 1989, Burdick and Bonar 1997, Mueller and Foster 1999, Burdick 2003). Several researchers have questioned the manner in which hatchery fish are raised, transported, and stocked but few studies have examined these issues (Marsh and Brooks 1989, Mueller and Foster 1999, Mueller 2003). Stocking success of extirpated or endangered fishes is dependent on a species' ability to adapt to present environmental conditions, coexist in current fish communities, and reproduce. Reintroduction of native fishes to their historical ranges may prove to be more difficult than anticipated if managers do not recognize all the factors that caused their original decline. Determining favorable conditions that have led to the success of some groups after stocking on the lower Colorado River is vital to maintaining razorback populations under the Lower Colorado River Multi-Species Conservation Program.

Preliminary fin ray aging data performed by Bio-West, Inc., suggested there are year classes that show up much more strongly than others during population monitoring and sampling (Brandon Albrecht, personal communication). It appears that environmental and fish-related conditions may have favored stocked fish survival in certain years more than others. From fin ray aging data of collected razorback and analysis of past stocking records, we attempted to determine if correlations exist among age and cohort frequencies with hatcheries, hatchery techniques, stocking methods, and stocking locations, and other factors that might influence overall fish health and survival.

METHODS

Over 300 razorback suckers were captured using trammel nets and electrofishing from known sucker habitats (Park Moabi, Topock Marsh, Blankenship, Pulpit Rock, Golden Shores, Castle Rock backwaters, and North Needles) on the Colorado River (Reach 3; Figure1) between Davis Dam and Lake Havasu Delta during spring and fall surveys in 2008 and 2009 (Figures 2 and 3). Trammel netting primarily occurred in backwater habitats of Topock Gorge down to Lake Havasu Delta, whereas electrofishing activities were focused at Park Moabi, Golden Shores, Needles Bridge, and North Needles along the Colorado River.

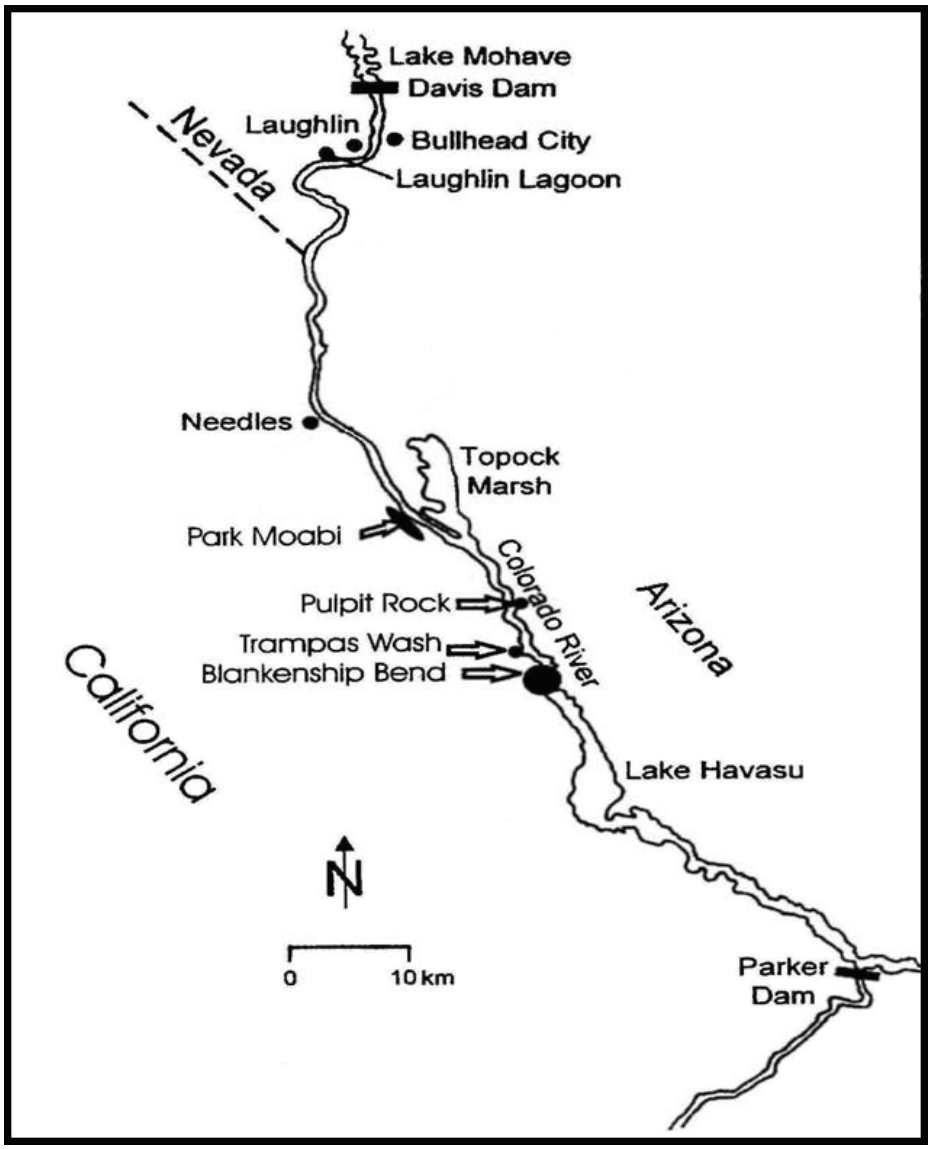


Figure 1.—Map of the Colorado River between Lakes Mohave and Havasu where sampling occurred during spring and fall surveys 2008–2009.

Figure 2.—Reclamation and Fish and Wildlife Service biologists electrofishing for population monitoring and tissue sample collection.

Figure 3.—Reclamation biologists retrieve trammel nets to obtain fish population data for endangered Colorado River fishes and to obtain fin ray samples for aging.

A small section of razorback sucker pectoral fin ray was collected from each fish caught by severing the second pectoral fin ray, perpendicularly to the ray, 1 cm from the base with specialized fin ray chisel clippers (Figure 4). This method poses little health and survival risk to the fish and does not require sacrifice (compared to otolith aging). Recaptures during the spring 2009 survey were completely healed from the previous fall's fin ray sampling 4 months prior. Fish were measured (TL), weighed, sexed, and scanned for PIT and wire-coded tags, and quickly returned to the water. Pectoral fin ray samples were dried and sent to Bio-West, Inc. (Logan, Utah) for aging. Fin ray samples were cross-sectioned, polished, slide mounted, and aged by counting annuli with the aid of a microscope for each fish (Figures 5 and 6). After aging, fin ray samples were sent to the University of California, Davis Interdisciplinary Center for Plasma Mass Spectrometry for quantifying ^{86}Sr:^{88}Sr isotopic ratios (Portz *et al*. 2010).

Aging data were compared to past stocking information located in the Native Fish Work Group Lower Colorado River database; where correlations among survival, abundance, and documented stocking data were analyzed to expose possible trends.

Figure 4.—Sampling a razorback sucker pectoral fin ray by severing the second pectoral fin ray, perpendicularly to the ray, approximately 1 centimeter from the base with specialized fin ray chisel clippers.

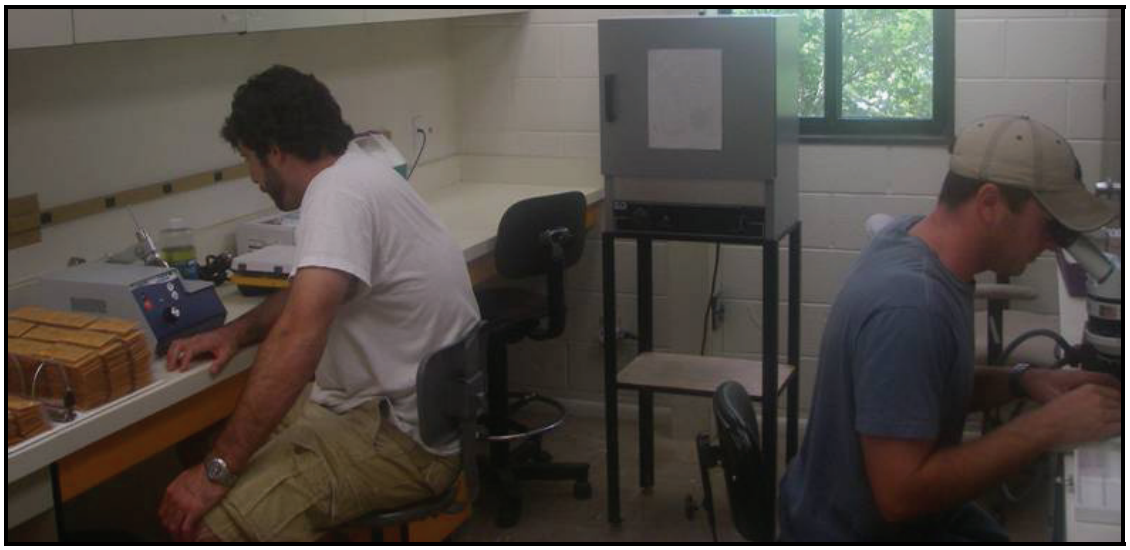


Figure 5.—Bio-West, Inc., biologists sectioned, polished, and mounted fin ray cross-sections to microscope slides before age determination under a microscope. Photograph courtesy of Bio-West, Inc.

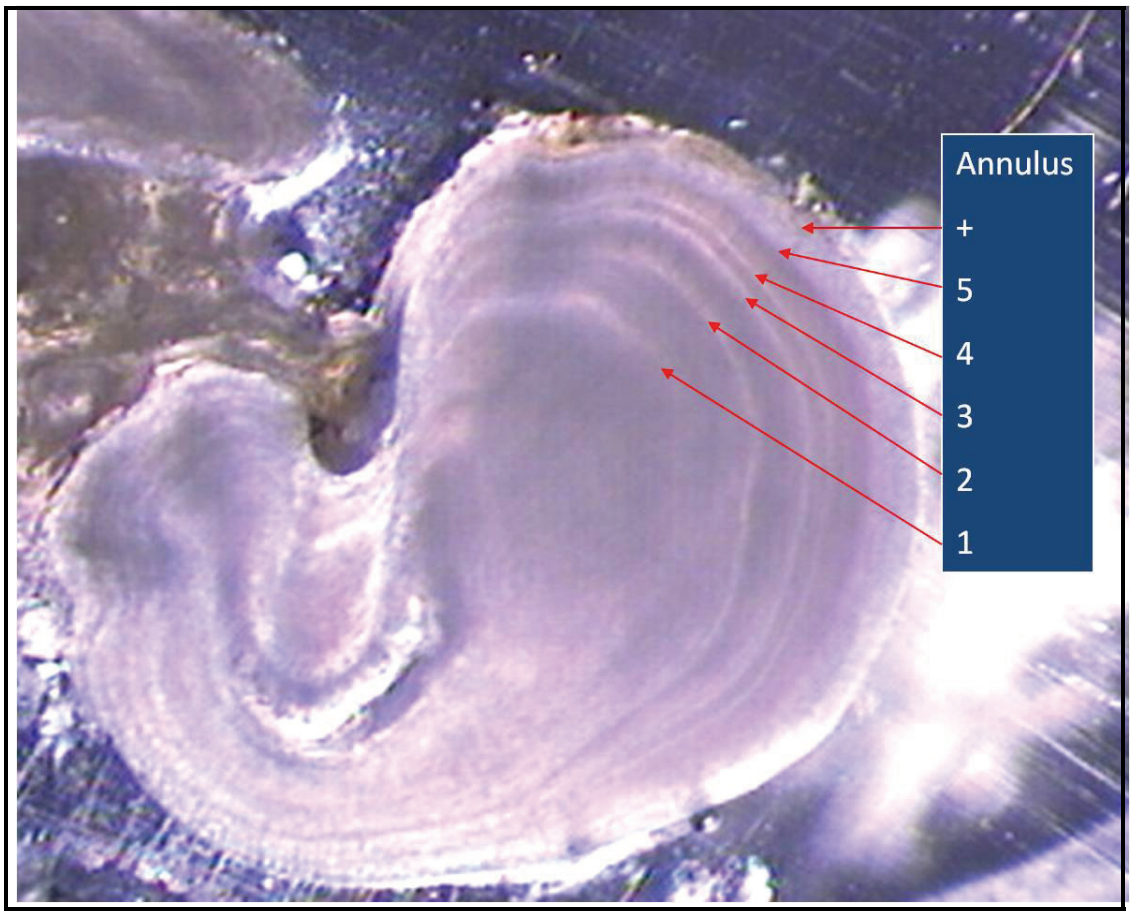


Figure 6.—Cross-section of a razorback sucker fin ray viewed under a microscope depicting annuli growth rings. Photograph courtesy of Bio-West, Inc.

RESULTS AND DISCUSSION

Capture data and related stocking information for 318 razorbacks are shown in Appendix 1. Of the 318 fish that were captured and had passive integrated transponder (PIT) tags, 127 were of known hatchery origin according to the Native Fish Work Group Lower Colorado River database (http://nativefishlab.net/nfwg). There were 34 fish that had been previously PIT tagged but were given a new PIT tag upon release. However, there was no information associated with the old PIT tags and all information in the database reflects recent information since recapture. Incomplete stocking records make it challenging to verify successful events and year classes.

Aging data from sampled razorback suckers showed a bimodal distribution with individuals ranging from 3–22 years (Figure 7 and Appendix 1). The two peaks revealed a strong emphasis within the perspective age classes to past Bubbling Ponds Fish Hatchery stockings and more recent Willow Beach National Fish Hatchery successes. Fish were identified using PIT tag information from eight different sources (Table 1). Aging data also revealed that a number of older stocked individuals (14+ years) still inhabit the river. Stocking success seems to vary among cohorts, and some year classes are more prevalent during current population sampling. However, increased number of capture occurrences is directly correlated with increased stocking numbers in specific years (Figure 8) and locations (Table 2). These data are reflected in the population structure. Fish stocked more recently in 2007 and 2008 are recaptured more often than fish stocked in years past (Figure 8).

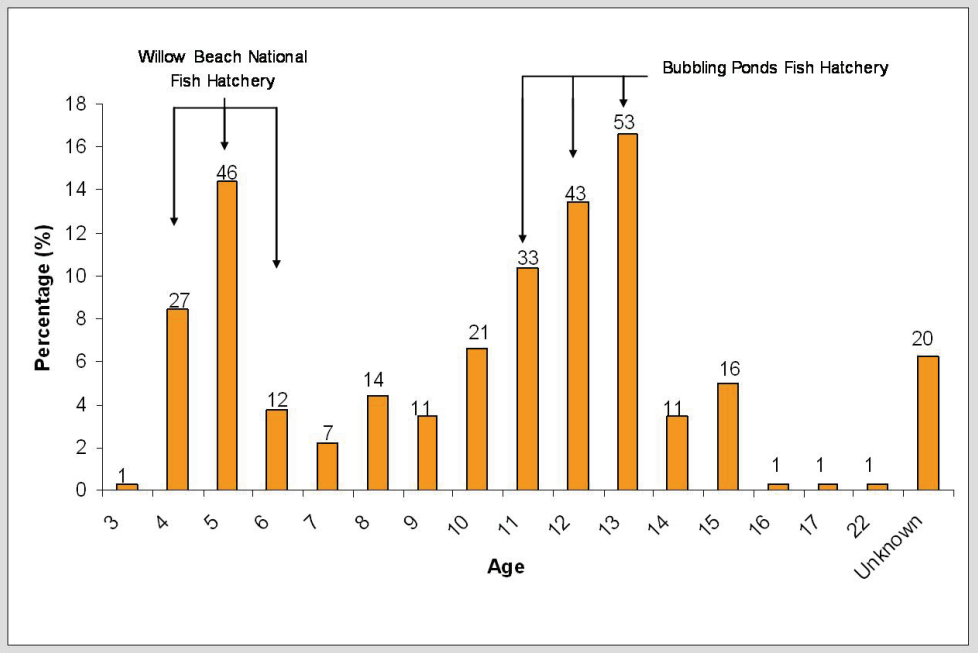


Figure 7.—Age distribution of razorback suckers captured. Percent age of the total fish capture is depicted by the histograms and number of individual is provided above each bar.

Table 1.—Rearing location percent occurrence of 318 sampled razorback suckers.

Rearing Location	% of Total
Unknown	61.44
Willow Beach	34.17
Emerald Canyon	1.25
Bubbling Ponds	0.94
Dexter	0.63
North Chemehuevi	0.31
Hualapai Tribe	0.31
Bulkhead Cove	0.31
Achii Hanyo	0.31

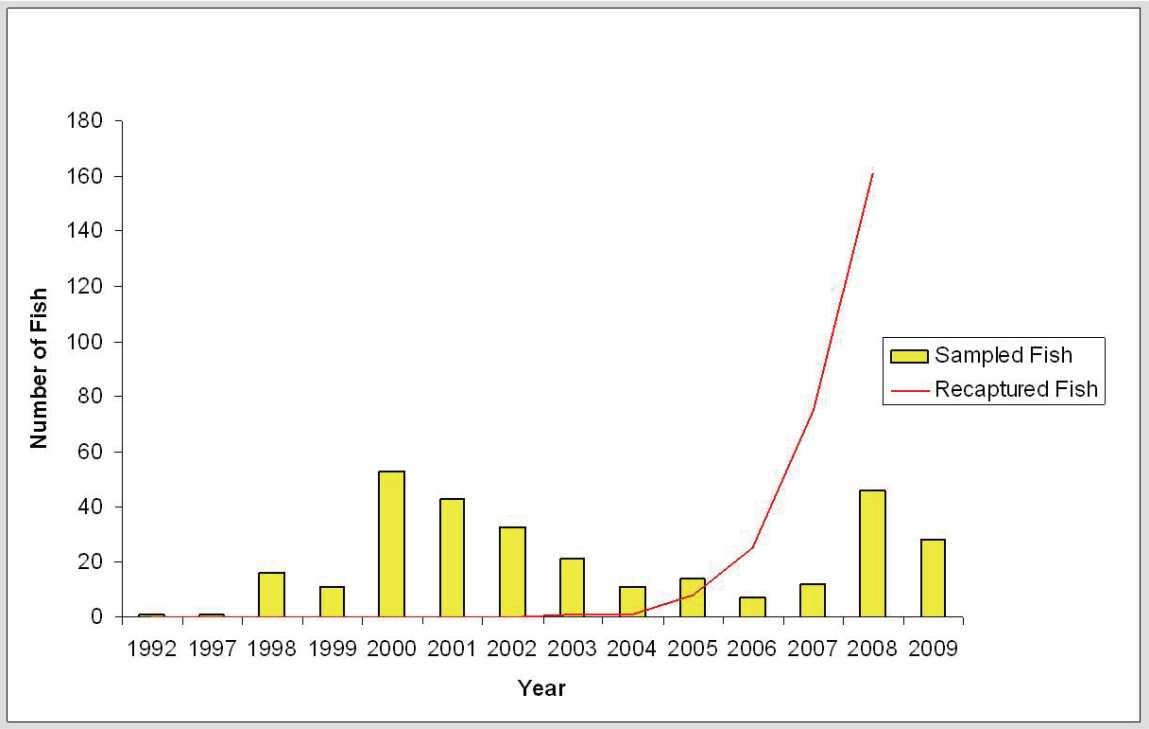


Figure 8.—Year class for fin ray sampled razorback suckers and recapture rates. Fish stocked more recently in 2007 and 2008 are recaptured (red line) more often than fish stocked years past.

Table 2.—Stocking locations of the 318 sampled razorback suckers.

Stocking Location	% of Total
Unknown (Mostly 9–22 years old)	60.25
Needles Dredge Yard	17.98
Park Moabi	14.51
Laughlin lagoon	1.89
Office Cove	1.58
Pulpit Rock Cove	0.95
Bill Williams River National Wildlife Refuge	0.63
Telephone Cove	0.32
Takeoff Point	0.32
Mesquite Bay	0.32
Lake Havasu	0.32
Chemehuevi Cove	0.32
Bulkhead Cove	0.32
24 River Mile	0.32

While fin ray aging provides an important age structure information and distribution of the current population, results demonstrate the limited utility of fin ray aging to determine hatchery origins because of inherent aging challenges and variation in age upon release. It is difficult to determine dates the sampled razorbacks were stocked based on fin ray annuli aging. Many variables combined to make the accuracy of using aging back-calculation to estimate past stocking events questionable.

Firstly, the method using capture dates to estimate stocking dates assumed that fish were 4–5 years old upon stocking. In actuality, fish were released upon reaching approximately 300 mm. Although the majority of razorback may be around 4–5 years of age at 300 mm in length, this is not true of all fish. Fish <300 mm may be provided additional time in the hatchery before release the subsequent season or year, and faster growing individuals are often stocked sooner than their cohort adding to the uncertainty of definitive age at release. A conservative estimate of the precision of age at release is therefore ±1 year due to the differences in growth time it takes a razorback to grow 300 mm (4–5 years). Three examples of the large age variation within each stocking year can be seen from aging data of more recent stocking years (Appendix 1): aging data for fish allegedly stocked in 2006 should be 6–7 years, however these fish were aged at 4–10 years; 2007 should be 5–6 years, however these fish were aged at 4–10 years; and 2008 should be 4–5 years, however these fish were aged at 3–10 years. These data reveal the variability and doubtfulness of using this technique to determine specific stocking occurrences. Adding to the uncertainty, fish have been stocked at much younger ages in the past (*i.e.*, fry and 50–175 mm TL), making it impossible to determine age at release unless individual fish were PIT tagged and hatchery data recorded upon stocking.

Secondly, aging using fin rays is difficult, subjective, and has an inherent level of error (± 1–2 years), bringing the total accuracy of release date estimates to within 2–3 years or more. Finally, there may be multiple stocking events per year (*i.e.*, sometimes two according to the data set), so when the year of release is predicted, the exact date is still unknown.

Background data were identified for 127 of the captured razorbacks. Because the actual stocking date was known for each of these samples, these data were analyzed to determine the rate of accuracy in estimating release dates using the capture date for a reference point. Of the 127 samples, stocking dates for 52 fish (or 41%) were estimated to within 1 year. There were inadequate fin ray samples from 12 fish (or 9%) for which age could not be determined. Therefore, these samples could not be used in estimating release dates. Stocking dates for 63 fish (50%) were estimated incorrectly (to within 2 or more years). Using known data to test the reliability of the aging data and the growth time to reach 300 mm demonstrated a low rate of accuracy and high degree of variability. The low accuracy rate combined with the various other factors that can lead to imprecise estimates indicates that using data from the 318 captured fish to estimate stocking date does not appear to be practical.

Exact stocking dates can be provided for the razorbacks with known histories. Table 3 lists the hatchery origins, stocking dates, and stocking locations for the most successful razorback stocking efforts (based on the highest capture rates) from the sample of 127. This list does not include the stocking dates that were represented by three captured fish or less. Based on this sample, the stocking event on March 19, 2008 was by far the most successful, with captures of 34 fish released from the Park Moabi location and 10 fish released from the Needles Dredge Yard location on that date. The Needles Dredge Yard release site was the most successful stocking location, with 57 fish captured that had been released on 3 different dates. While the Needles Dredge Yard and Park Moabi offer some of the best stocking locations in Reach 3, the higher capture occurrence of fish stocked from these two locations most likely represents the proximity to our sampling locations (Table 4). There were only two stocking locations represented, however, the other one being the Park Moabi release site from which 45 fish were captured. The Willow Beach National Fish Hatchery was the only hatchery from which all fish originated.

Table 3.—Hatchery origins, stocking dates, and stocking locations for the most successful razorback stocking efforts based on known information of fish captured (n=127).

Hatchery Origin	Stocking Dates	Stocking Location	# of Fish Captured
Willow Beach National Fish Hatchery	3/19/2008	Park Moabi	34
Willow Beach National Fish Hatchery	4/12/2007	Needles Dredge Yard	25
Willow Beach National Fish Hatchery	11/1/2006	Needles Dredge Yard	22
Willow Beach National Fish Hatchery	11/2/2006	Park Moabi	11
Willow Beach National Fish Hatchery	3/19/2008	Needles Dredge Yard	10

Table 4.—Percent occurrence of stocking locations for fish stocked during 2006–2008 (3–8 years old) of sampled razorback suckers.

Stocking Location	% of Total
Needles Dredge Yard	48.1
Park Moabi	33.3
Unknown	11.1
Laughlin Lagoon	4.6
Bill Williams River National Wildlife Refuge	1.9
Pulpit Rock Cove	0.9

Results suggest a reevaluation of the hatchery practices of those hatcheries that did not make significant contributions to the population. Since the sampling protocol employed in this study was focused on a relatively localized area during what is thought to be spawning migrations, it is possible that fish from other hatcheries may reside in areas not sampled or may not exhibit a migratory spawning behavior. However, this may not be likely based on unpublished data (R. Wydoski) which has shown that fish captured/stocked at numerous locations in Reach 3 have all keyed on the spawning population in Needles, and there has been little evidence of other groups based on netting and telemetry.

Quality and quantity of hatchery fish, stocking-related effects, and release site location might all play a role in the disparate survival of some year classes. To our knowledge, no previous attempt has been made to analyze stocking locations for any of the endangered fishes in the lower basin. A further analysis of past stocking records and better data management of current practices is needed. Future stocking events may benefit from past stocking accomplishments but without recorded data, the successes of the past cannot be fully understood. Past razorback suckers stocking efforts have been impacted by predation and apparently poor conditioning which may lead to mortality, however few studies have examined these issues in this system (Marsh and Brooks 1989, Burdick and Bonar 1997, Mueller and Foster 1999). The choice of stocking site locations has been generally driven by logistics, politics, and convenience. More often than not, fish are stocked at the closest accessible location to the rearing ponds or hatcheries and these sites have varied throughout the river.

Information of natal origins, hatchery procedures, and stocking practices of repatriated razorback suckers, successfully introduced under the Lower Colorado River Multi-Species Conservation Program, a long-term, multi-agency effort to conserve and work towards the recovery of endangered species, will be helpful in understanding the composition and history of razorback suckers in the Colorado River. This study highlights future research needs regarding hatchery operations and continued stocking efforts.

RECOMMENDATIONS

- All stocked fish should receive PIT tags to track the success of individuals and stocking efforts—minimal cost for the scale of the recovery effort.
- Uniform stocking procedures should be required for all hatcheries and grow-out facilities.
- Stocking data need to be acquired and compiled in a single data base that is accessible to all agencies.
- Thorough stocking program evaluations should be performed for improvement and directing quantifiable goals and objectives.
- Fish need to be acclimated to release site water quality for greatest chance of survival.
- Protection from predators should be implemented during the acclimation period by using net pens or impoundments.
- Releases and release site locations needs to be timed with seasonally and spatially available food supply.
- Stocking of native fishes should be to areas that poses suitable habitat for species conservation.
- Native fishes must not be stocked upon existing and established nonnative fish communities.
- Predators should be removed from release sites by electrofishing or gill netting.
- Assess whether the goals and objectives of native fishes recovery efforts can co-exist with the management of sport fishes.

ACKNOWLEDGMENTS

We thank the Multi-Species Conservation Program for their support. We would also like to thank Carol Pacey and her remarkable ability to manage the PIT Tag Database for the Lower Colorado River endangered fishes at Marsh & Associates' Native Fish Lab. The following people assisted with field surveys and fin ray collections: Eric Best and Rick Wydoski, Bureau of Reclamation Technical Service Center; Bonnie Contreras, Trish Delrose, Jeff Anderson, Andi Montony, and Jim Burke, Bureau of Reclamation Lower Colorado Region; Mitch Thorson and Tammy Knecht, U.S. Fish and Wildlife Service; David Vigil, California Department of Fish and Game; Charles Hueth, Science Applications International Corporation. We are also grateful for suggestions provided by Tom Burke and those attending the Colorado River Aquatic Biologists (CRAB) conference, Laughlin, Nevada.

REFERENCES

Burdick, B.D. 2003. *Monitoring and evaluation of various sizes of domestic-reared razorback sucker stocked in the Upper Colorado and Gunnison Rivers, 1995–2001*. U.S. Fish and Wildlife Service, Colorado River Recovery Project No. 50, Grand Junction, Colorado.

Burdick, B.D. and R.B. Bonar. 1997. *Experimental stocking of adult razorback sucker in the Upper Colorado and Gunnison Rivers*. U.S. Fish and Wildlife Service, Colorado River Recovery Project, Grand Junction, Colorado.

Hartman K.J. and B. Preston. 2001. Stocking. Pages 661–688 *in* G.A. Wedemeyer, editor. *Fish Hatchery Management*, Second Edition. American Fisheries Society, Bethesda, Maryland.

Marsh, P.C. and J.E. Brooks. 1989. *Predation by ictalurid catfishes as a deterrent to reestablishment of hatchery-reared razorback suckers*. Southwest Naturalist 34:188–195.

Mueller, G. 2003. *The role of stocking in the reestablishment and augmentation of native fish in the Lower Colorado River Mainstem (1998–2002)*. U.S. Geological Survey, Open File Report 03-288.

Mueller, G.A. 2006. *Ecology of bonytail and razorback sucker and the role of off-channel habitats in their recovery*. U.S. Geological Survey, Scientific Investigations Report 2006-5065.

Mueller, G. and D. Foster. 1999. *Movement patterns, behavior, and habitat use of razorback sucker stocked into the Green River at Canyonlands National Park, Utah*. U.S. Geological Survey Open File Report 99-107.

Portz, D.E., J.A. Hobbs, and N. Ikemiyagi. 2010. *Stable isotope and microchemistry analyses of fin rays to determine habitat use and movement patterns of razorback sucker (Xyrauchen texanus) in reach 3*. Lower Colorado River Multi-Species Conservation Program Report.

Schooley, J.D. and P. C. Marsh. 2007. *Stocking of endangered razorback suckers in the Lower Colorado River Basin over three decades: 1974–2004*. North American Journal of Fisheries Management 27: 43-51.

Appendix 1

Age, Origin, Stocking, and Capture Information of Razorback Suckers

New PIT Tag Number	Hatchery Origin	Stocking Dates	Stocking Location	Latest Capture Dates	Capture Location	Fin Ray Annuli Age (Years)
1c2d0612ce	Willow Beach NFH	10/31/2008	Laughlin Lagoon	2/11/2009	Blankenship Bend	unknown
1c2c83c4e5		10/30/2008	Pulpit Rock Cove	2/12/2009	Park Moabi Marina	8
1c2c320808	Willow Beach NFH	3/19/2008	Park Moabi	10/29/2008	Park Moabi	3
1c2c857b5a	Willow Beach NFH	3/19/2008	Needles Dredge Yard	10/30/2008	Pulpit Rock Cove	4
1c2c84118d	Willow Beach NFH	3/19/2008	Needles Dredge Yard	10/29/2008	Park Moabi	4
1c2c8409b3	Willow Beach NFH	3/19/2008	Needles Dredge Yard	10/29/2008	Park Moabi	4
1c2c83c0e0	Willow Beach NFH	3/19/2008	Needles Dredge Yard	10/28/2009	32 RM	4
1c2c841432	Willow Beach NFH	3/19/2008	Needles Dredge Yard	10/30/2008	Pulpit Rock Cove	4
1c2c83bfa8	Willow Beach NFH	3/19/2008	Needles Dredge Yard	10/30/2008	Pulpit Rock Cove	4
1c2c840933	Willow Beach NFH	3/19/2008	Needles Dredge Yard	10/30/2008	Pulpit Rock Cove	4
1c2c84136d	Willow Beach NFH	3/19/2008	Park Moabi	2/12/2009	Pulpit Rock Cove	4
1c2c83bef9	Willow Beach NFH	3/19/2008	Park Moabi	10/30/2008	Pulpit Rock Cove	4
1c2c857cd8	Willow Beach NFH	3/19/2008	Park Moabi	10/29/2008	Park Moabi	4
1c2c857498	Willow Beach NFH	3/19/2008	Park Moabi	10/29/2008	Park Moabi	4
1c2c7eeb98	Willow Beach NFH	3/19/2008	Park Moabi	10/29/2008	Park Moabi	4
1c2c3687a9	Willow Beach NFH	3/19/2008	Park Moabi	10/29/2008	Park Moabi	4
1c2c857585	Willow Beach NFH	3/19/2008	Park Moabi	10/28/2009	32 RM	4
1c2c80e2b6	Willow Beach NFH	3/19/2008	Park Moabi	10/30/2008	Park Moabi	4
1c2c83c79f	Willow Beach NFH	3/19/2008	Park Moabi	10/30/2008	Park Moabi	4
1c2c840993	Willow Beach NFH	3/19/2008	Park Moabi	10/30/2008	Park Moabi	4
1c2c83c9da	Willow Beach NFH	3/19/2008	Park Moabi	10/30/2008	Park Moabi	4
1c2c83bd51	Willow Beach NFH	3/19/2008	Park Moabi	10/29/2008	Park Moabi	4
1c2c840690	Willow Beach NFH	3/19/2008	Park Moabi	10/29/2008	Park Moabi	4
1c2c83bca3	Willow Beach NFH	3/19/2008	Park Moabi	10/29/2008	Park Moabi	4
1c2c840fcc	Willow Beach NFH	3/19/2008	Park Moabi	10/29/2008	Park Moabi	4
1c2c856cc1	Willow Beach NFH	3/19/2008	Park Moabi	10/30/2008	Pulpit Rock Cove	4
1c2c856d66	Willow Beach NFH	3/19/2008	Park Moabi	10/30/2008	Pulpit Rock Cove	4
1c2c8572bd	Willow Beach NFH	3/19/2008	Needles Dredge Yard	1/27/2009	Needles (north of)	5
1c2c856d5e	Willow Beach NFH	3/19/2008	Park Moabi	2/12/2009	Park Moabi Marina	5

New PIT Tag Number	Hatchery Origin	Stocking Dates	Stocking Location	Latest Capture Dates	Capture Location	Fin Ray Annuli Age (Years)
1c2c857d19	Willow Beach NFH	3/19/2008	Park Moabi	2/12/2009	Park Moabi Marina	5
1c2c7f493a	Willow Beach NFH	3/19/2008	Park Moabi	10/30/2008	Pulpit Rock Cove	5
1c2c83be9d	Willow Beach NFH	3/19/2008	Park Moabi	10/29/2008	Park Moabi	5
1c2c7f4b2e	Willow Beach NFH	3/19/2008	Park Moabi	10/29/2008	Park Moabi	5
1c2c83c213	Willow Beach NFH	3/19/2008	Park Moabi	10/29/2008	Park Moabi	5
1c2c84097a	Willow Beach NFH	3/19/2008	Park Moabi	10/29/2008	Park Moabi	5
1c2c83bff1	Willow Beach NFH	3/19/2008	Park Moabi	10/28/2009	32 RM	5
1c2c83c519	Willow Beach NFH	3/19/2008	Park Moabi	10/30/2008	Park Moabi	5
1c2c2f3ae9	Willow Beach NFH	3/19/2008	Park Moabi	10/30/2008	Park Moabi	5
1c2c8416e6	Willow Beach NFH	3/19/2008	Park Moabi	10/29/2008	Park Moabi	5
1c2c8409c9	Willow Beach NFH	3/19/2008	Needles Dredge Yard	2/12/2009	Park Moabi Marina	unknown
1c2c7f4d4e	Willow Beach NFH	3/19/2008	Needles Dredge Yard			unknown
1c2c856b17	Willow Beach NFH	3/19/2008	Park Moabi	2/12/2009	Pulpit Rock Cove	unknown
1c2c7f4aa0	Willow Beach NFH	3/19/2008	Park Moabi	2/12/2009	Park Moabi Marina	unknown
1c2c83c38f	Willow Beach NFH	3/19/2008	Park Moabi	2/12/2009	Park Moabi Marina	unknown
1c2c2fd6a4	Willow Beach NFH	3/19/2008	Park Moabi	2/12/2009	Park Moabi Marina	unknown
1c2c7ef220	Willow Beach NFH	3/19/2008	Park Moabi	2/12/2009	Park Moabi Marina	unknown
1c2c840b55	Willow Beach NFH	3/19/2008	Park Moabi	2/12/2009	Park Moabi Marina	unknown
1c2c83e4c3		2/12/2008	Pulpit Rock Cove	10/30/2008	Pulpit Rock Cove	10
1c2c33bcb8	Willow Beach NFH	11/15/2007	Laughlin Lagoon	10/30/2008	Pulpit Rock Cove	4
1c2c32141b	Willow Beach NFH	11/15/2007	Laughlin Lagoon	1/27/2009	Needles (north of)	5
1c2c38c693	Willow Beach NFH	11/15/2007	Office Cove area and bridge at Bill Williams NWR	2/12/2009	Pulpit Rock Cove	unknown
257c608ae0	Dexter NFH	10/17/2007	Bill Williams River NWR	1/26/2009	Needles	8
257c6109a1	Dexter NFH	10/17/2007	Bill Williams River NWR	10/29/2008	Park Moabi	8
257c60f046	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/26/2009	Needles	4
257c6121ea	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/26/2009	Needles	5
257c601877	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/26/2009	Needles	5
257c611713	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/26/2009	Needles	5

New PIT Tag Number	Hatchery Origin	Stocking Dates	Stocking Location	Latest Capture Dates	Capture Location	Fin Ray Annuli Age (Years)
257c62fba5	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/26/2009	Needles	5
257c60e50d	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/28/2009	Laughlin Lagoon	5
257c60d5cf	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/28/2009	Laughlin Lagoon	5
257c6117ab	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/28/2009	Laughlin Lagoon	5
257c61ed79	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/28/2009	Laughlin Lagoon	5
257c61221e	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/28/2009	Laughlin Lagoon	5
257c61b9c1	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/28/2009	Laughlin Lagoon	5
257c625930	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/28/2009	Avi Hotel	5
257c61e75b	Willow Beach NFH	4/12/2007	Needles Dredge Yard			5
257c63257f	Willow Beach NFH	4/12/2007	Needles Dredge Yard	10/30/2008	Pulpit Rock Cove	5
257c6122a8	Willow Beach NFH	4/12/2007	Needles Dredge Yard	10/30/2008	Park Moabi	5
257c60ca7d	Willow Beach NFH	4/12/2007	Needles Dredge Yard	10/30/2008	Pulpit Rock Cove	5
257c62fc32	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/26/2009	Needles	6
257c61238c	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/26/2009	Needles	6
257c62bdcd	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/27/2009	Needles (north of)	6
257c5fe31d	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/26/2009	Needles	6
257c611575	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/27/2009	Needles (north of)	6
257c671b32	Willow Beach NFH	4/12/2007	Needles Dredge Yard			6
257c630835	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/26/2009	Needles	7
257c672b36	Willow Beach NFH	4/12/2007	Needles Dredge Yard	1/26/2009	Needles	9
257c61c7ac	Willow Beach NFH	4/12/2007	Needles Dredge Yard	2/25/2008	Needles	10
46476a461d	Willow Beach NFH	11/2/2006	Park Moabi	10/29/2008	Park Moabi	5
46377f4c17	Willow Beach NFH	11/2/2006	Park Moabi	10/29/2008	Park Moabi	5
463744340a	Willow Beach NFH	11/2/2006	Park Moabi	10/30/2008	Park Moabi	5
46466f2d4a	Willow Beach NFH	11/2/2006	Park Moabi	10/29/2008	Park Moabi	5
463778161d	Willow Beach NFH	11/2/2006	Park Moabi	10/29/2008	Park Moabi	7
257c60d823	Willow Beach NFH	11/2/2006	Park Moabi	1/26/2009	Needles	8
1c2d06168f	Willow Beach NFH	11/2/2006	Park Moabi	1/27/2009	Needles (north of)	8
1c2c841026	Willow Beach NFH	11/2/2006	Park Moabi	1/28/2009	Avi Hotel	10

New PIT Tag Number	Hatchery Origin	Stocking Dates	Stocking Location	Latest Capture Dates	Capture Location	Fin Ray Annuli Age (Years)
4648124421	Willow Beach NFH	11/2/2006	Park Moabi	10/30/2008	Park Moabi	10
257c60db65	Willow Beach NFH	11/2/2006	Park Moabi	2/12/2009	Pulpit Rock Cove	unknown
257c60d753	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	5
257c60f224	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	5
257c60dbb0	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/27/2009	Needles (north of)	5
257c60f0f8	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	5
257c60c90e	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	5
257c60c86d	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	5
257c60ac68	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	5
257c60e5cc	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	5
257c60da33	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	5
257c612587	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	5
257c60ada7	Willow Beach NFH	11/1/2006	Needles Dredge Yard	10/29/2008	Park Moabi	5
257c62f313	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	6
257c611a16	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	6
257c60ce7f	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	6
257c60e186	Willow Beach NFH	11/1/2006	Needles Dredge Yard	2/12/2009	Park Moabi Marina	6
257c632481	Willow Beach NFH	11/1/2006	Needles Dredge Yard	10/29/2008	Park Moabi	6
257c608373	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	7
257c613669	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	7
257c646e8f	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	7
257c62b905	Willow Beach NFH	11/1/2006	Needles Dredge Yard	1/26/2009	Needles	8
257c60ca25	Willow Beach NFH	11/1/2006	Needles Dredge Yard	2/25/2008	Needles	8
257c6196bf	Willow Beach NFH	11/1/2006	Needles Dredge Yard	2/12/2009	Park Moabi Marina	unknown
257c60ff03	Willow Beach NFH	10/24/2006	Laughlin Lagoon	1/26/2009	Needles	4
257c5fe358	Willow Beach NFH	10/24/2006	Laughlin Lagoon	1/26/2009	Needles	5
257c61c1d5	Willow Beach NFH	10/24/2006	Laughlin Lagoon	1/26/2009	Needles	5
257c609683	Hualapai Tribe Hatchery	6/28/2005	Office Cove	1/26/2009	Needles	9
1c2c83be04		2/3/2004	24 RM	1/28/2009	Avi Hotel	13

New PIT Tag Number	Hatchery Origin	Stocking Dates	Stocking Location	Latest Capture Dates	Capture Location	Fin Ray Annuli Age (Years)
424d6c1f32	Bubbling Ponds FH	2/26/2003	Pulpit Rock Cove	2/25/2008	Needles	13
423f3e4475	Bubbling Ponds FH	2/22/2002	Mesquite Bay	2/26/2008	Needles	13
257c60953b		1/23/2001	Park Moabi	1/26/2009	Needles	12
521f165e67	North Chemehuevi Cove	9/26/2000	Chemehuevi Cove	2/25/2008	Needles	10
257c60e0bf		2/24/2000	Park Moabi and Topock Gorge	1/26/2009	Needles	12
1c2d0621f4	Bubbling Ponds FH	12/1/1999	Telephone Cove	1/27/2009	Needles (north of)	10
1c2c8442be	Emerald Canyon Golf Course Ponds	1/25/1999	Office Cove	1/28/2009	Avi Hotel	13
257c60d281	Bulkhead Cove	1/8/1999	Bulkhead Cove	1/26/2009	Needles	10
257c608372	Achii Hanyo	11/2/1998	Lake Havasu	1/26/2009	Needles	11
1c2c83b807	Emerald Canyon Golf Course Ponds	10/2/1998	Office Cove	1/27/2009	Needles (north of)	11
257c61c612	Emerald Canyon Golf Course Ponds	10/2/1998	Office Cove	1/27/2009	Needles (north of)	12
1c2c2f9920	Emerald Canyon Golf Course Ponds	6/9/1998	Takeoff Point	1/27/2009	Needles (north of)	13
1c2c8304e5						5
1c2d060cb5				1/28/2009	Laughlin Lagoon	6
1c2c7f46f7				1/28/2009	Laughlin Lagoon	7
257c6111d4				1/26/2009	Needles	7
257c60ef0c				1/26/2009	Needles	8
257c60f087				1/26/2009	Needles	8
257c60c2ef				1/27/2009	Needles (north of)	8
1c2d05bf34				1/27/2009	Needles (north of)	8
1c2c83c058						8
1c2c840a0d				1/26/2009	Needles	8
1c2c857cf4				1/26/2009	Needles	8
1c2c2f9a25				1/27/2009	Needles (north of)	9
257c5ff9bd				1/27/2009	Needles (north of)	9
1c2d061347				1/27/2009	Needles (north of)	9
257c60f9cd				1/27/2009	Needles (north of)	9

New PIT Tag Number	Hatchery Origin	Stocking Dates	Stocking Location	Latest Capture Dates	Capture Location	Fin Ray Annuli Age (Years)
1c2d05ca25				1/27/2009	Needles (north of)	9
257c6108ac				1/26/2009	Needles	9
257c60d750				1/26/2009	Needles	9
1c2d06192e				1/27/2009	Needles (north of)	9
1c2c851732				1/26/2009	Needles	9
257c612413				1/27/2009	Needles (north of)	10
1c2d061b78				1/27/2009	Needles (north of)	10
1c2c3369ec				1/26/2009	Needles	10
257c60cbd8				1/26/2009	Needles	10
257c60d533				1/26/2009	Needles	10
257c60e3e9				1/26/2009	Needles	10
1c2c83e40f				1/27/2009	Needles (north of)	10
1c2d05ad5b				1/27/2009	Needles (north of)	10
1c2c83b7b5				1/27/2009	Needles (north of)	10
257c60dc19				1/26/2009	Needles	10
257c60d446				1/26/2009	Needles	10
1c2c7f4bf0				1/26/2009	Needles	10
257c60c932				1/26/2009	Needles	10
257c60cc39				2/26/2008	Needles	10
1c2d05ab3d				1/27/2009	Needles (north of)	11
257c60f0ad				1/26/2009	Needles	11
257c60cec2				1/26/2009	Needles	11
257c60d9b5				1/26/2009	Needles	11
257c60da62				1/26/2009	Needles	11
1c2d061a32				1/27/2009	Needles (north of)	11
1c2c84132f				1/26/2009	Needles	11
1c2c33a69f				1/27/2009	Needles (north of)	11
257c609d60				1/26/2009	Needles	11
1c2c33691c				1/26/2009	Needles	11

New PIT Tag Number	Hatchery Origin	Stocking Dates	Stocking Location	Latest Capture Dates	Capture Location	Fin Ray Annuli Age (Years)
257c612174				1/26/2009	Needles	11
257c60c349				1/26/2009	Needles	11
257c60e4c0				1/26/2009	Needles	11
1c2d05be35				1/27/2009	Needles (north of)	11
257c60d325				1/26/2009	Needles	11
257c6004cc				1/26/2009	Needles	11
257c618311				1/26/2009	Needles	11
257c621f44				1/27/2009	Needles (north of)	11
257c60da2d				1/26/2009	Needles	11
257c60b903				1/26/2009	Needles	11
1c2c844d8f				1/28/2009	Laughlin Lagoon	11
1c2d05c063				1/28/2009	Laughlin Lagoon	11
1c2c841d98				1/28/2009	Laughlin Lagoon	11
1c2d061294				1/28/2009	Laughlin Lagoon	11
1c2c84132f				1/26/2009	Needles	11
1c2c856eb8				1/26/2009	Needles	11
1c2d061a32				1/27/2009	Needles (north of)	11
1c2c3895c5				2/25/2008	Needles	11
257c609890				2/26/2008	Needles	11
257c60e470				1/26/2009	Needles	11
445606344b				2/25/2008	Needles	11
1c2d05acf0				1/27/2009	Needles (north of)	12
1c2d06f8a5				1/27/2009	Needles (north of)	12
257c60cbfa				1/27/2009	Needles (north of)	12
1c2c2fdcd0				1/27/2009	Needles (north of)	12
1c2d05ad0b				1/27/2009	Needles (north of)	12
257c60e88a				1/26/2009	Needles	12
1c2c388987				1/26/2009	Needles	12
257c60bac4				1/27/2009	Needles (north of)	12

New PIT Tag Number	Hatchery Origin	Stocking Dates	Stocking Location	Latest Capture Dates	Capture Location	Fin Ray Annuli Age (Years)
257c60c8a5				1/26/2009	Needles	12
1c2c388fbe				1/26/2009	Needles	12
1c2d05c5d6				1/27/2009	Needles (north of)	12
1c2d06e416				1/27/2009	Needles (north of)	12
257c60def3				1/26/2009	Needles	12
257c618f90				1/26/2009	Needles	12
257c6105be				1/26/2009	Needles	12
257c60d732				1/26/2009	Needles	12
257c60850f				1/26/2009	Needles	12
1c2c3378ee				1/26/2009	Needles	12
1c2c850a7d				1/27/2009	Needles (north of)	12
1c2d06f185				1/27/2009	Needles (north of)	12
257c60dfa5				1/26/2009	Needles	12
1c2c3369ca				1/26/2009	Needles	12
257c60b246				1/28/2009	Laughlin Lagoon	12
1c2d05bf37				1/28/2009	Laughlin Lagoon	12
257c60c401				1/28/2009	Laughlin Lagoon	12
1c2d05b1bf				1/28/2009	Laughlin Lagoon	12
42536d5a61				1/28/2009	Laughlin Lagoon	12
4456432678				1/28/2009	Laughlin Lagoon	12
1c2c83cb58				1/28/2009	Avi Hotel	12
1c2c83c550				1/26/2009	Needles	12
1c2c7fe1c6						12
1c2cfd5a9d						12
1c2c3376e9				2/25/2008	Needles	12
1c2c389147				2/25/2008	Needles	12
1c2c38f9ae				2/25/2008	Needles	12
257c60ce52				2/26/2008	Needles	12
257c60d2a5				1/27/2009	Needles	12

New PIT Tag Number	Hatchery Origin	Stocking Dates	Stocking Location	Latest Capture Dates	Capture Location	Fin Ray Annuli Age (Years)
257c611c07				1/26/2009	Needles	12
425479345c				2/25/2008	Needles	12
4255191b06				2/26/2008	Needles	12
1c2d05ae51				1/27/2009	Needles (north of)	13
257c620dc8				1/26/2009	Needles	13
257c610d1c				1/26/2009	Needles	13
257c60d503				1/26/2009	Needles	13
257c5b2e31				1/26/2009	Needles	13
257c62faf8				1/27/2009	Needles (north of)	13
257c60e853				1/26/2009	Needles	13
257c60e195				1/26/2009	Needles	13
257c6095bd				1/26/2009	Needles	13
1c2d06149e				1/27/2009	Needles (north of)	13
257c609c93				1/26/2009	Needles	13
257c60f442				1/27/2009	Needles (north of)	13
1c2d0620f8				1/27/2009	Needles (north of)	13
257c60ad46				1/27/2009	Needles (north of)	13
1c2d061c06				1/27/2009	Needles (north of)	13
257c608b44				1/27/2009	Needles (north of)	13
257c612052				1/26/2009	Needles	13
257c60d007				1/26/2009	Needles	13
257c60dc61				1/26/2009	Needles	13
257c60f334				1/27/2009	Needles (north of)	13
257c60d145				1/27/2009	Needles (north of)	13
1c2c83c3c0				1/27/2009	Needles (north of)	13
257c60dc1b				1/26/2009	Needles	13
1c2d059cfa				1/26/2009	Needles	13
1c2c337bb4				1/26/2009	Needles	13
257c60f474				1/26/2009	Needles	13

New PIT Tag Number	Hatchery Origin	Stocking Dates	Stocking Location	Latest Capture Dates	Capture Location	Fin Ray Annuli Age (Years)
257c60e2a1				1/26/2009	Needles	13
257c60ea3f				1/26/2009	Needles	13
1c2d06176e				1/28/2009	Laughlin Lagoon	13
257c6097ef				1/28/2009	Laughlin Lagoon	13
1c2d05a9d0				1/28/2009	Laughlin Lagoon	13
1c2c84515f				1/28/2009	Avi Hotel	13
1c2c83bea4				1/28/2009	Avi Hotel	13
1c2c83c066				1/28/2009	Avi Hotel	13
257c61205c				1/26/2009	Needles	13
4255003776				2/25/2008	Needles	13
1c2c31ec09				2/25/2008	Needles	13
1c2c31ee7f				2/25/2008	Needles	13
1c2c333edc				1/26/2009	Needles	13
1c2c337948				2/25/2008	Needles	13
1c2c33f310				2/25/2008	Needles	13
257c60b5b7				2/26/2008	Needles	13
257c612287				2/26/2008	Needles	13
257c6129f1f				2/25/2008	Needles	13
424d7d0f34				2/25/2008	Needles	13
425339414f				1/26/2009	Needles	13
1c2c841778						13
1c2c3336b0						13
1c2c333833				1/26/2009	Needles	14
1c2c333e9e				1/26/2009	Needles	14
1c2c33329f				1/27/2009	Needles (north of)	14
257c60f4a8				1/27/2009	Needles (north of)	14
1c2d06c3bd				1/28/2009	Laughlin Lagoon	14
1c2c841d15				1/28/2009	Avi Hotel	14
1c2c83c1c1				1/28/2009	Avi Hotel	14

New PIT Tag Number	Hatchery Origin	Stocking Dates	Stocking Location	Latest Capture Dates	Capture Location	Fin Ray Annuli Age (Years)
1c2c84122a				1/26/2009	Needles	14
257c600b07				2/25/2008	Needles	14
257c60f5e3				1/27/2009	Needles	14
257c62ef0b				2/25/2008	Needles	14
1c2d05bf90				1/27/2009	Needles (north of)	15
257c61d90f				1/27/2009	Needles (north of)	15
257c60beb8				1/26/2009	Needles	15
1c2d061956				1/27/2009	Needles (north of)	15
1c2d061a4d				1/27/2009	Needles (north of)	15
1c2d05bb0a				1/27/2009	Needles (north of)	15
257c60cc9d				1/26/2009	Needles	15
257c610f57				1/27/2009	Needles (north of)	15
1c2c85796d				1/27/2009	Needles (north of)	15
1c2d0609f0				1/27/2009	Needles (north of)	15
1c2d060cdc				1/27/2009	Needles (north of)	15
257c611a02				1/28/2009	Laughlin Lagoon	15
1c2c2f928f				1/26/2009	Needles	15
1c2c31efb9				2/25/2008	Needles	15
1c2c337269				2/25/2008	Needles	15
1c2c36a441				2/25/2008	Needles	15
257c609373				1/26/2009	Needles	16
1c2d061d3e				1/27/2009	Needles (north of)	17
1c2c2f9631				1/28/2009	Laughlin Lagoon	22
257c60ca78				1/26/2009	Needles	unknown
1c2d060ce4				2/10/2009	Blankenship Bend	unknown
257c60f621				2/12/2009	Park Moabi Marina	unknown
257c611c07				1/26/2009	Needles	unknown
257c60f5e3				1/27/2009	Needles	unknown
257c60d2a5				1/27/2009	Needles	unknown

New PIT Tag Number	Hatchery Origin	Stocking Dates	Stocking Location	Latest Capture Dates	Capture Location	Fin Ray Annuli Age (Years)
257c60e470				1/26/2009	Needles	unknown
1c2c333edc				1/26/2009	Needles	unknown