

PERFORMANCE REPORT

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FEDERAL AID IN SPORT FISH RESTORATION ACT

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FEDERAL AID PROJECT F-30-R-30

STATEWIDE FRESHWATER FISHERIES MONITORING AND MANAGEMENT PROGRAM

2004 Survey Report

Lake Wright Patman

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EXECUTIVE SUMMARY

Lake Wright Patman was surveyed during the period June 2004 to May 2005 using electrofishing, gill netting, trap netting, a littoral zone habitat survey, an aquatic vegetation survey, and an angler access survey. This report summarizes the results of the surveys and contains a management plan for the reservoir based on those findings.

- **Reservoir Description:** Lake Wright Patman is located on the Sulphur River. It was constructed by the U. S. Army Corps of Engineers (USACE) in 1956 for flood control, municipal and industrial water supply, and public recreation. It has a drainage area of approximately 3,443 square miles. Shoreline length is 170 miles. Average annual water level fluctuation is 5-10 feet; however, water level fluctuation may be much higher during periods of high rainfall. Littoral area (water depth less than 15 feet) accounts for 58% of the reservoir. Bank fishing and boating access is available at numerous USACE parks and private marinas. Structural habitat is comprised of inundated timber, brush, and riprap. Aquatic macrophytes are present with highest densities in the upper end of the reservoir. Hydrilla coverage was estimated to be 5 acres during the 2004 vegetation survey.
- **Prey species:** Gizzard shad, threadfin shad, sunfishes and several species of minnows were present indicating good prey fish diversity. Moderate densities of clupeids were available as prey; electrofishing catch rates for gizzard shad and threadfin shad were 491.5 fish/hour and 45.0 fish/hour, respectively. Total clupeid (gizzard and threadfin shad) density (537.5 fish/hour) of 2004 electrofishing was very similar to that of 2000 (531.5 fish/hour). Index of vulnerability (IOV) for gizzard shad in 2004 indicated 77% of the population was available to existing predators. Catch rates for combined sunfish species (bluegill, longear sunfish, and redear sunfish) increased from 90.5 fish/hour in 2000 to 150.0 fish/hour in 2004. Size distributions of sunfishes indicated many small fish were available as prey for piscivores. Prey availability was adequate for adult largemouth bass as evidenced by mean relative weights in excess of 90 for all inch groups.
- **Catfishes:** Historical gill net data indicated there were higher catch rates of blue catfish during fall sampling when compared to spring. Therefore, fall gill netting was used in conjunction with a special project until 2001 to assess the blue catfish population. The blue catfish catch rate during fall gill netting was 4.7 fish/net night in 2001. This survey occurred after the most recent report was published. However, 2005 spring gill netting catch rate of blue catfish was only 0.07 fish/net night. These data indicate that the species still exists in the reservoir but population assessment is difficult. Ryan and Brice (2001) reported that blue catfish attain legal size (≥ 12 inches) during their second or third growing season. The 2005 gill netting catch rate of channel catfish (14.5 fish/net night) was more than double the catch in 2002 (5.5 fish/net night). Most of the fish collected in 2005 were legal-size (≥ 12 inches), indicating an increase in the numbers of fish that were available for angler harvest. Channel catfish growth was slower compared to other district water bodies as they reach legal size during their fourth growing season (Ryan and Brice 2001).

- **White bass, palmetto bass:** The catch rate of white bass in gill nets has increased from 2.7 fish/net night in 2001 and 1.1 fish/net night in 2002 to 11.5 fish/net night in 2005. Competition with palmetto bass, which were stocked from 1994-1999, and 2002 at a stocking rate that ranged from 5 to 25 fingerlings/acre, is a possible reason for the lower catch rates of white bass over the past several years. Ryan and Brice (2001) reported that white bass reach legal size (\geq 10 inches) by age 1. Annual stockings of palmetto bass were discontinued in 2003 due to low angler utilization. The palmetto bass catch rate has steadily declined from 2.8 fish/net night in 2000 to 0.1 fish/net night in 2005.
- **Sunfishes:** Electrofishing catch rates increased from 2000 to 2004 for both bluegill (76.0 fish/hour to 118.5 fish/hour) and redear sunfish (4.0 fish/hour to 11.0 fish/hour); however, current catch rates were lower than those in 1997 for both species (bluegill; 341.3 fish/hour, redear sunfish; 64.7 fish/hour). Bluegill and redear sunfish attain 6.0 inches during their third growing season (Ryan and Brice 2001).
- **Black bass:** The catch rate of largemouth bass increased from 26.5 fish/hour in 2000 to 48.5 fish/hour in 2004. This increase was due to higher numbers of sub stock-size fish (<8 inches) being collected in 2004 (20.0 fish/hour) as compared with 2000 (6.0 fish/hour). Largemouth bass reach legal size during their third growing season. Florida largemouth bass were stocked in 2002 and 2003 to enhance the genetics of the largemouth bass population. However, electrophoretic analysis of young-of-year largemouth bass indicated only 5.9% Florida alleles in 2004, which was below the target level of 20%.
- **Crappie:** Catch rates of white and black crappie in 2004 were 31.9 fish/net night and 1.2 fish/net night, respectively. Of the white crappie collected \geq 5 inches (stock-size), 52.1% were legally harvestable (\geq 10 inches). Crappies up to 15 inches were collected. Growth rates of both species were similar to previous years. White and black crappies reach legal size during their second and third growing season, respectively.
- **Management Strategies**
Based on fish community data, the reservoir should be managed under current harvest regulations. Lake Wright Patman supports excellent catfish, white bass, and crappie fishing opportunities. Special efforts should be made to promote these fisheries. Because Florida largemouth bass alleles were <20% in the latest sample, additional stocking should be requested for 2007 and 2008 at a rate of 25 fish/acre. Electrophoretic sampling should be conducted when necessary to monitor the success of Florida largemouth bass stockings and their genetic influence on the population.

INTRODUCTION

This document is a summary of fisheries data collected from Lake Wright Patman in 2004 and 2005. The purpose of the document is to provide fisheries information and make management recommendations to protect and improve the sport fishery. While information on other species of fishes was collected, this report deals primarily with major sport fishes and important prey species. Management strategies are included to address existing problems or opportunities. Historical data are presented with the 2004-2005 data for comparison.

Harvest regulations for Lake Wright Patman, September 1, 2004.

Species	Daily Bag Limit	Minimum-Maximum Length
Catfish, blue and channel	25	12 – No limit
Catfish, flathead	5	18 - No limit
Bass, white	25	10 - No limit
Bass, palmetto	5	18 – No limit
Bass, largemouth	5 ¹	14 – No limit
Crappie, white and black	25	10 - No limit

¹Aggregate bag limit for black basses

METHODS

- Fishes were collected by electrofishing (2.0 hours at 24 stations), spring gill netting (15 net nights at 15 stations), and fall trap netting (15 net nights at 15 stations). Sampling stations were randomly selected. Catch per unit effort (CPUE) for electrofishing was recorded as the number of fish caught per hour of actual electrofishing, and for gill netting and trap netting as the number of fish caught in one net set overnight in accordance with Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2002).
- Sampling statistics (CPUE for various length categories) and structural indices (Proportional Stock Density [PSD], Relative Stock Density [RSD], and Relative Weight [Wr]) were calculated, when appropriate, for target fishes according to Anderson and Neumann (1996). Index of vulnerability (IOV) was calculated for gizzard shad (DiCenzo et al. 1996).
- Ages were determined for largemouth bass and white and black crappie.
- Liver samples from young-of-year largemouth bass were collected in accordance with Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2002).
- A habitat survey, an aquatic vegetation survey, and an angler access facility survey were conducted in accordance with Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2002).

LITERATURE CITED

- Anderson, R. and R. Neumann. 1996. Length, weight, and associated structural indices. Pages 447-482 in B. R. Murphy and D. W. Willis, editors. Fisheries Techniques. American Fisheries Society, Bethesda, Maryland.
- DiCenzo, V.J., M. J. Maceina, and M. R. Stimert. 1996. Relations between reservoir trophic state and gizzard shad population characteristics in Alabama reservoirs. North American Journal of Fisheries Management 16:888-895.
- Ryan, M. J. and M. W. Brice. 2001. Statewide freshwater fisheries monitoring and management program. Survey report for Lake Wright Patman, 2000. Fed. Aid in Sport Fish Restoration, Project F-30-R-26. Texas Parks and Wildlife Department, Inland Fisheries Branch. Austin, Texas.

Physical and historical data for Lake Wright Patman, Texas, 2004-2005.

Inland Fisheries Water Body Code: 0722 IF District 3-A, Marshall

Controlling authority: U. S. Army Corps of Engineers Acres: 20,300

Counties: Bowie and Cass

Constructed for: Municipal/industrial water supply, flood control, recreation Longitude: 94° 20'
Latitude: 33° 09'

Location: 10 miles from Texarkana MSA Mean depth (ft): 7.6

Reservoir description: Mainstream

River system: Sulphur River

Shoreline length (mi): 170 Maximum depth (ft): 40.0
Shoreline development ratio: 8.5:1.0
Secchi disc range (ft): 1-2 Watershed (mi²): 3,443
Constructed: 1956 Conductivity: 190 (umhos/cm)

Access: Boat: Adequate
Bank: Adequate

Sampling history:

Method	Year
Gill net – spring	1976 1983 1988-1994 1997 2000-2002 2005
Gill net – fall	1990-1994 1997 2001
Electrofishing - spring	1991 1993 1994
Electrofishing - fall	1974 1976 1983 1986 1988-1994 1997 2000 2004
Trap net	1976 1984-1994 1997 2000 2004
Cove rotenone	1976 1983
Creel survey	1983 1984 1991 1995
Habitat survey	1976 1994 1997 2000 2004
Vegetation survey	1989 1994 1997 2000 2004

Habitat survey of littoral zone and physical habitat types, Lake Wright Patman, Texas, September 2004. A linear shoreline distance was recorded for each habitat type found.

Habitat type	Shoreline distance (miles)	Percent of total
Overhanging brush	51.4	30.2
Cut Bank	12.0	7.1
Overhanging brush / Cut bank	87.2	51.3
Overhanging brush / Native emergent / Native floating	5.9	3.5
Overhanging brush / Native emergent	9.0	5.3
Rip rap / Rocky shore	3.0	1.8
Eroded bank / Native submerged	1.0	0.9
Eroded bank / Hydrilla	0.5	0.3
Total	170.0	100.0

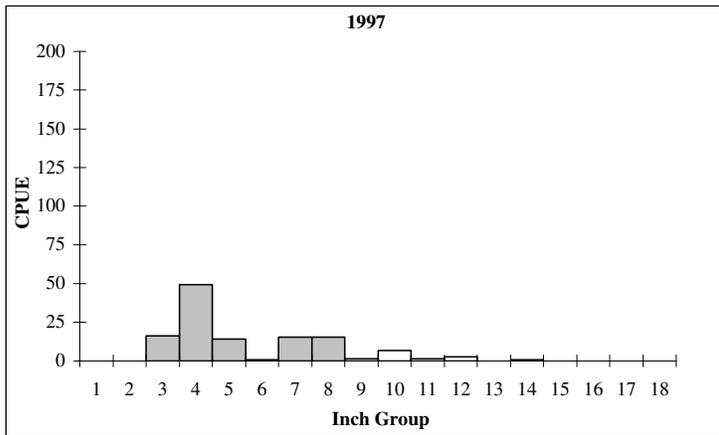
Summary of aquatic vegetation survey, Lake Wright Patman, Texas, September 2004. Acreage of each species and percent coverage of total reservoir surface acres (20,300) are presented.

Species	Total area (acres)	Percent of total
Chara	250.0	1.2
Giant duckweed	<1.0	<0.1
Cattail	25.0	0.1
Black willow	200.0	1.0
Arrowhead	10.0	<0.1
Waterprimrose	20.0	0.1
American lotus	25.0	0.1
Hydrilla	5.0	<0.1
Illinois pondweed	<1.0	<0.1
Buttonbush	1,030.0	5.1

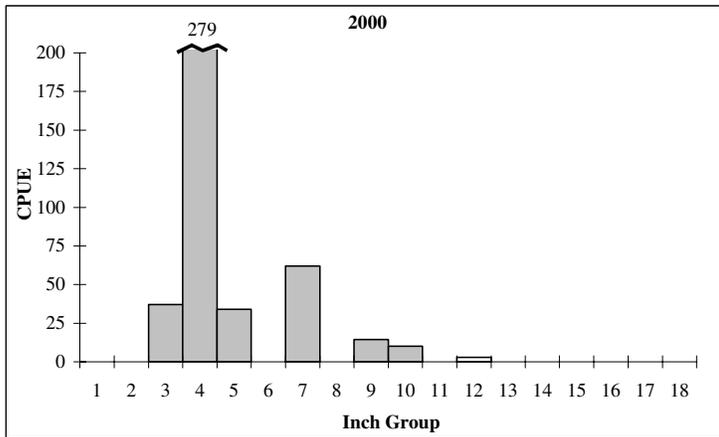
Stocking history of Lake Wright Patman, Texas. Size categories are FGL for fingerling and FRY for fry.

Species	Year	Number	Size
Paddlefish	1992	11,991	FGL
	1994	4,976	FGL
	Species Total	16,967	
Palmetto bass	1994	208,174	FGL
	1995	530,541	FGL
	1996	152,271	FGL
	1997	105,274	FGL
	1998	184,564	FGL
	1999	91,254	FGL
	2002	100,444	FGL
	Species Total	1,372,522	
Florida largemouth bass	1978	295,460	FRY
	1991	500,427	FGL
	1992	499,718	FGL
	1994	507,378	FGL
	2002	500,228	FGL
	2003	500,540	FGL
	Species Total	2,803,751	
Walleye	1974	334,317	FRY
	1975	338,000	FRY
	Species Total	672,317	

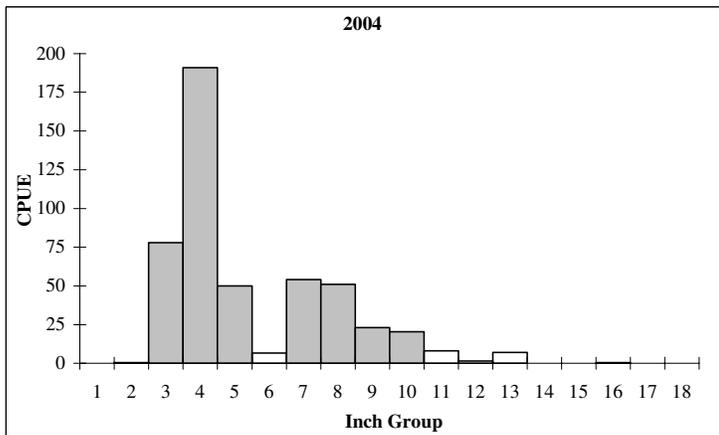
Gizzard Shad



Effort = 1.5 hrs.
 Total CPUE = 123.3
 Stock CPUE = 43.3
 PSD = 11
 IOV = 80



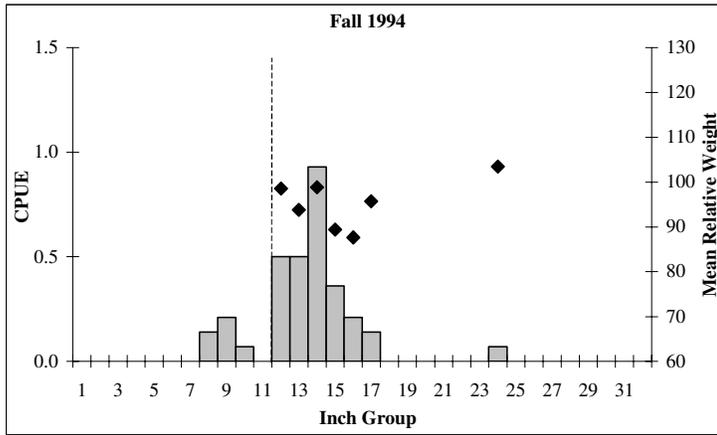
Effort = 2.0 hrs.
 Total CPUE = 439.5
 Stock CPUE = 89.5
 PSD = 3
 IOV = 93



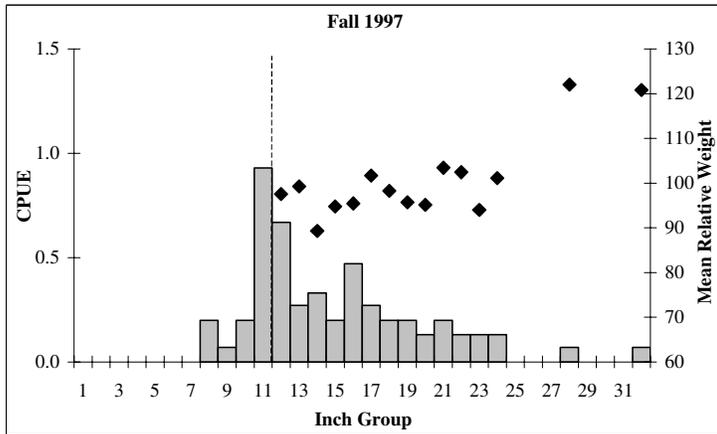
Effort = 2.0 hrs.
 Total CPUE = 491.5
 Stock CPUE = 165.5
 PSD = 10
 IOV = 77

The number of gizzard shad caught per hour (CPUE, bars) and population indices for fall electrofishing surveys, Lake Wright Patman, Texas.

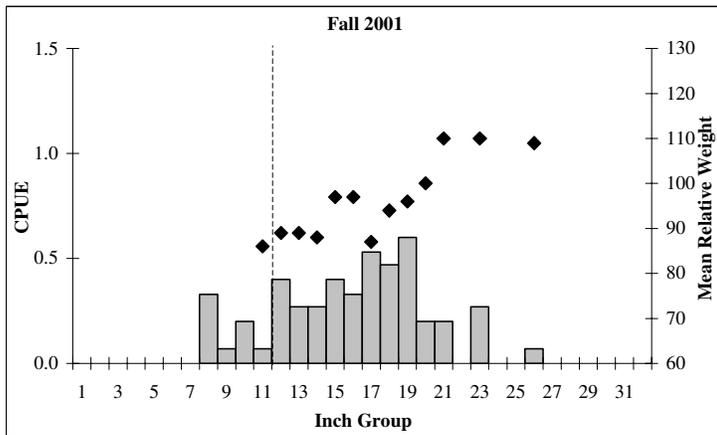
Blue Catfish



Effort = 14 net-nights
 Total CPUE = 3.1
 Stock CPUE = 3.7
 PSD = 3
 RSD-P = 0



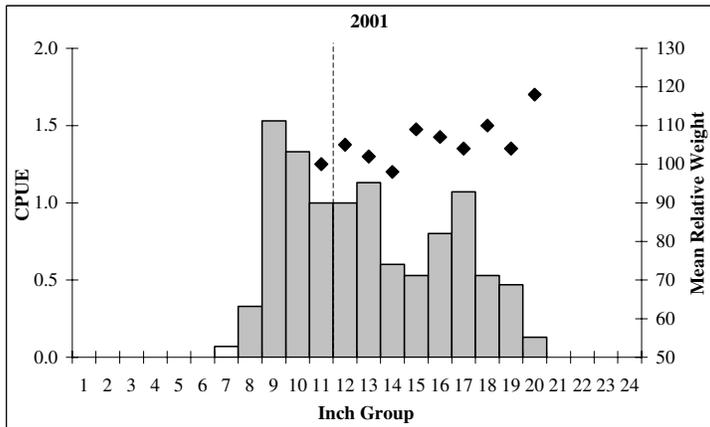
Effort = 15 net-nights
 Total CPUE = 4.9
 Stock CPUE = 3.5
 PSD = 25
 RSD-P = 2



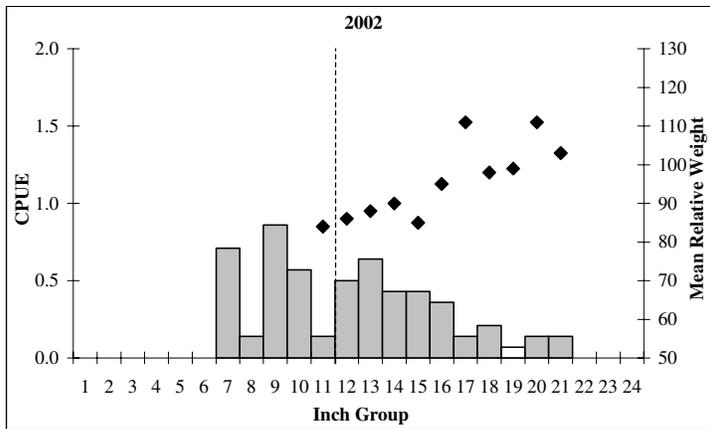
Effort = 15 net-nights
 Total CPUE = 4.7
 Stock CPUE = 4.0
 PSD = 18
 RSD-P = 0

The number of blue catfish caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices for fall gill netting surveys, Lake Wright Patman, Texas, November 1994 and 1997, and December 2001. Dashed-line indicates minimum length-limit at the time of the survey.

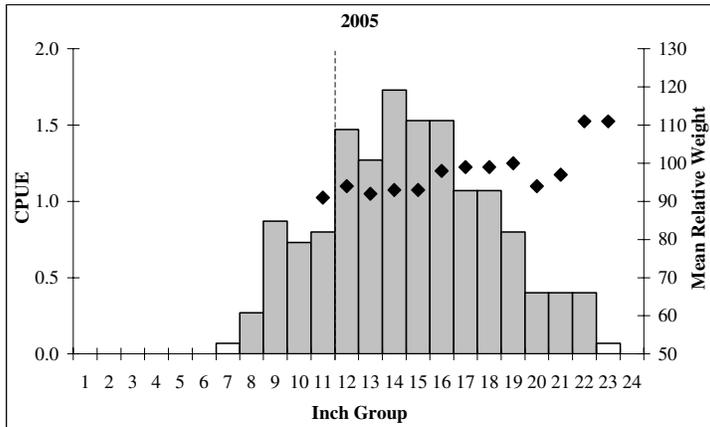
Channel Catfish



Effort = 15 net-nights
 Total CPUE = 10.5
 Stock CPUE = 7.3
 PSD = 41
 RSD-P = 0



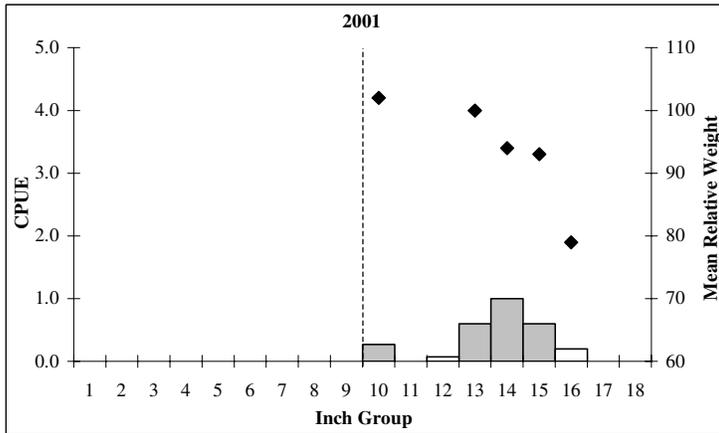
Effort = 15 net-nights
 Total CPUE = 5.5
 Stock CPUE = 3.0
 PSD = 33
 RSD-P = 0



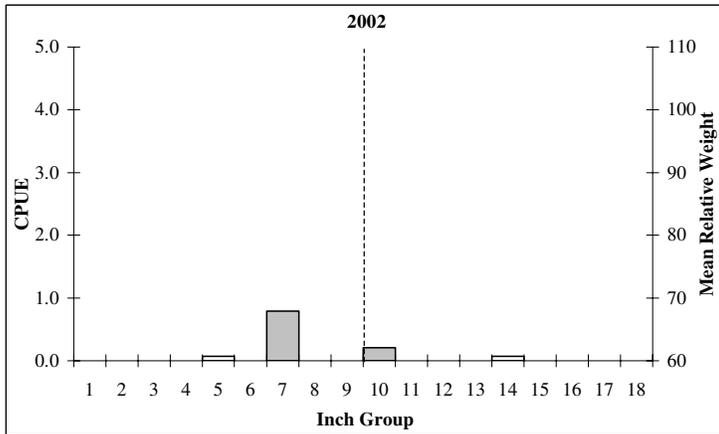
Effort = 15 net-nights
 Total CPUE = 14.5
 Stock CPUE = 12.6
 PSD = 46
 RSD-P = 1

The number of channel catfish caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices for spring gill netting surveys, Lake Wright Patman, Texas, March 2002, April 2005, and June 2001. Dashed-line indicates minimum length-limit at the time of the survey.

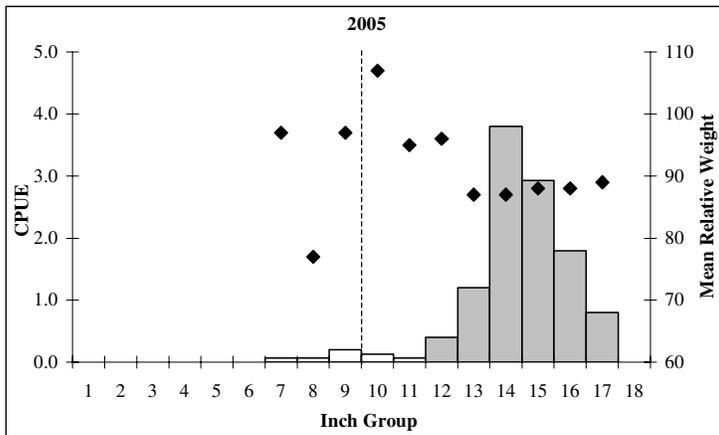
White Bass



Effort = 15 net-nights
 Total CPUE = 2.7
 Stock CPUE = 2.7
 PSD = 100
 RSD-P = 90



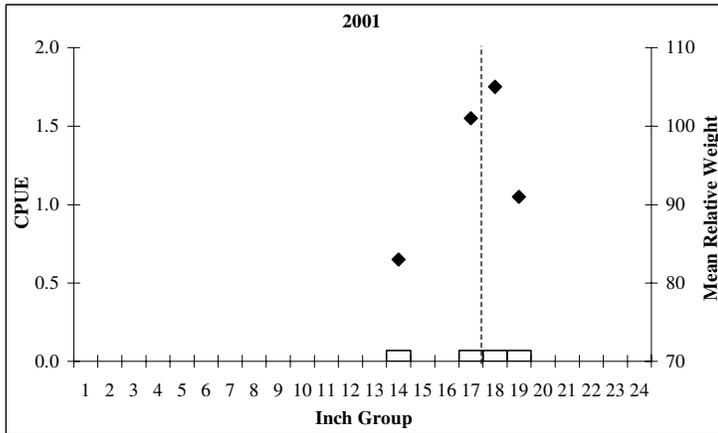
Effort = 14 net-nights
 Total CPUE = 1.1
 Stock CPUE = 1.1
 PSD = 27
 RSD-P = 7



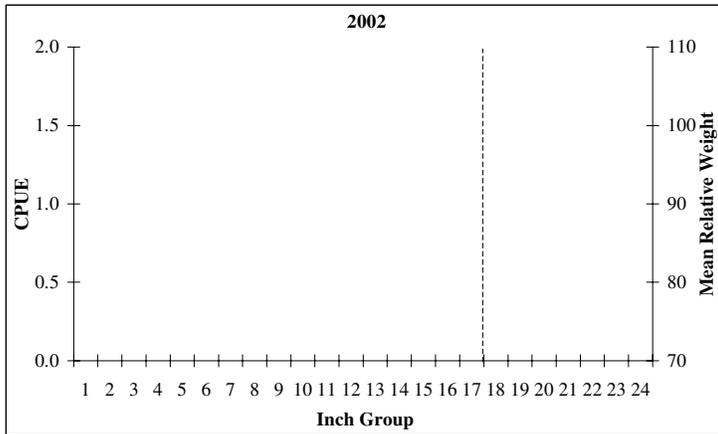
Effort = 15 net-nights
 Total CPUE = 11.5
 Stock CPUE = 11.5
 PSD = 99
 RSD-P = 95

The number of white bass caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices for spring gill netting surveys, Lake Wright Patman, Texas, March 2002, April 2005, and June 2001. Dashed-line indicates minimum length-limit at the time of the survey.

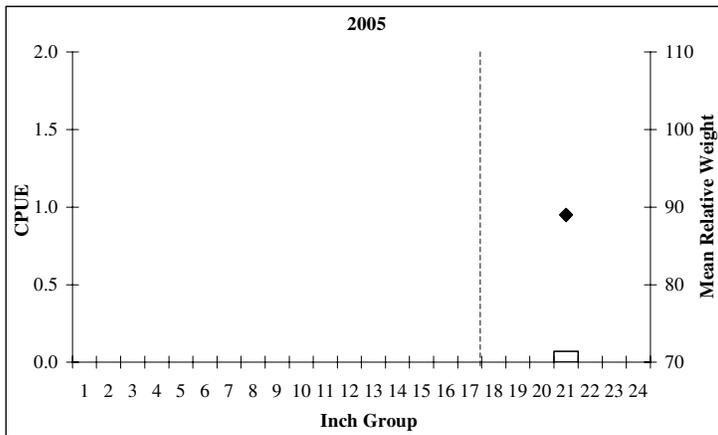
Palmetto Bass



Effort = 15 net-nights
 Total CPUE = 0.3
 Stock CPUE = 0.3
 PSD = 100
 RSD-P = 75



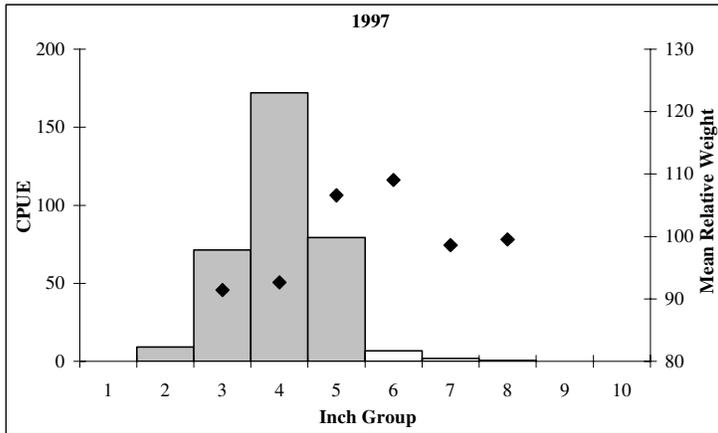
Effort = 15 net-nights
 Total CPUE = 0.0
 Stock CPUE = 0.0



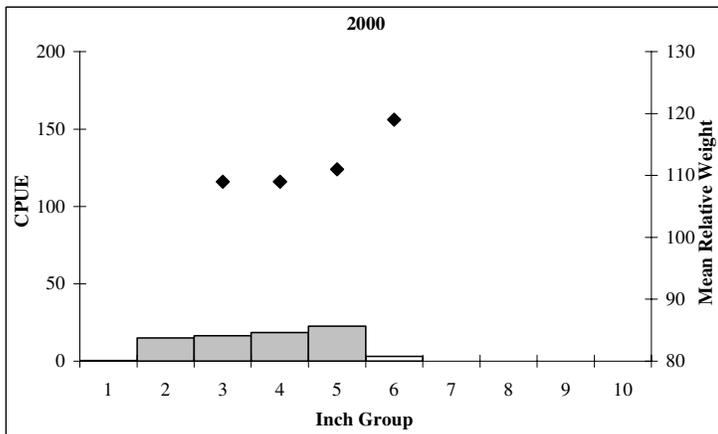
Effort = 15 net-nights
 Total CPUE = 0.1
 Stock CPUE = 0.1
 PSD = 100
 RSD-P = 100

The number of palmetto bass caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices for spring gill netting surveys, Lake Wright Patman, Texas, March 2002, April 2005, and June 2001. Dashed-line indicates minimum length-limit at the time of the survey.

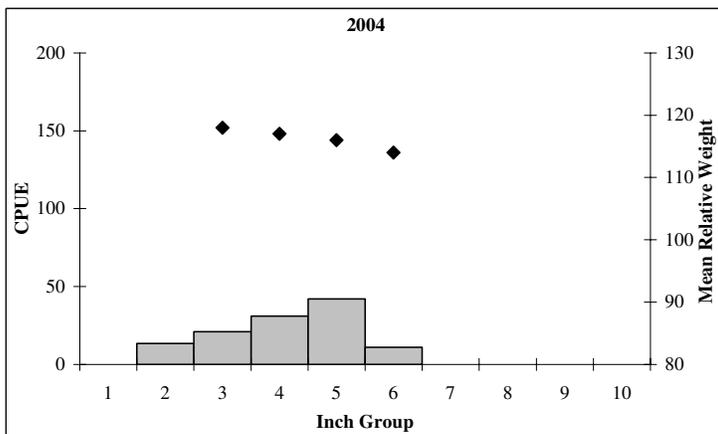
Bluegill



Effort = 1.5 hrs.
 Total CPUE = 341.3
 Stock CPUE = 332.0
 PSD = 3
 RSD-P = 0



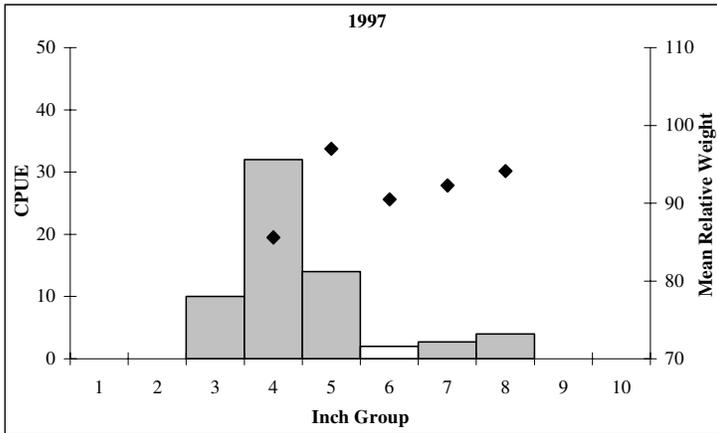
Effort = 2.0 hrs.
 Total CPUE = 76.0
 Stock CPUE = 60.5
 PSD = 5
 RSD-P = 0



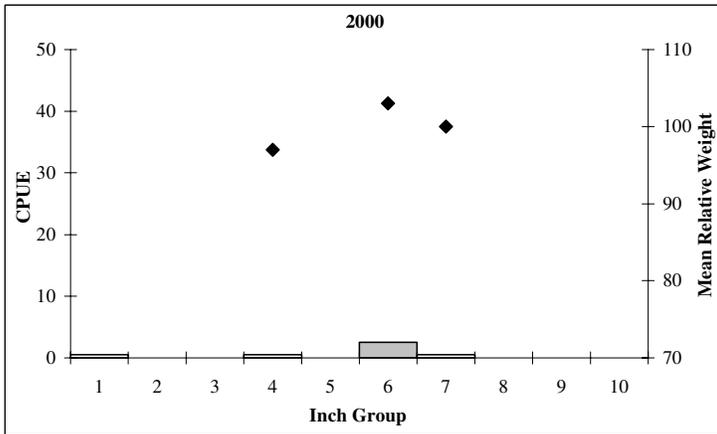
Effort = 2.0 hrs.
 Total CPUE = 118.5
 Stock CPUE = 105.0
 PSD = 10
 RSD-P = 0

The number of bluegill caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices for fall electrofishing surveys, Lake Wright Patman, Texas.

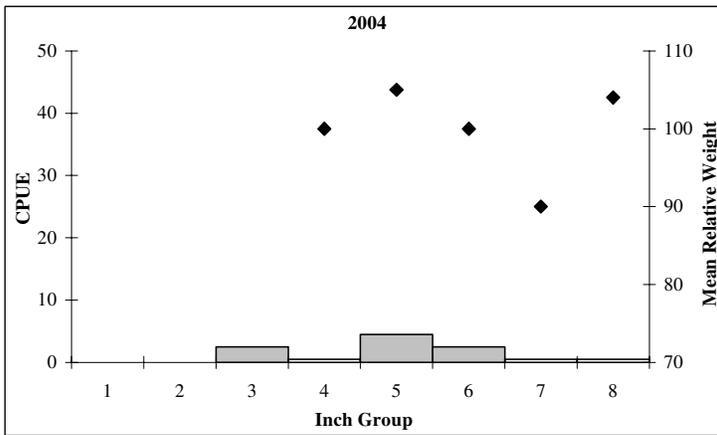
Redear Sunfish



Effort = 1.5 hrs.
 Total CPUE = 64.7
 Stock CPUE = 54.7
 PSD = 12
 RSD-P = 0



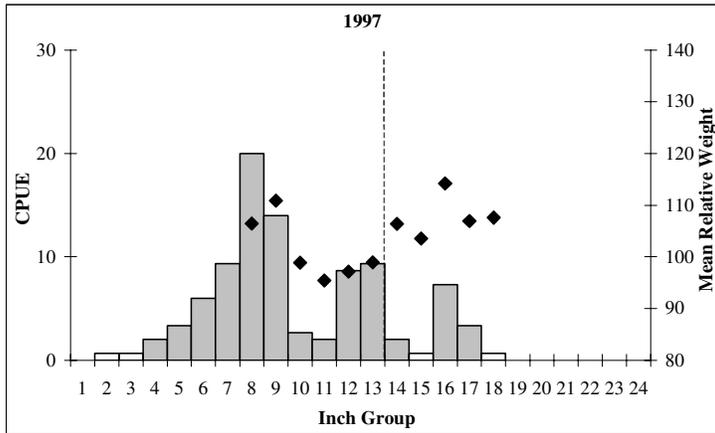
Effort = 2.0 hrs.
 Total CPUE = 4.0
 Stock CPUE = 3.5
 PSD = 14
 RSD-P = 0



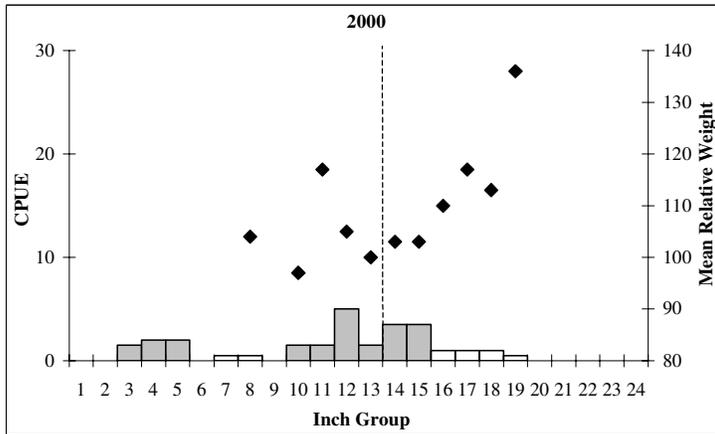
Effort = 2.0 hrs.
 Total CPUE = 11.0
 Stock CPUE = 8.5
 PSD = 12
 RSD-P = 0

The number of redear sunfish caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices for fall electrofishing surveys, Lake Wright Patman, Texas.

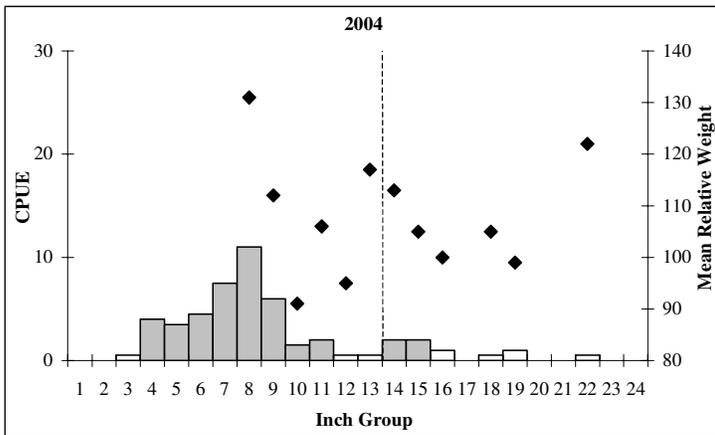
Largemouth Bass



Effort = 1.5 hrs.
 Total CPUE = 92.7
 Stock CPUE = 70.7
 PSD = 45
 RSD-P = 17
 %FLMB Alleles = 2.7

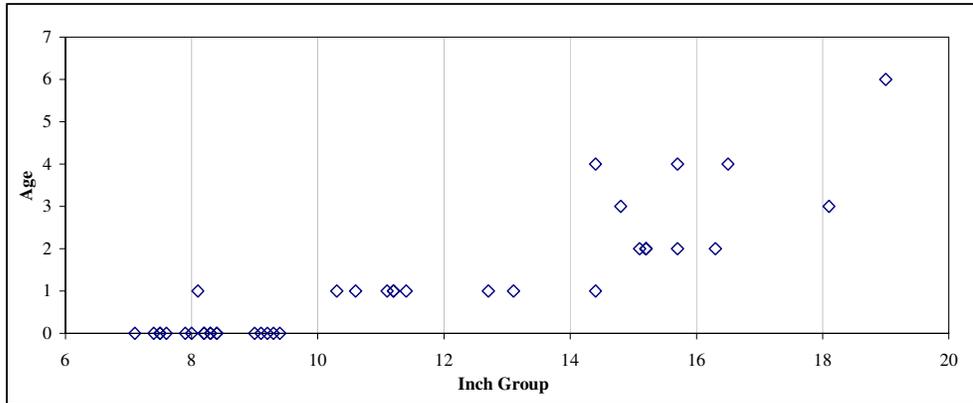


Effort = 2.0 hrs.
 Total CPUE = 26.5
 Stock CPUE = 20.5
 PSD = 83
 RSD-P = 34
 %FLMB Alleles = 4.5



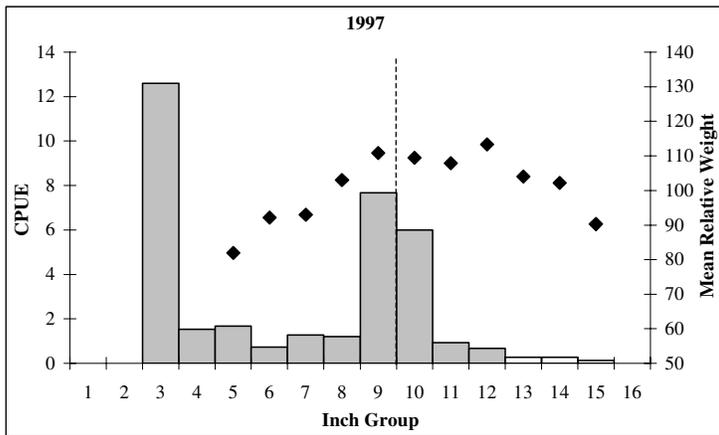
Effort = 2.0 hrs.
 Total CPUE = 48.5
 Stock CPUE = 28.5
 PSD = 28
 RSD-P = 18
 %FLMB Alleles = 5.9

The number of largemouth bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices for fall electrofishing collections, Lake Wright Patman, Texas, October 1997, 2000, and 2004. %FLMB Alleles = percent of Florida largemouth bass alleles present in a sub-sample of age-0 fish. Vertical dashed-line indicates minimum length-limit at the time of the survey.

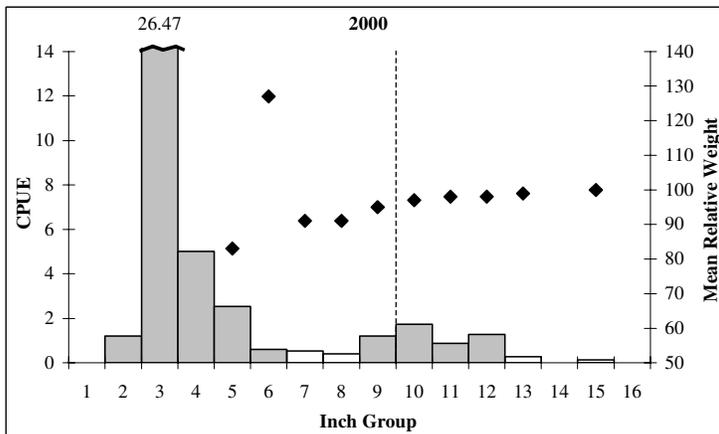


Age distribution of 7.0-19.0-inch largemouth bass collected from fall electrofishing, Lake Wright Patman, Texas, 2004.

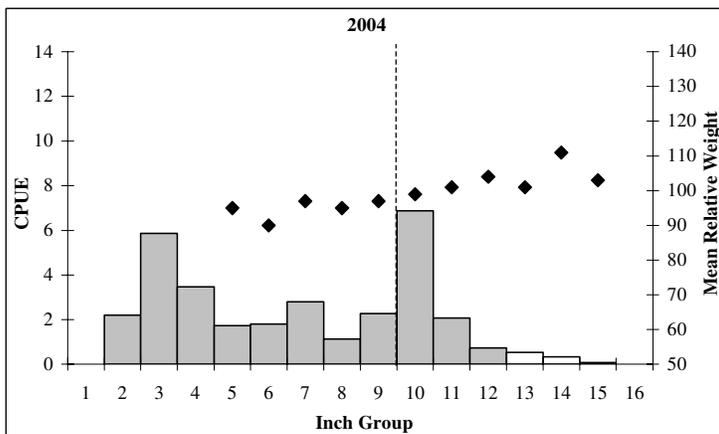
White Crappie



Effort = 15 net-nights
 Total CPUE = 34.9
 Stock CPUE = 20.8
 PSD = 82
 RSD-P = 40

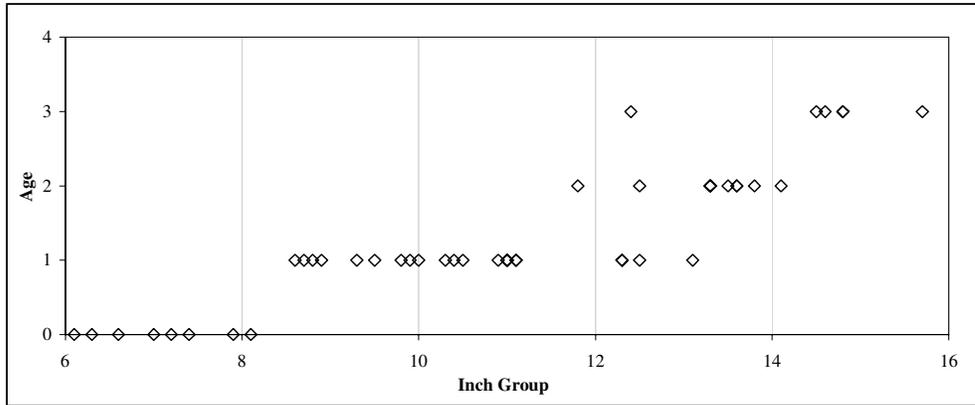


Effort = 15 net-nights
 Total CPUE = 42.2
 Stock CPUE = 9.5
 PSD = 62
 RSD-P = 45



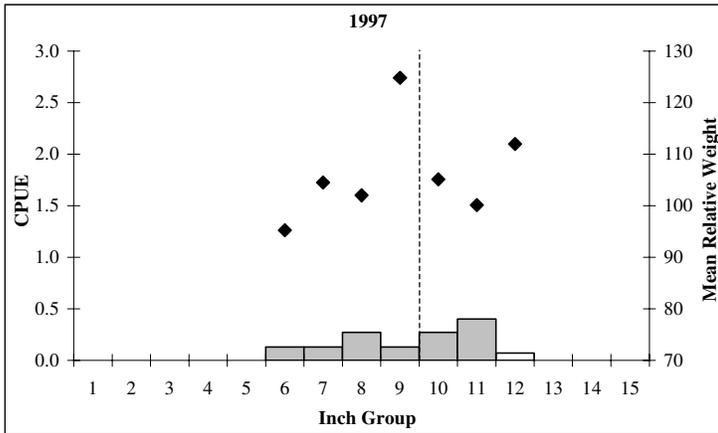
Effort = 15 net-nights
 Total CPUE = 31.9
 Stock CPUE = 20.3
 PSD = 69
 RSD-P = 31

The number of white crappie caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices for fall trap netting collections, Lake Wright Patman, Texas, November 1997 and 2000, and December 2004. Dashed-line indicates minimum length-limit at the time of the survey.

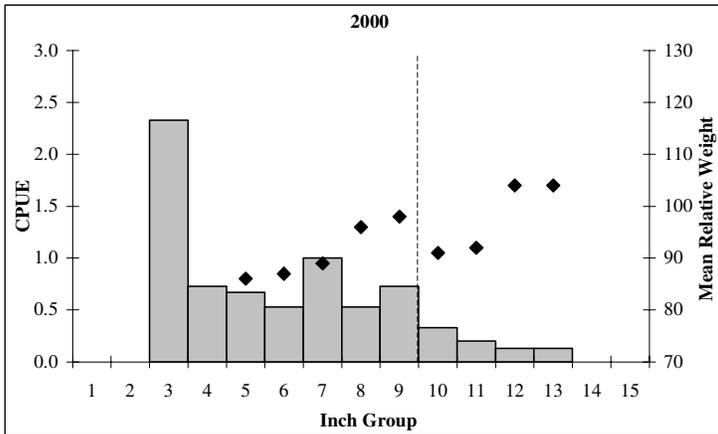


Age distribution of 6.0-16.0-inch white crappie collected from fall trap netting, Lake Wright Patman, Texas, 2004.

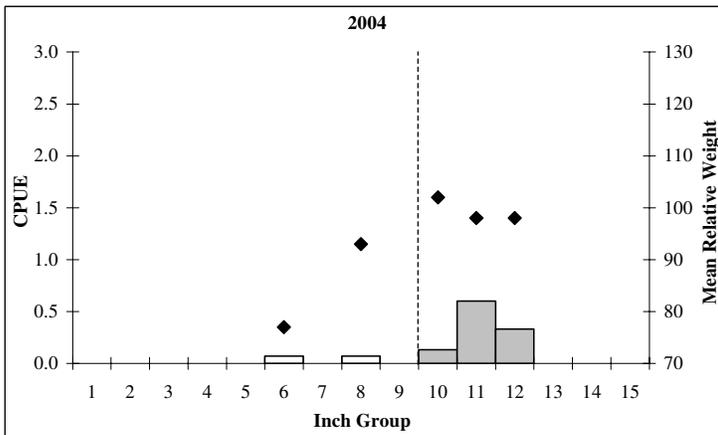
Black Crappie



Effort = 15 net-nights
 Total CPUE = 1.4
 Stock CPUE = 1.4
 PSD = 81
 RSD-P = 52

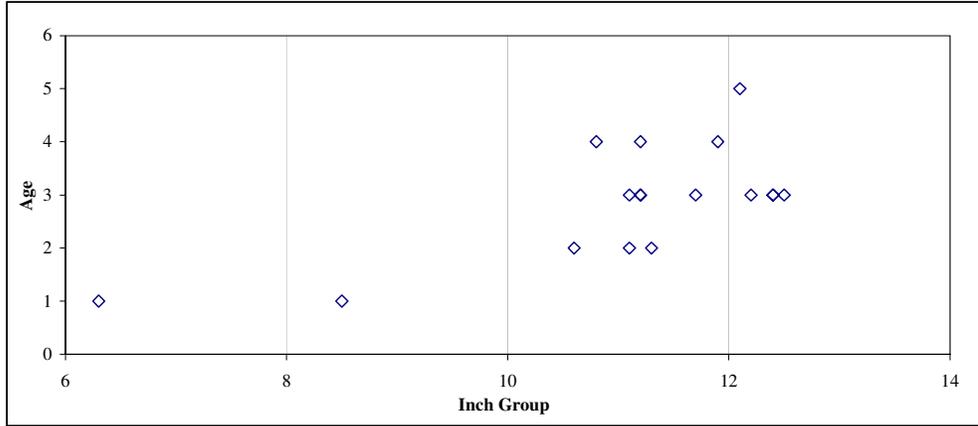


Effort = 15 net-nights
 Total CPUE = 7.3
 Stock CPUE = 4.3
 PSD = 48
 RSD-P = 19



Effort = 15 net-nights
 Total CPUE = 1.2
 Stock CPUE = 1.2
 PSD = 94
 RSD-P = 89

The number of black crappie caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices for fall trap netting collections, Lake Wright Patman, Texas, November 1997 and 2000, and December 2004. Dashed-line indicates minimum length-limit at the time of the survey.



Age distribution of 6.0-13.0 inch black crappie collected from fall trap netting, Lake Wright Patman, Texas, 2004.

Fishery Management Plan Lake Wright Patman

Prepared – July 2005

ISSUE 1 Lake Wright Patman supports excellent catfish, white bass, and crappie fishing opportunities. The fisheries need to be promoted so they are utilized.

MANAGEMENT STRATEGIES

1. Provide seasonal news releases informing anglers on fishing techniques, catch locations, and species-specific regulations.
2. Provide USACE personnel and private marinas with fishery information; regulation posters, lake brochures, and angler recognition program procedures.
3. Conduct a year-long angler creel survey from June 2008 through May 2009 to estimate angler effort and catch rates.

ISSUE 2 Palmetto bass were introduced in 1994 to increase fishing quality and broaden angling opportunities. Stockings were successful with spring gill net catch rates ranging from 0.1 to 4.9 fish/net night; however, annual stockings of palmetto bass were discontinued in 2003 due to low angler utilization.

MANAGEMENT STRATEGIES

1. Discontinue palmetto bass stockings.

ISSUE 3 Florida largemouth bass have been stocked (2002 and 2003) in an effort to influence genetics of the population and ultimately make a positive impact on angling opportunities. From 1991 to 2004, electrophoretic analyses of young-of-year (age-0) largemouth bass have indicated that Florida largemouth bass alleles are present in the population but have only ranged from 0.0 to 6.7%. Therefore, Florida largemouth bass should continue to be stocked to enhance the genetics of the population.

MANAGEMENT STRATEGIES

1. Because 2007 is the next year Lake Wright Patman is eligible for Florida largemouth bass stocking, electrophoresis of young-of-the-year fish should be conducted in 2006 to verify that the percentage of Florida bass alleles is still below 20%.
2. Request stocking of Florida largemouth bass for 2007 and 2008 at 25 fish/acre.

Appendix 1

Number and catch rate (CPUE) of fish species collected by all gear types from Lake Wright Patman, Texas, 2004-2005.

Species	Gill Netting		Trap Netting*		Electrofishing	
	N	CPUE	N	CPUE	N	CPUE
Spotted gar	21	1.4			3	1.50
Longnose gar	3	0.20				
Gizzard shad	591	39.4			985	491.5
Threadfin shad					90	45.0
Common carp	39	2.60				
Golden shiner					7	3.5
Brooks silversides					28	14.0
Smallmouth buffalo	50	3.33			5	2.50
Bigmouth buffalo	1	0.07				
Blue catfish	1	0.07				
Channel catfish	218	14.53				
Flathead catfish	4	0.27				
White bass	177	11.80			80	4.0
Yellow bass	654	43.60				40.5
Palmetto bass	1	0.07				
Warmouth					1	0.5
Bluegill	5	0.33			237	118.50
Longear sunfish					41	20.50
Redear sunfish	2	0.13			22	11.0
Largemouth bass	7	0.47			97	48.5
White crappie	52	3.47	478	31.87	15	7.5
Black crappie	11	0.73	18	1.20	2	1.0
Freshwater drum	19	1.27			23	11.5

*Reported target fishes only

Appendix 2

Number of target species caught per net night during spring gill netting, Lake Wright Patman, Texas, April, May, and June 1989-1994, 1997, 2000-2001, and 2005. Sampling effort was 15 net nights each year.

Species	1991	1992	1993	1994	1997	2000	2001	2002	2005
	*	*	*	**	**	**	**	**	**
Blue catfish	0.1	0.2	0.3	0.4	0.3	0.2	1.3	0.8	0.1
Channel catfish	5.7	4.5	5.7	9.4	4.9	6.7	10.5	5.5	14.5
Flathead catfish	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.3
White bass	2.5	10.0	9.6	13.4	5.5	9.6	2.7	1.1	11.8
Yellow bass	0.0	0.0	0.0	0.0	0.1	2.3	0.4	30.9	43.6
Palmetto bass	0.0	0.0	0.0	0.0	4.9	2.8	0.3	0.0	0.1

* 175 ft gill net, 1"-4" bar mesh

** 125 ft gill net, 1"-3" bar mesh

Number of target species caught per net night during fall gill netting, Lake Wright Patman, Texas, November 1990-1994, and 1997. Sampling effort was 15 net nights each year.

Species	1990	1991	1992	1993	1994	1997	2001
	*	*	*	*	*	**	**
Blue catfish	0.1	0.4	6.0	4.3	3.1	4.9	4.7
Channel catfish	5.4	5.5	4.9	7.7	6.1	2.7	2.9
White bass	7.5	23.1	17.9	19.3	14.4	6.3	2.9
Yellow bass	0.0	0.0	0.0	0.0	0.0	0.2	20.5
Palmetto bass	0.0	0.0	0.0	0.0	0.0	2.2	0.0

* 175 ft gill net, 1"-4" bar mesh

** 125 ft gill net, 1"-3" bar mesh

Number of target species caught per net night during trap netting, Lake Wright Patman, Texas, November, December (D), and January (J) 1990-1994, 1997, 2000, and 2004. Sampling effort was 15 net nights each year.

Species	1990	1990	1991	1992	1993	1994	1997	2000	2004
	(J)	(D)							
White crappie	11.1	17.2	7.7	11.0	9.5	13.3	34.9	42.2	31.9
Black crappie	9.4	14.0	3.3	2.9	0.7	4.6	1.4	7.3	1.2

Number of target species caught per hour during fall electrofishing, Lake Wright Patman, Texas, October 1990-1994, and 2000 and 2004. Sampling effort was 2.0 hours in 1990, 1992-1994, 1997, 2000, and 2005, and 1.3 hours in 1991.

Species	1990	1991	1992	1993	1994	1997	2000	2004
Gizzard shad	380.0	306.8	147.5	378.0	328.5	123.2	439.5	491.5
Threadfin shad	58.5	1,706.0	677.0	116.0	388.0	204.7	92.0	45.0
Bluegill	380.5	639.1	388.5	647.5	371.0	341.3	76.0	118.5
Longear sunfish	84.0	224.1	106.0	478.5	239.5	80.7	10.5	20.5
Redear sunfish	18.0	29.3	56.5	56.5	94.5	64.7	4.0	11.0
Largemouth bass	183.0	306.8	209.0	158.0	110.0	92.7	26.5	48.5

Appendix 3

Summary of electrophoretic analyses of young-of-year largemouth bass collected during fall electrofishing from Lake Wright Patman, Texas.

Year	Sample Size	Genotype				Northern	% FLMB Alleles	% Pure FLMB
		Florida	F1	Fx				
1991	30	2	0	0	28	6.7	6.7	
1993	30	0	0	0	30	0.0	0.0	
1997	27	0	1	1	25	2.7	0.0	
2000	11	0	1	0	10	4.5	0.0	
2004	60	0	4	5	50	5.9	0.0	

Appendix 4

Access and facility information for Lake Wright Patman, Texas. BR = boat ramp, FP = fishing pier, and J = jetty

Facility Type (BR, FP, J)	Location	Latitude	Longitude	Fee charged (Yes/No)	Number of boat ramp lanes	Boat ramp parking capacity	ADA Accommodations (Yes/No)	Bank fishing (Yes/No)
BR, FP	Kelley Creek	33° 17.28	94° 15.09	Yes	2	5	No	Yes
BR	Big Creek	33° 18.99	94° 14.44	Yes	2	10	No	No
BR	Big Creek North	33° 20.04	94° 14.99	No	1	5	No	No
BR	North Shore Park	33° 21.04	94° 10.63	Yes	2	42	Yes	Yes
BR	Mallard Bay	33° 20.74	94° 10.26	Yes	2	10	No	Yes
BR	Rocky Point	33° 19.37	94° 09.75	No	2	10	No	No
BR, FP	Sulfur Point	33° 18.37	94° 09.17	No	2	25	No	No
BR, FP	Piney Point	33° 17.99	94° 10.35	Yes	3	44	Yes	No
BR	USACE Park	33° 17.51	94° 10.13	Yes	2	10	No	Yes
BR, FP	Malden Lake Park	33° 15.88	94° 20.87	No	2	37	Yes	Yes
BR	Overcup	32° 14.27	94° 21.06	No	2	10	No	No
BR, FP	Heron Creek	32° 17.27	94° 19.69	Yes	2	10	Yes	No
BR	Claiborne Crossing	33° 16.95	94° 18.79	No	1	5	No	No
BR	Berry Farm	33° 15.67	94° 16.16	No	1	5	No	Yes
BR	Cass County Park	33° 15.88	94° 11.54	No	2	5	No	Yes
BR	Green Farm	33° 14.75	94° 13.19	No	1	10	No	Yes
BR	Atlanta State Park	33° 14.06	94° 15.43	Yes	2	30	No	No
BR	Jackson Creek	33° 13.48	94° 18.17	Yes	2	10	No	No
BR	Highway 59 Park	33° 18.30	94° 09.18	No	2	12	No	Yes
BR	Elliott Bluff	33° 19.27	94° 09.88	No	1	10	No	Yes
BR, FP, J	North Shore	33° 21.04	94° 10.63	Yes	2	35	Yes (FP)	Yes
BR, FP	Clear Springs	33° 21.28	94° 11.81	Yes	2	16	Yes (FP)	Yes