

Lake Redstone Fisheries Update

Wisconsin Department of Natural Resources

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How We Manage...

- Biology
 - Stocking rates
 - Fish Abundance Estimates
 - Growth Rate
- Habitat
 - Spawning Habitat
 - Water Quality
- People
 - Bag Limits
 - Fishing Seasons
 - Shoreline Development



ulations
2010-2011

Effective April 1, 2010 through March 31, 20

ited and Unwelcome



Outline

- **Methods**
 - Data collection
 - Data analysis
- **Results**
- **Conclusions and Recommendations**

An underwater photograph showing a large number of small, yellowish-brown fish swimming in a body of water. A large, light-colored net is visible, partially enclosing the fish. The water is a deep blue-green color. The word "Methods" is overlaid in white text in the center of the image.

Methods

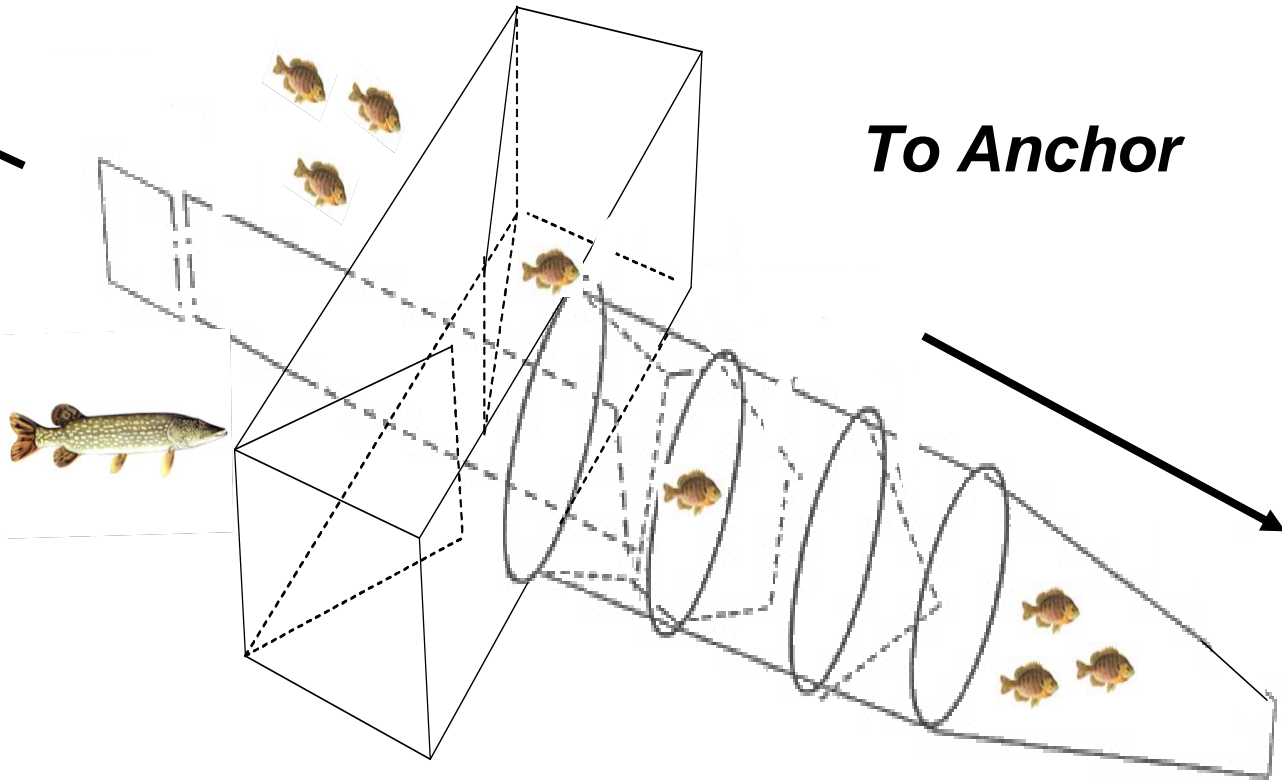
The background of the slide is a photograph of a fishing net, likely a fyke net, submerged in water. Several fish, which appear to be yellow perch or similar species, are visible swimming within the net. The net is made of a fine mesh and is supported by a frame of vertical poles. The water is a clear, light blue color.

Methods

- **Adult Walleye/Muskellunge Fyke Netting (Fyke Netting I)**
 - Set 6 nets on March 30, 2010.
 - Set 4 nets on March 31, 2010.
 - 10 Nets were fished until April 3, 2010, and 8 nets until April 8, 2010.

To Shore

To Anchor



The background of the slide is a photograph showing several fish, likely walleyes, swimming in a body of water. They are positioned near a large, fine-mesh fishing net that is partially visible. The water is a clear, light blue-green color. The fish are mostly yellowish-gold with some darker markings.

Methods

- Walleye Recapture electrofishing (Electrofishing I)
 - April 12, 2010.
 - 8.4 miles of shoreline, 4.67 hours shocked.
 - Objective – Recapture marked walleyes, and mark largemouth and smallmouth bass.



The background of the slide is a photograph of a fishing net, likely a fyke net, submerged in water. Numerous crappie fish are visible, some swimming near the net and others further away. The water is a murky greenish-blue. The net is made of a fine mesh and is supported by a frame of vertical poles.

Methods

- Crappie Netting (Fyke Netting II)
 - 6 nets set from April 27 – 29, 2010.

The background of the slide is a photograph of several yellow perch fish swimming in a body of water. A large, fine-mesh fishing net is visible, partially enclosing the fish. The water is a murky greenish-blue, and the fish are bright yellow with some darker spots. The net is made of a light-colored, fine-mesh material, and its structure is visible as it divides the space.

Methods

- Centrarchid electroshocking (Electrofishing II)
 - May 26, 2010
 - 7.34 miles, 4.1 hours shocked
 - 4 x ~0.5 mile “catch all” stations
 - 4 x ~1.5 mile “gamefish only” stations

The background of the slide is an underwater photograph showing several muskellunge fish swimming near a large, fine-mesh fishing net. The fish are silvery with a yellowish tint, and the water is a clear, light blue. The net is made of a diamond-shaped mesh and is supported by a dark frame.

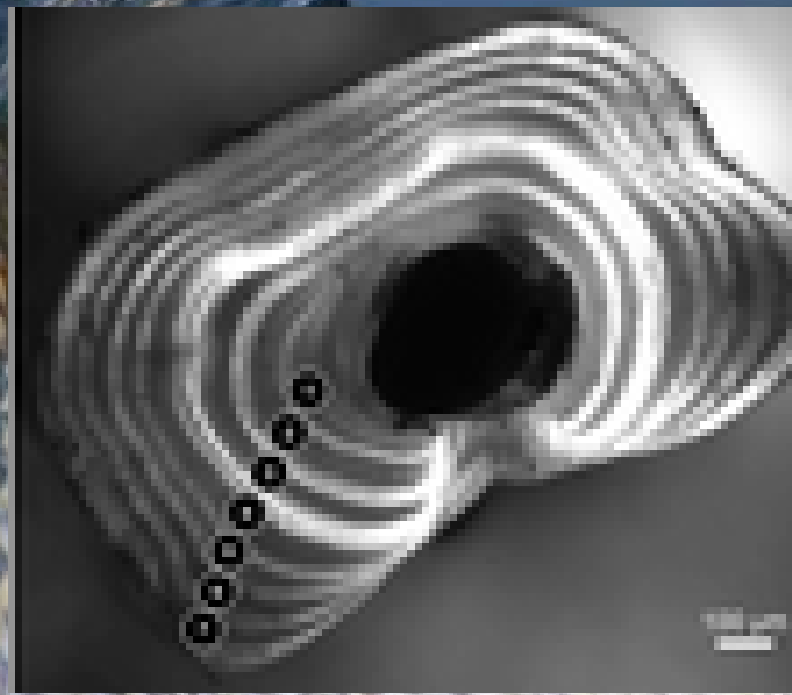
Methods

- **Adult Muskellunge Recapture 2011**

- 8 nets set from on April 17 - 27, 2011.

- Only looking at muskellunge.

John Lyon



The background of the slide is a photograph of several yellow perch fish swimming in a body of water. A large, fine-mesh fishing net is visible, partially enclosing the fish. The water is a clear, light blue-green color. The fish are mostly yellow with some darker spots and stripes.

Methods

- **Data Analysis**

- All data entered into the statewide database and downloaded into excel.
- Abundance-Population estimates (PE) for walleye and Muskellunge, catch rates for other fish.
- Length and age frequency
- Age/Growth
- Relative weight.

An underwater photograph showing a large number of small, yellowish-orange fish swimming in a body of water. A large, dark, mesh-like net or barrier is visible, partially enclosing the fish. The word "Results" is overlaid in white text in the center of the image.

Results

Results

Species	Fyke netting I	Fyke netting II	Electrofishing I		Electrofishing II	
	Mean Catch per net night	Mean Catch per net night	Catch per hour	Catch per mile	Catch per hour	Catch per mile
Black Crappie	6.2	16.8	-	-	2.0	1.0
Bluegill	11.4	5.8	-	-	21.0	10.5
Common Carp	-	0.1	-	-	58.0	29.0
Largemouth Bass	0.0	0.0	6.2	3.6	9.0	5.0
Muskellunge	2.2	0.0	3	1.7	2.4	1.4
Smallmouth Bass	0.0	0.0	16.9	9.8	8.0	4.5
Walleye	10.3	1.6	65.3	36.3	23.7	13.2
White Crappie	1.8	5.3	-	-	1.0	0.5
Yellow Perch	2.2	1.0	-	-	2.0	1.0

Results

Adult Walleye Population Estimate

Number

Count

2,627

$N/Acre = 4.3$



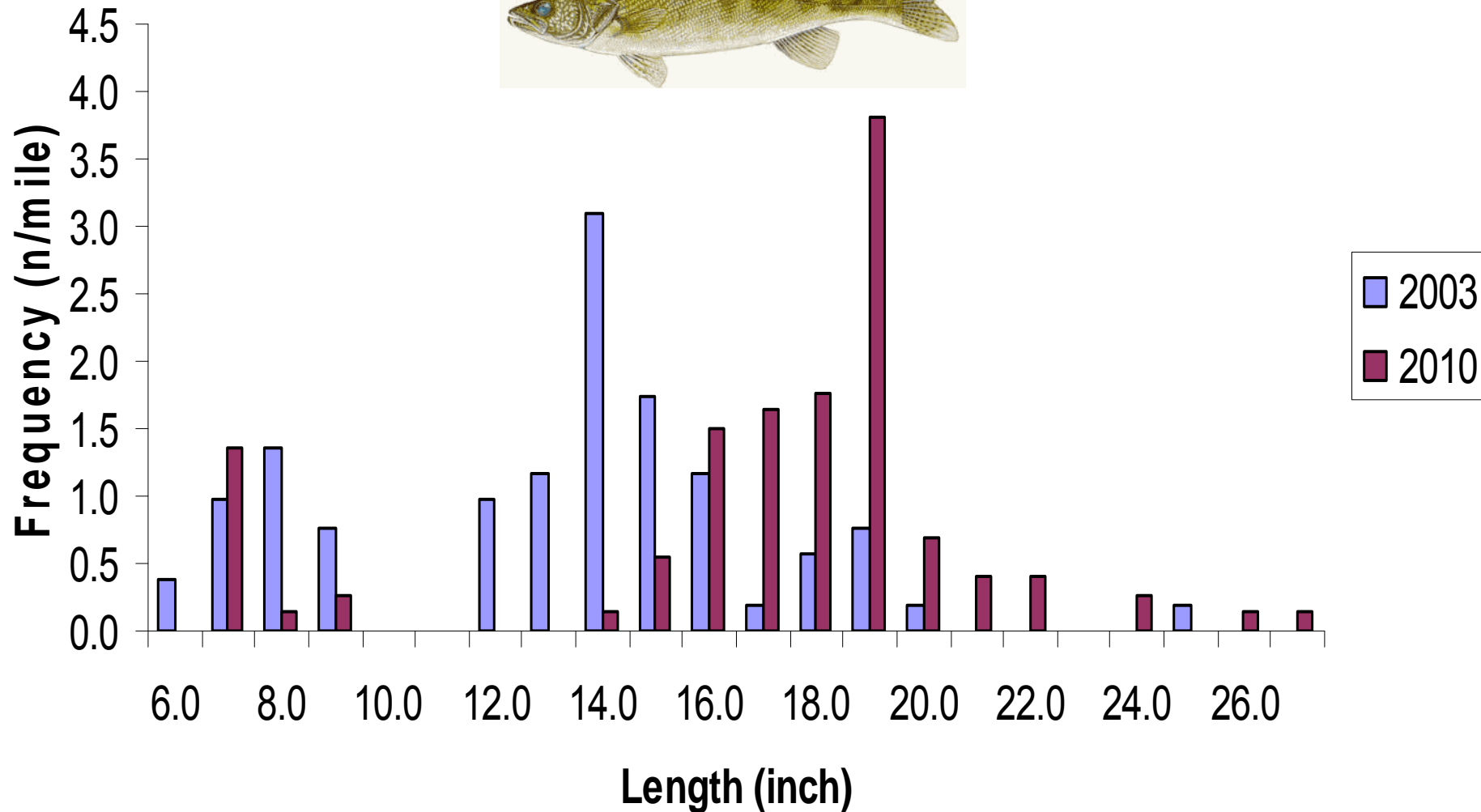
Results

Lake Redstone Spring 2010 N/Acre	4.3
Average N/Acre	2.7
Stocked Average N/Acre	1.7
Natural Average N/Acre	3.3

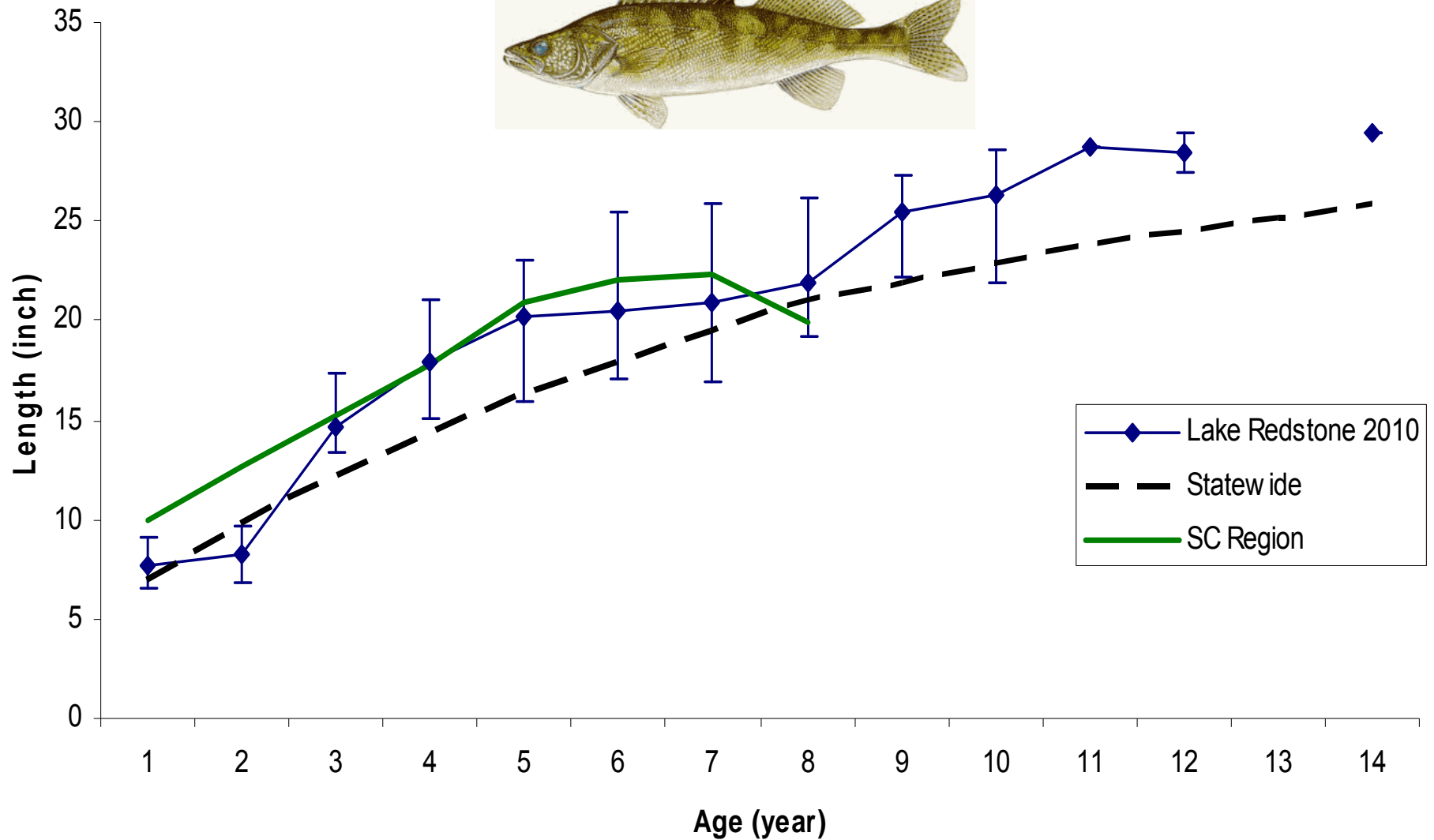
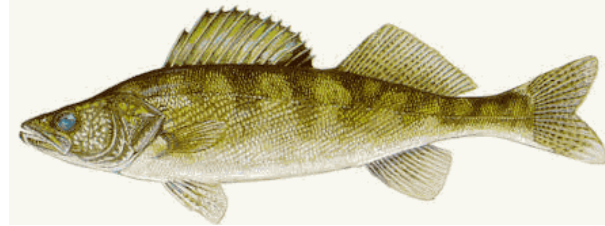


Length Frequency of Walleyes

Spring Electrofishing Lake Redstone, WI

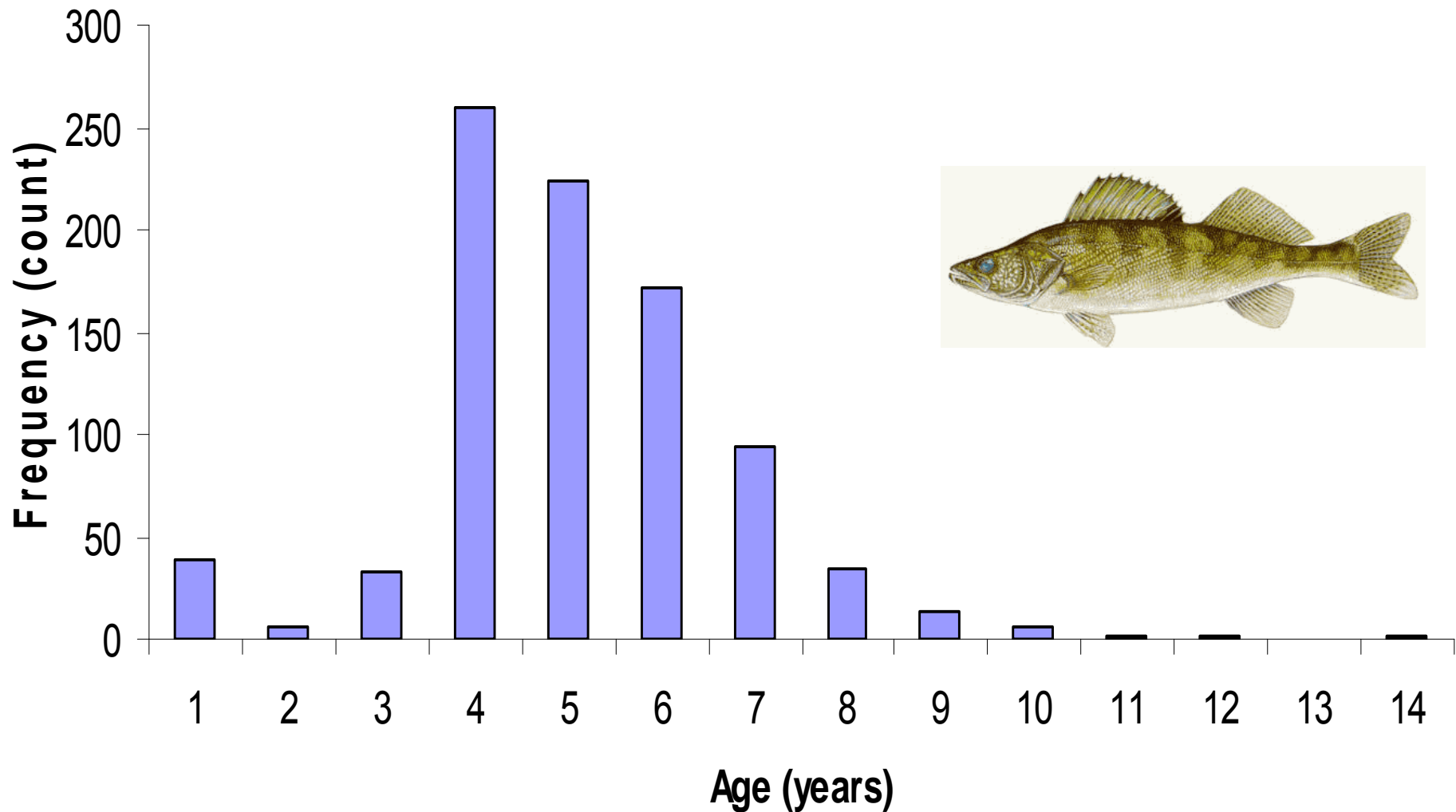


Length at age Walleyes Lake Redstone, Spring 2010



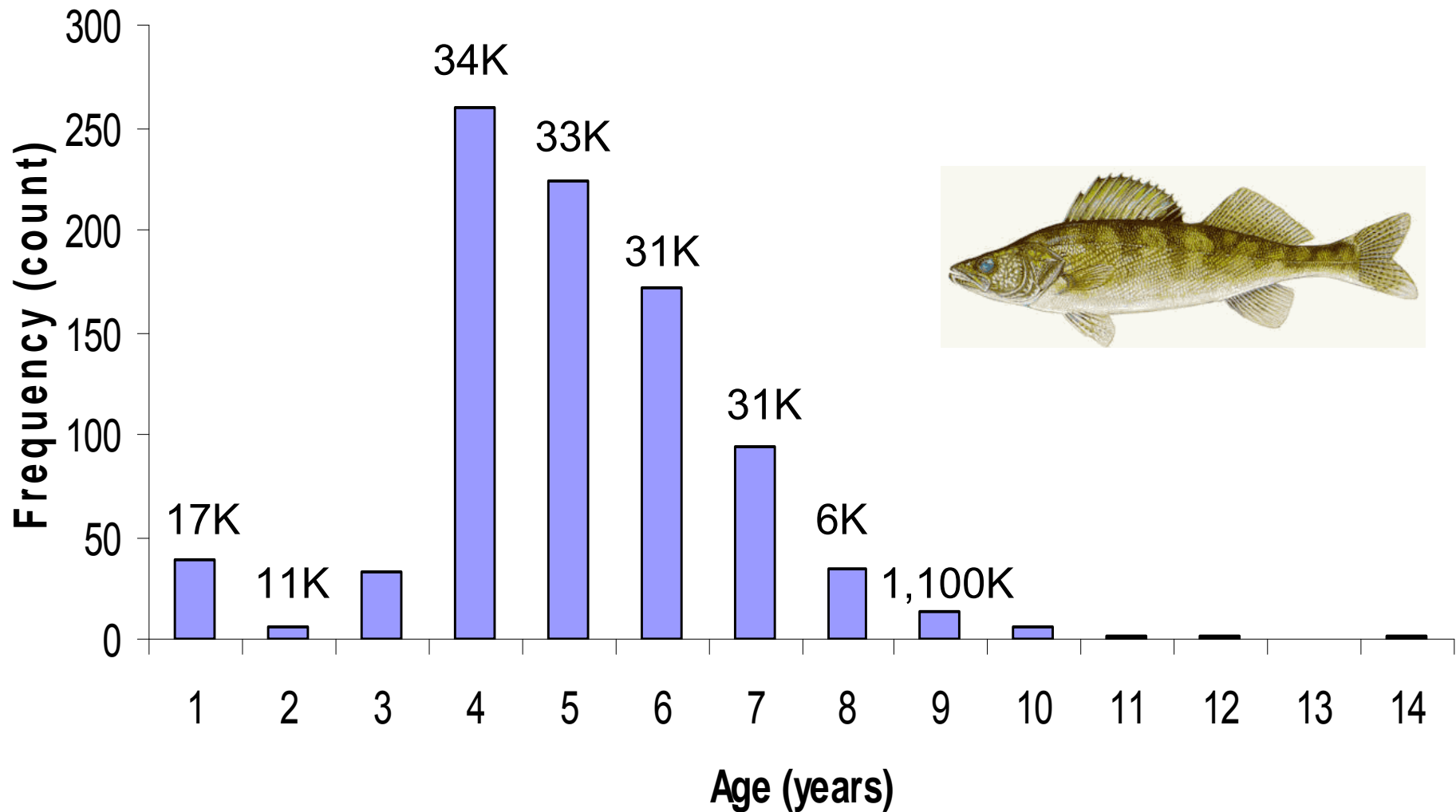
Age Frequency of Walleye

Lake Redstone, WI Spring 2010



Age Frequency of Walleye

Lake Redstone, WI Spring 2010



Results

Adult Muskellunge Population Estimate

2010 Estimate

Count

N/Acre

197

0.32

2011 Estimate

200

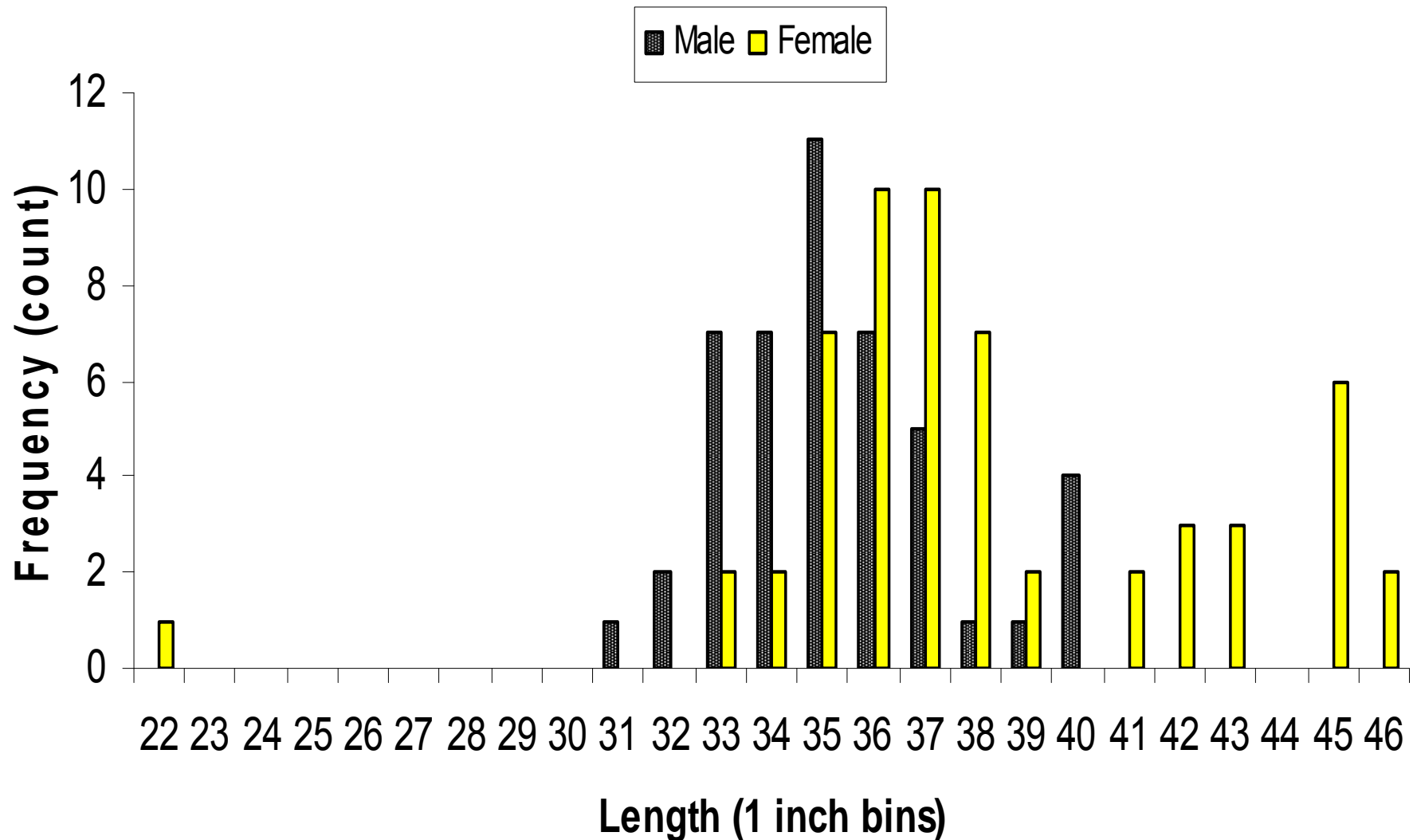
0.33



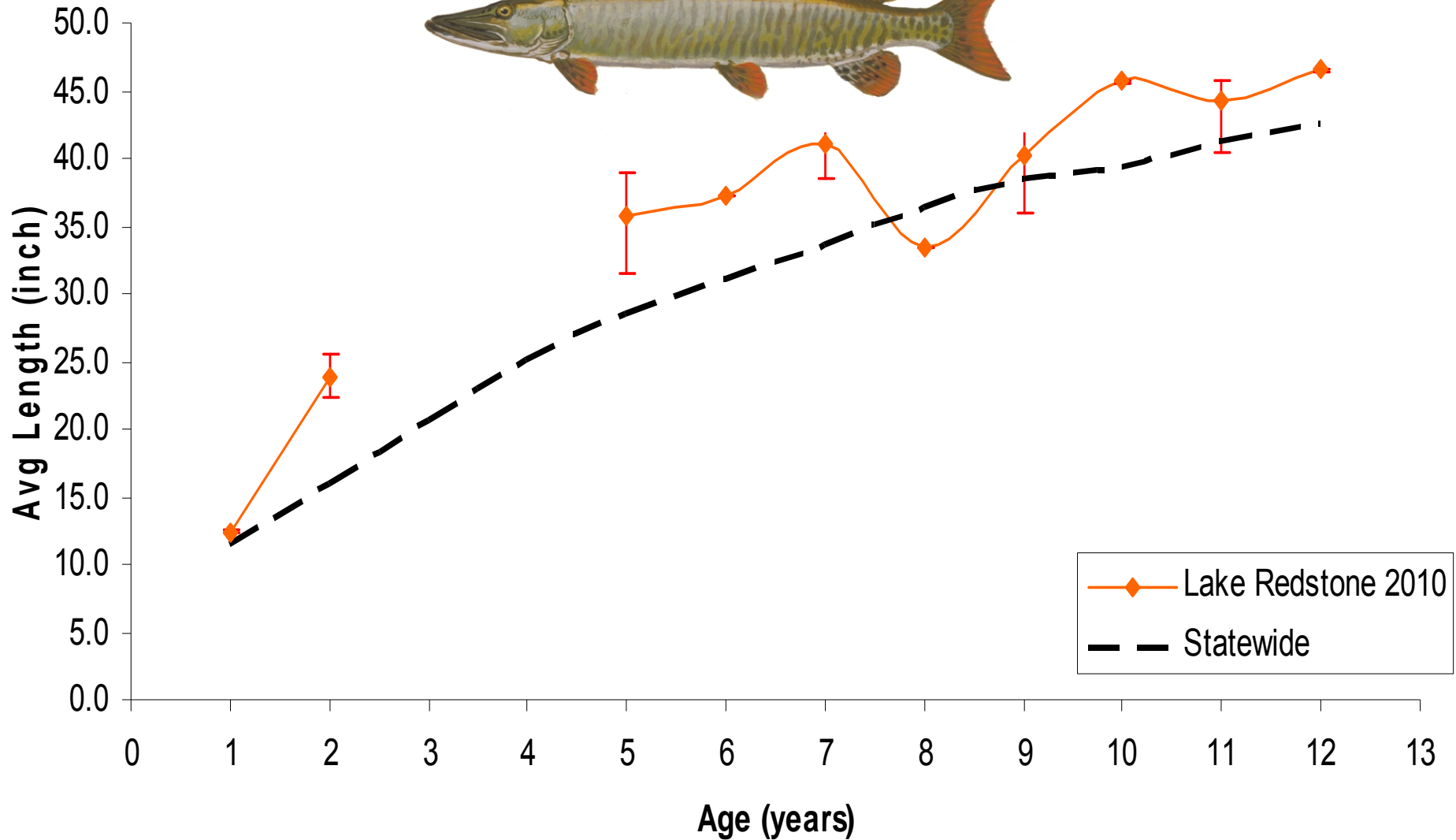
Results

N/Acre Lake Redstone 2010	0.32
N/Acre Lake Redstone 2011	0.33
N/Acre Avg Stocked	0.33
N/Acre Avg Natural Reproduction	0.36

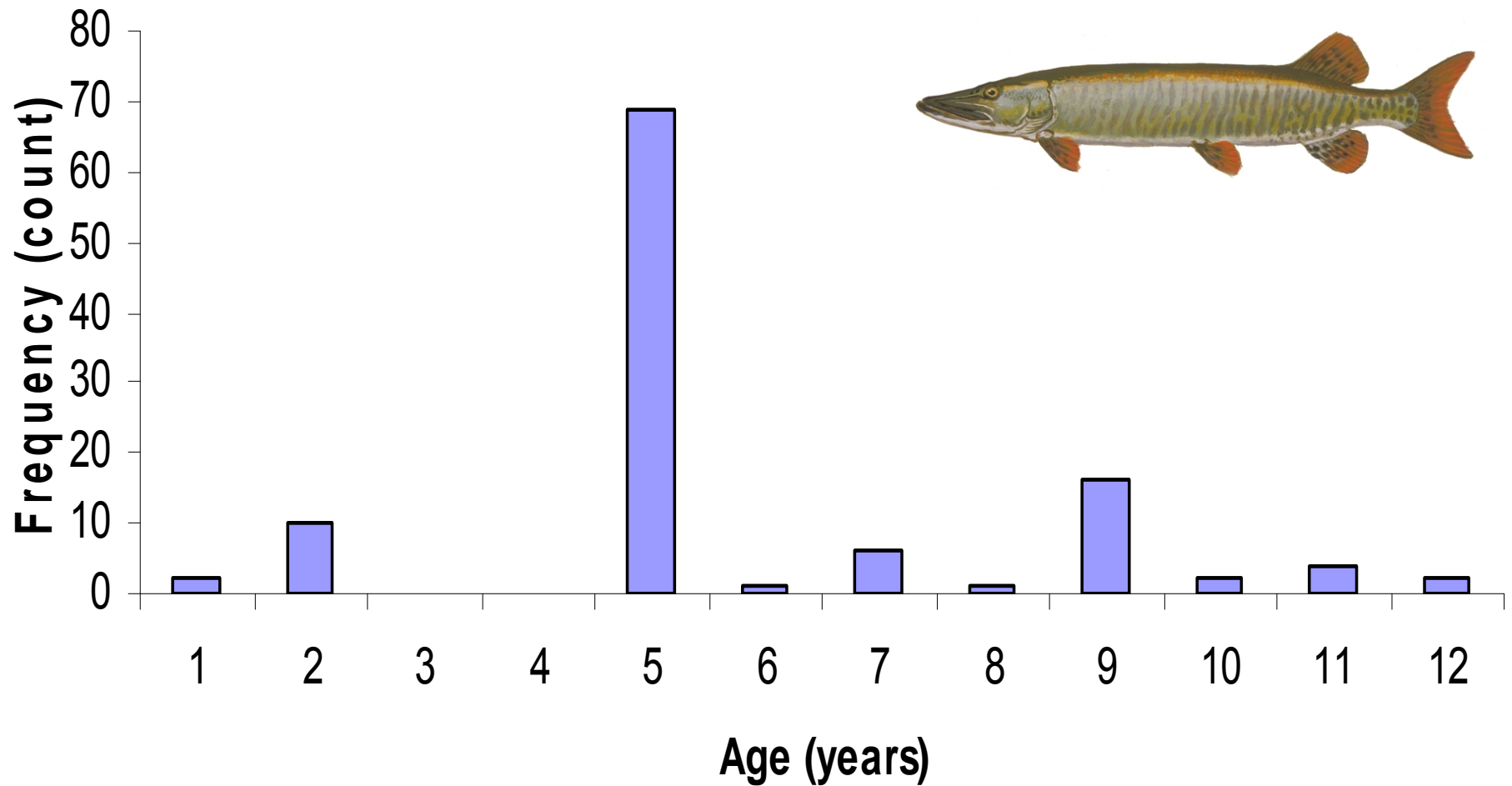
Length Frequency of Adult Muskellunge Lake Redstone Spring 2010



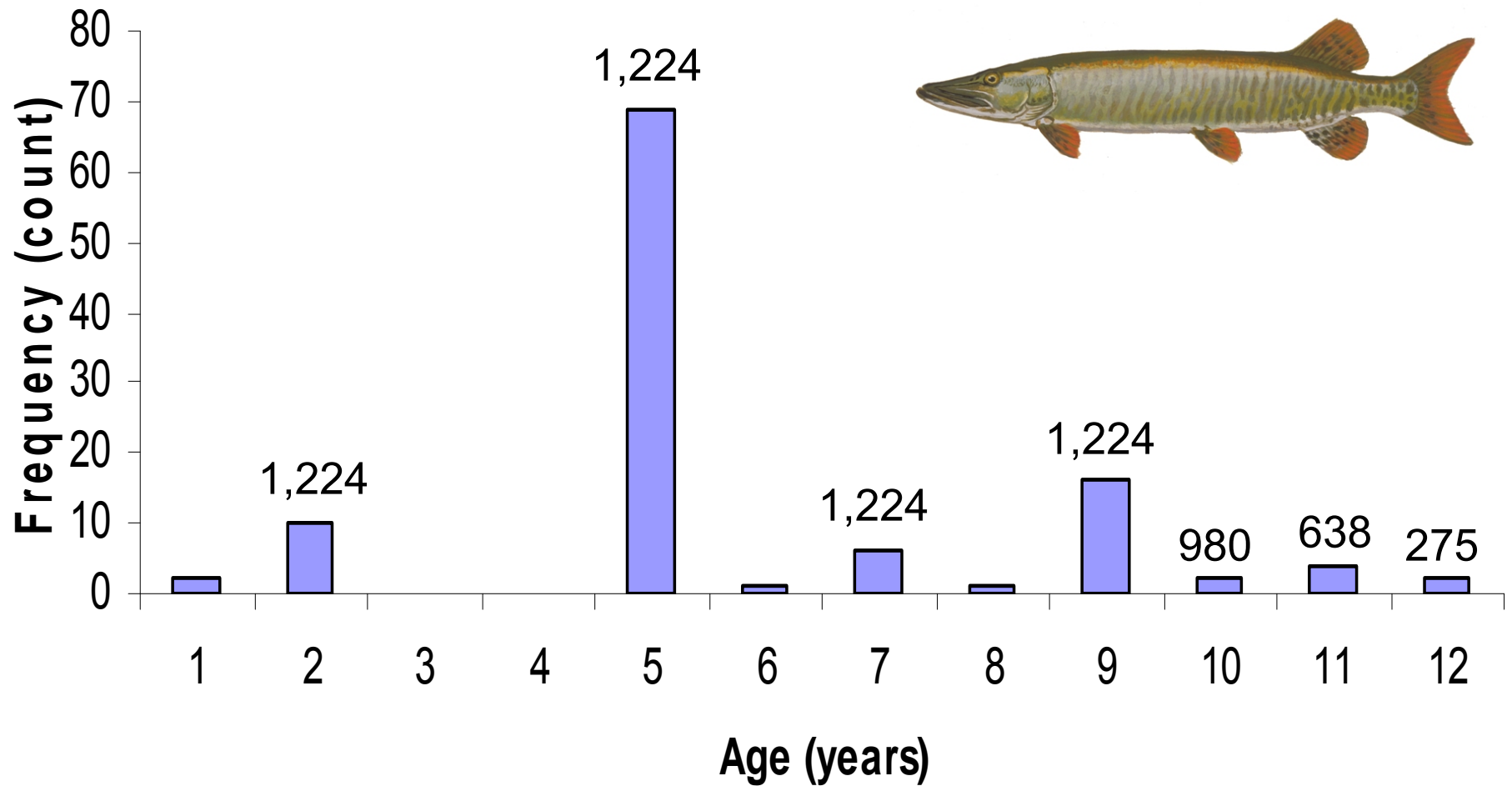
Avg Length at age for Muskellunge Lake Redstone, Spring 2010



Age Frequency of Muskellunge Lake Redstone, WI Spring 2010



Age Frequency of Muskellunge Lake Redstone, WI Spring 2010



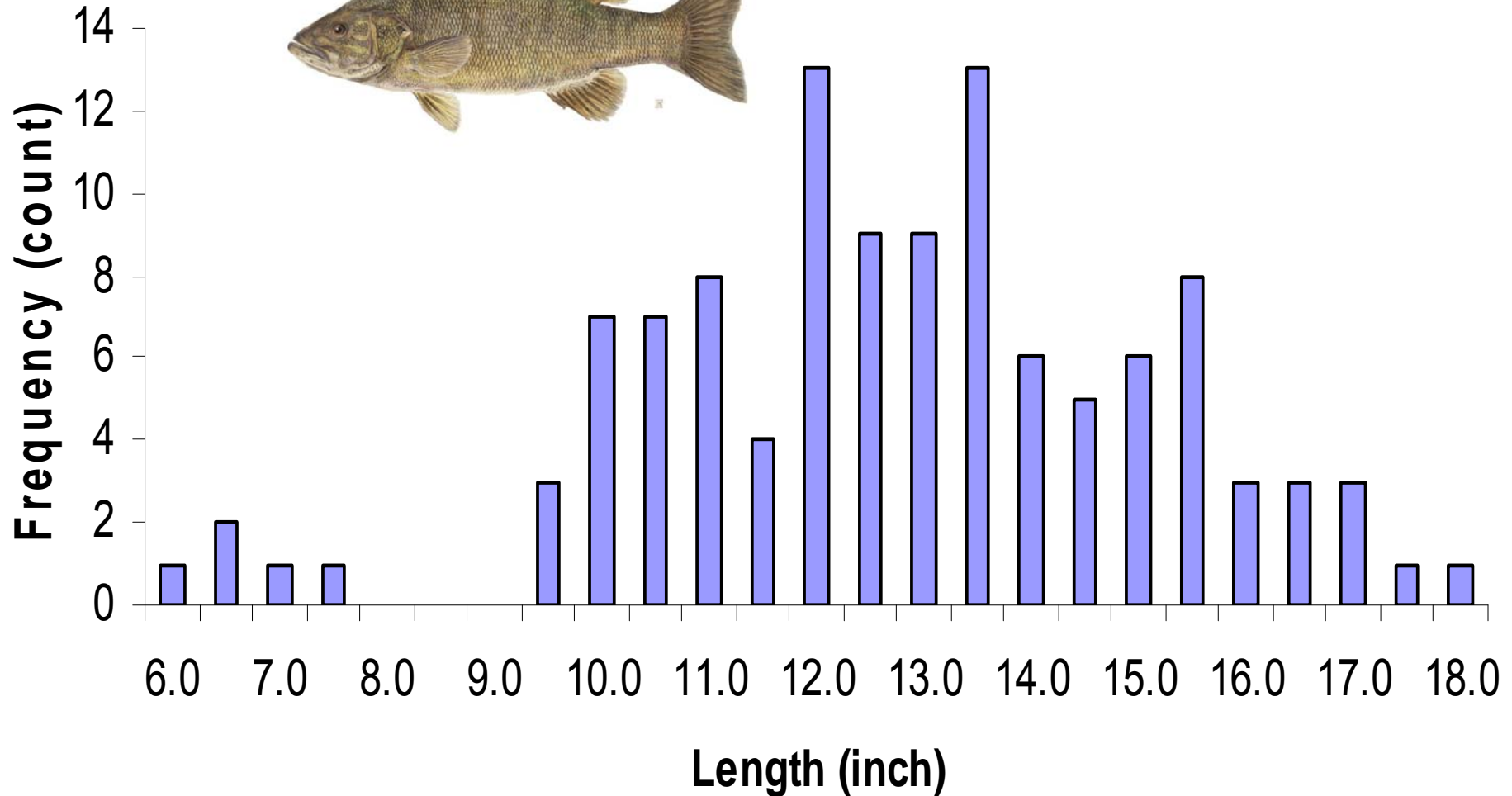
Results

- Smallmouth Bass
 - CPUE of $\geq 12'' = 2.9/\text{mile}$.
 - 68th percentile of the statewide average.

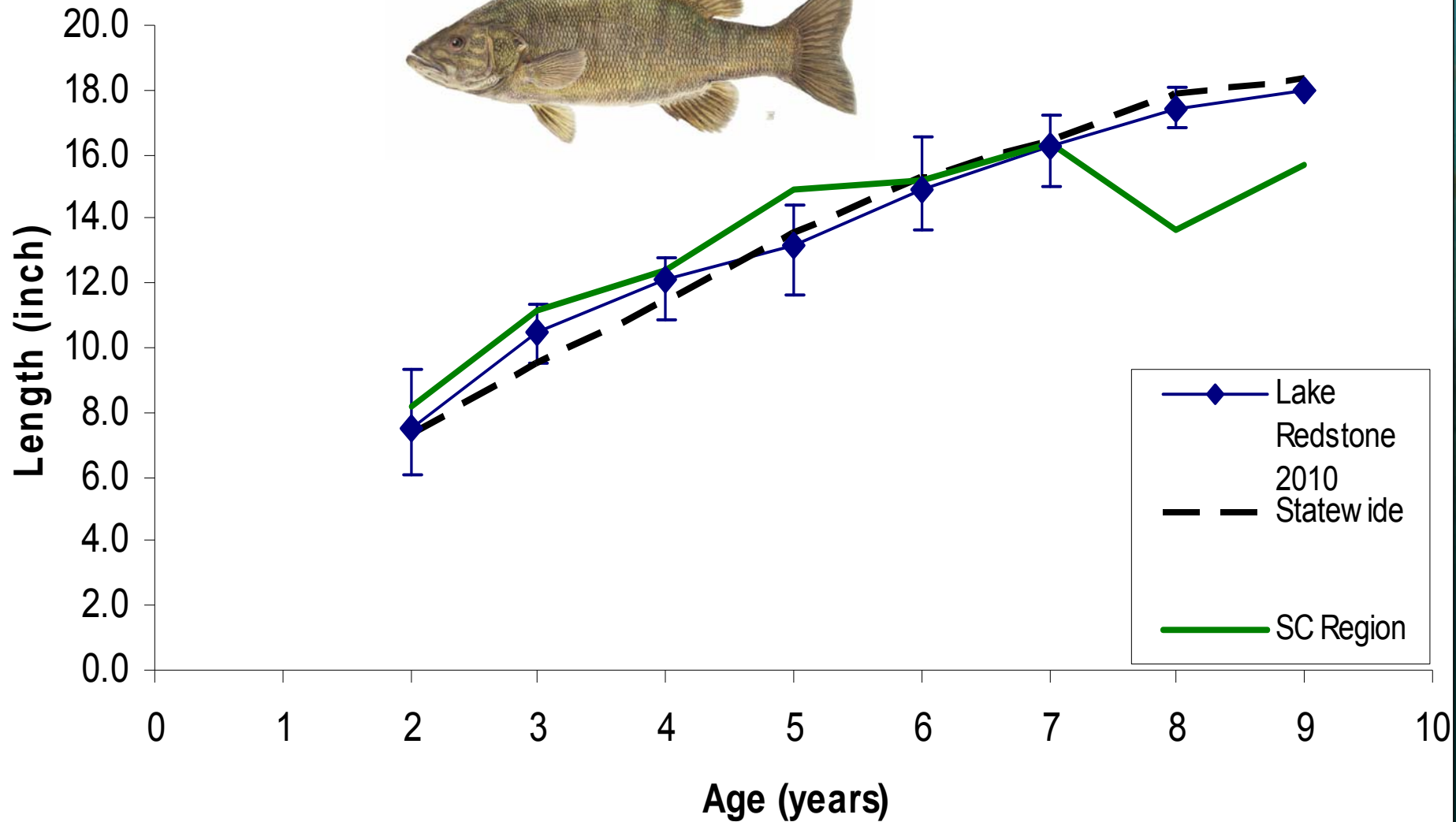


Length Frequency of Smallmouth Bass

Lake Redstone, WI Spring 2010

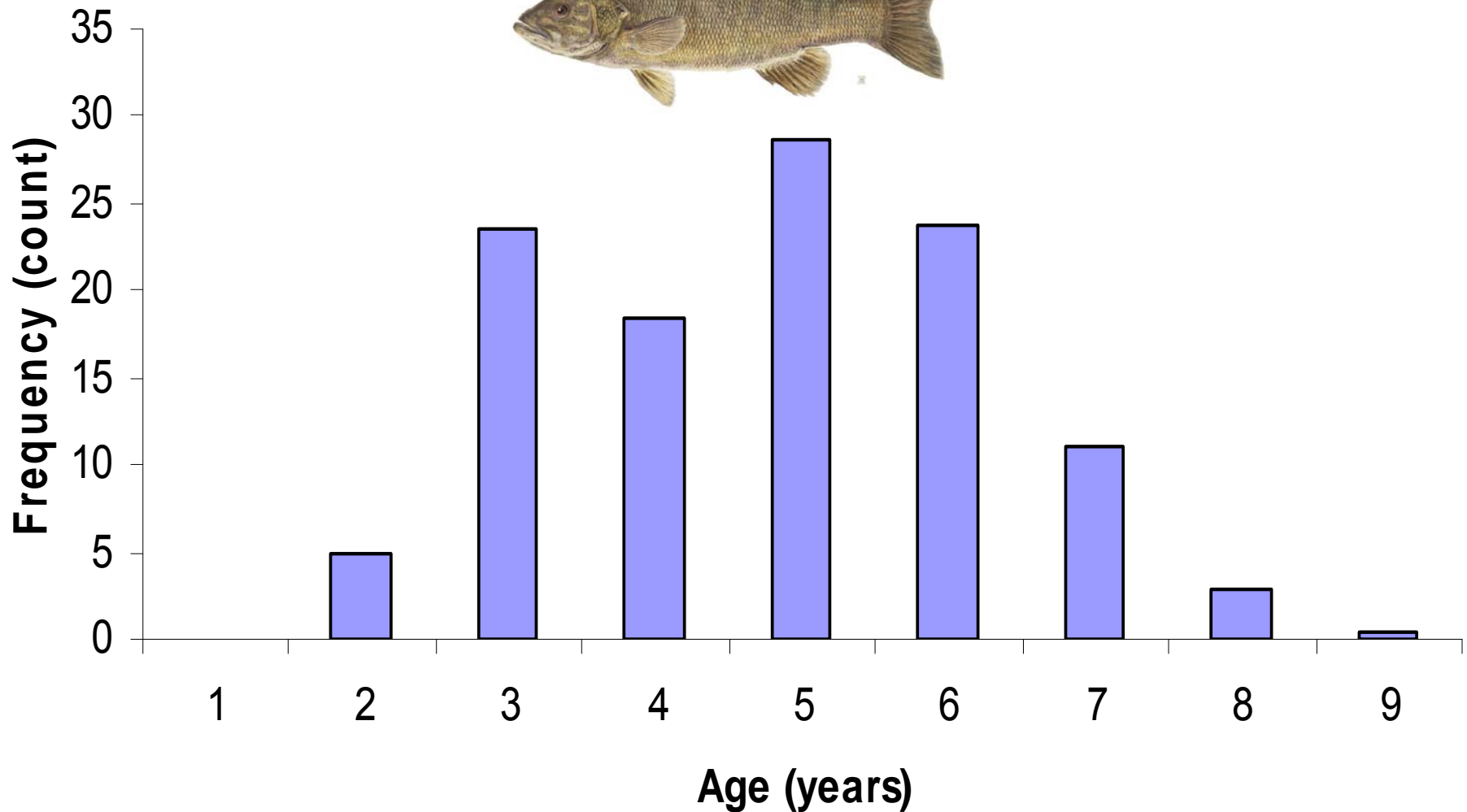


Length at Age for Smallmouth Bass Lake Redstone, Spring 2010



Age Frequency of Smallmouth Bass

Lake Redstone, WI Spring 2010



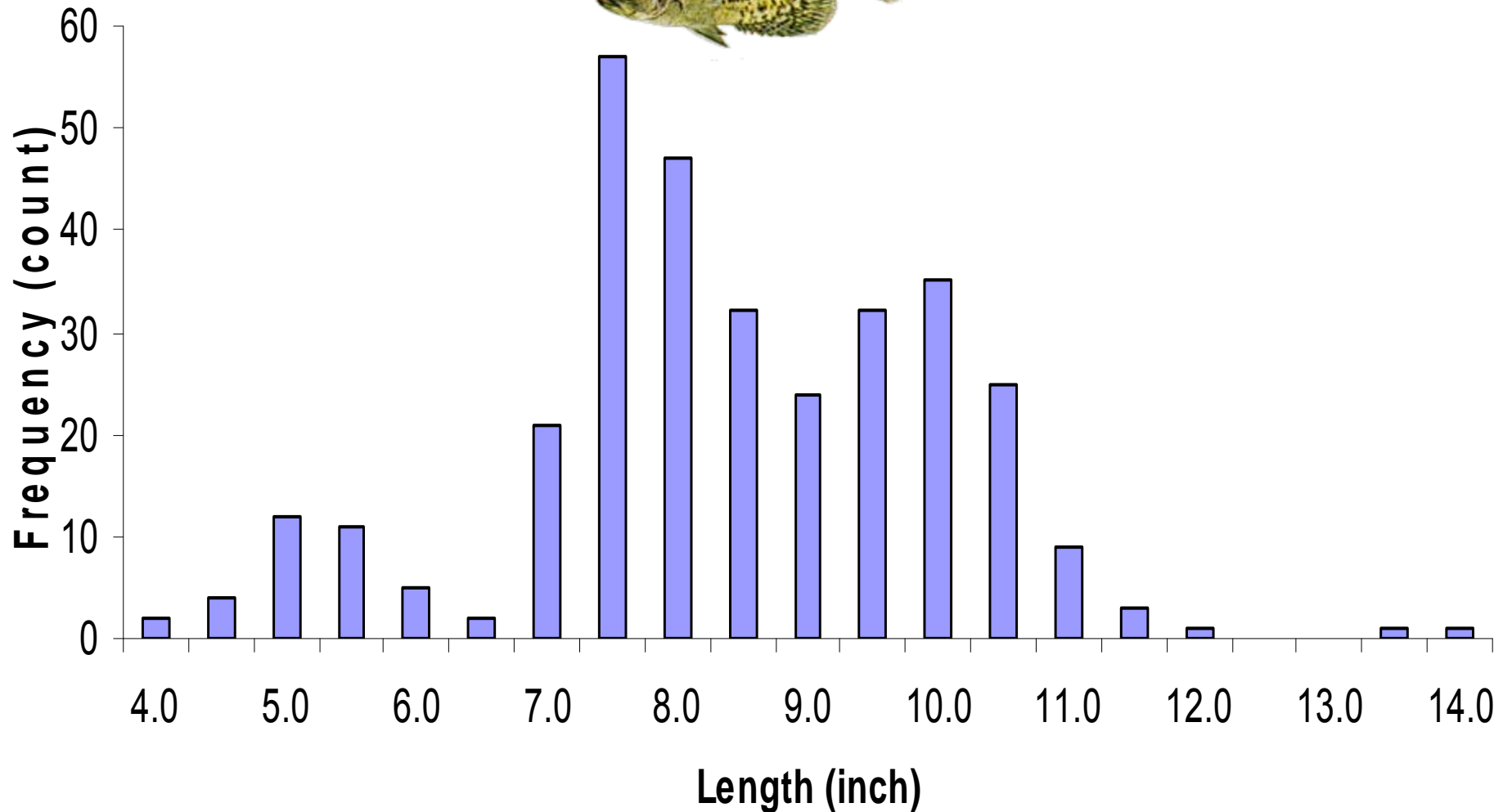
Results

- Black Crappie
 - CPUE = 1.0/mile
 - Very low when compared to state average.



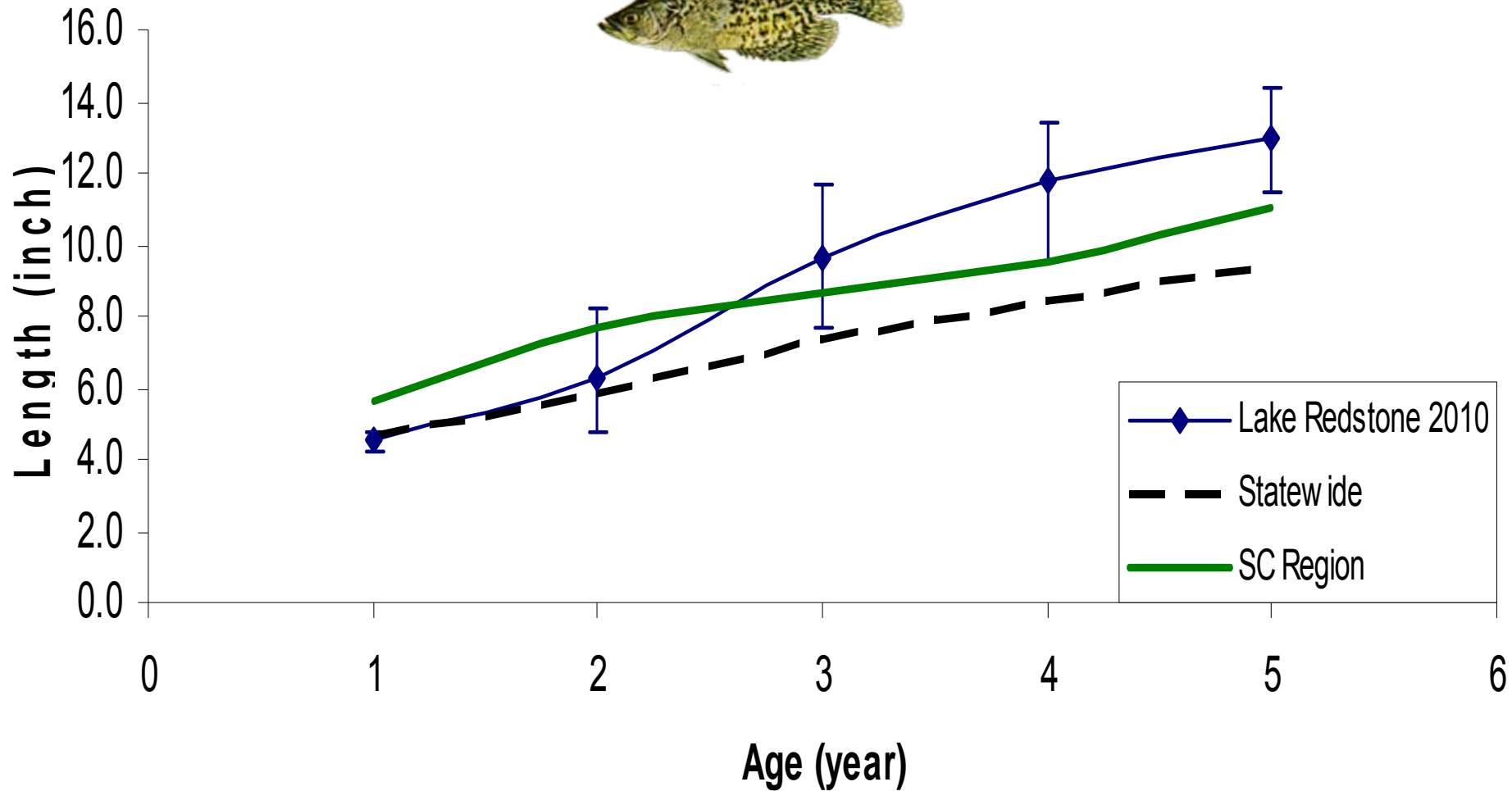
Length Frequency of Black Crappie

Lake Redstone, WI Spring 2010

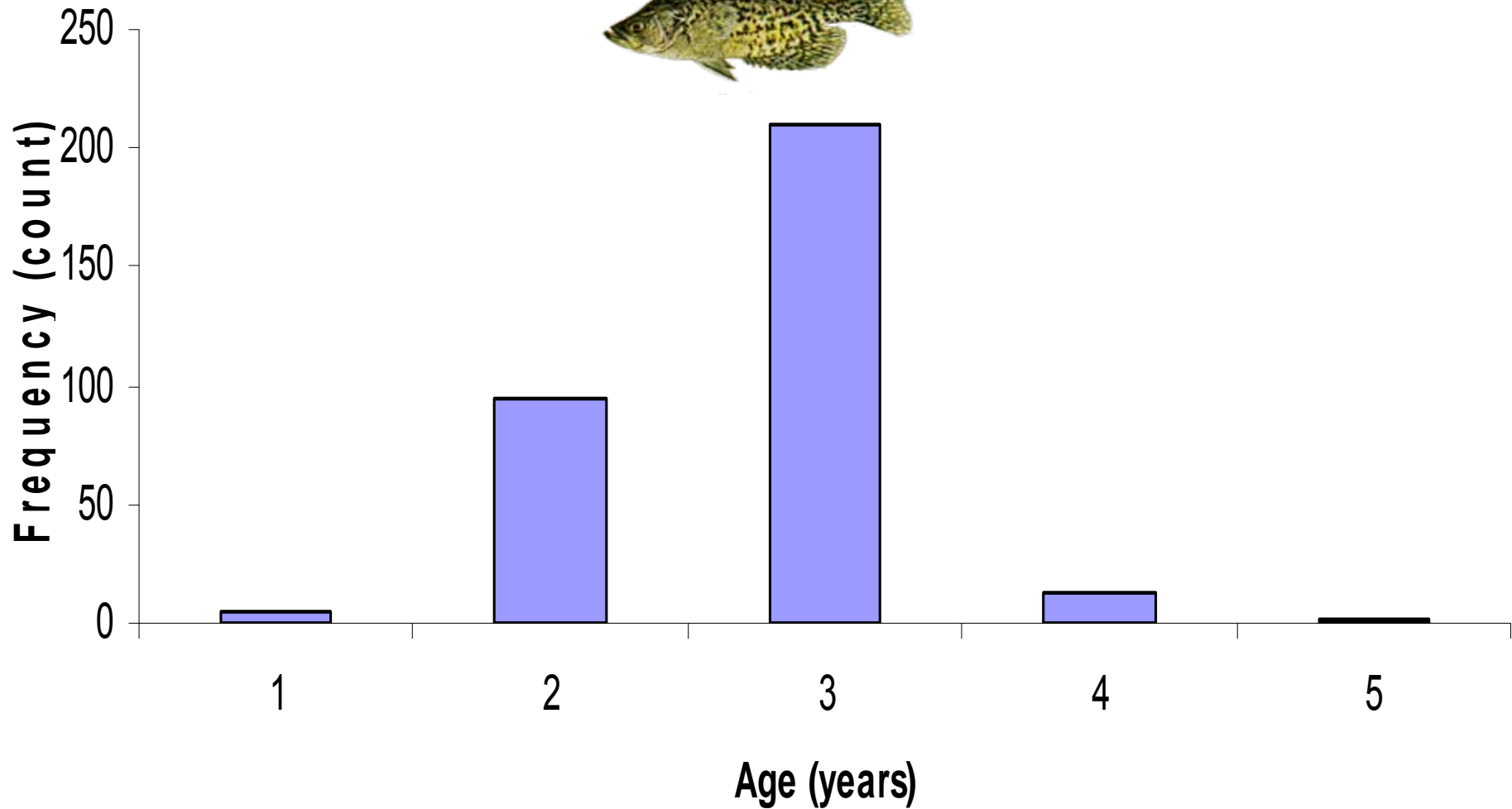


Length at Age for Black Crappie

Lake Redstone, Spring 2010



Age Frequency of Black Crappie Lake Redstone, WI Spring 2010

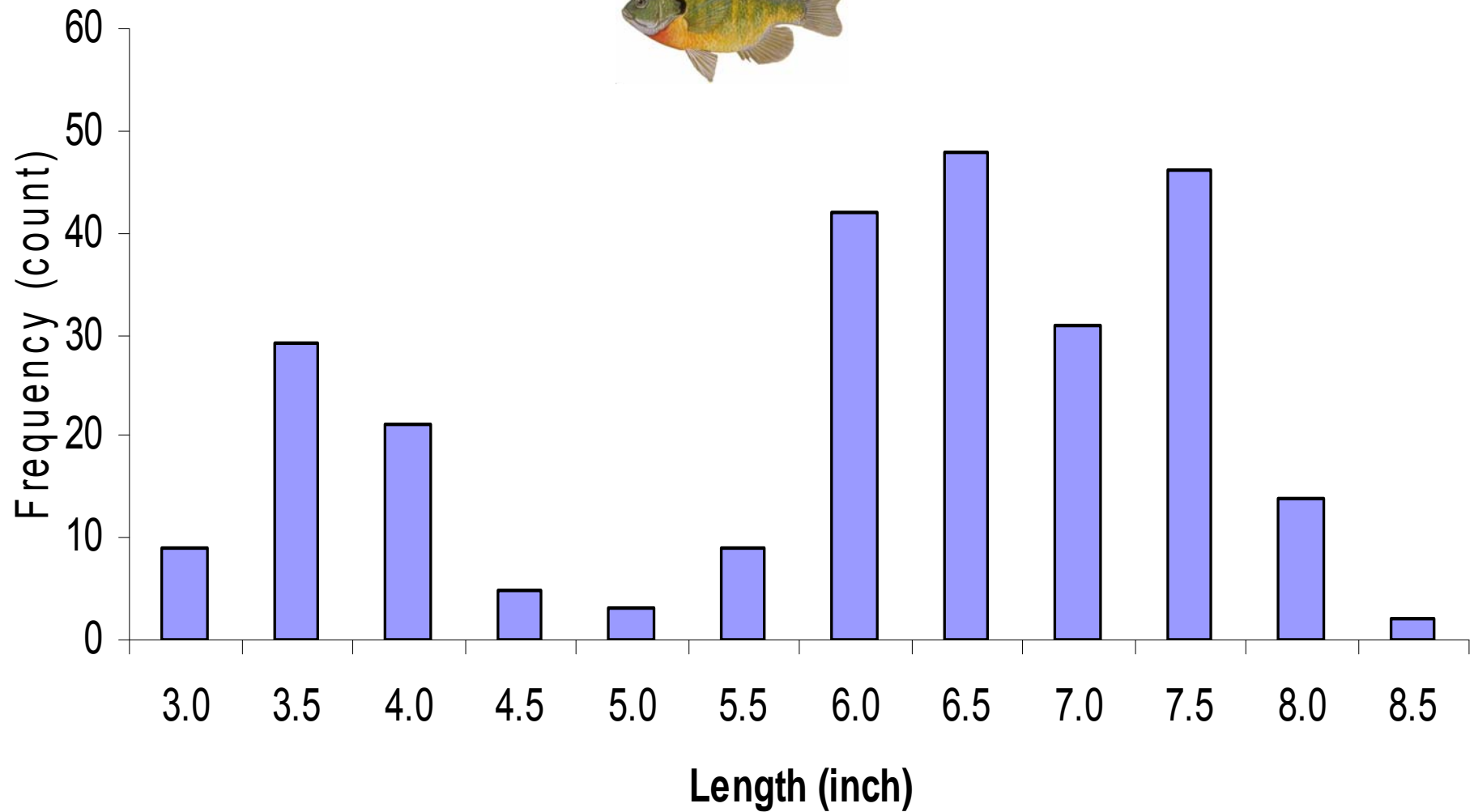


Results

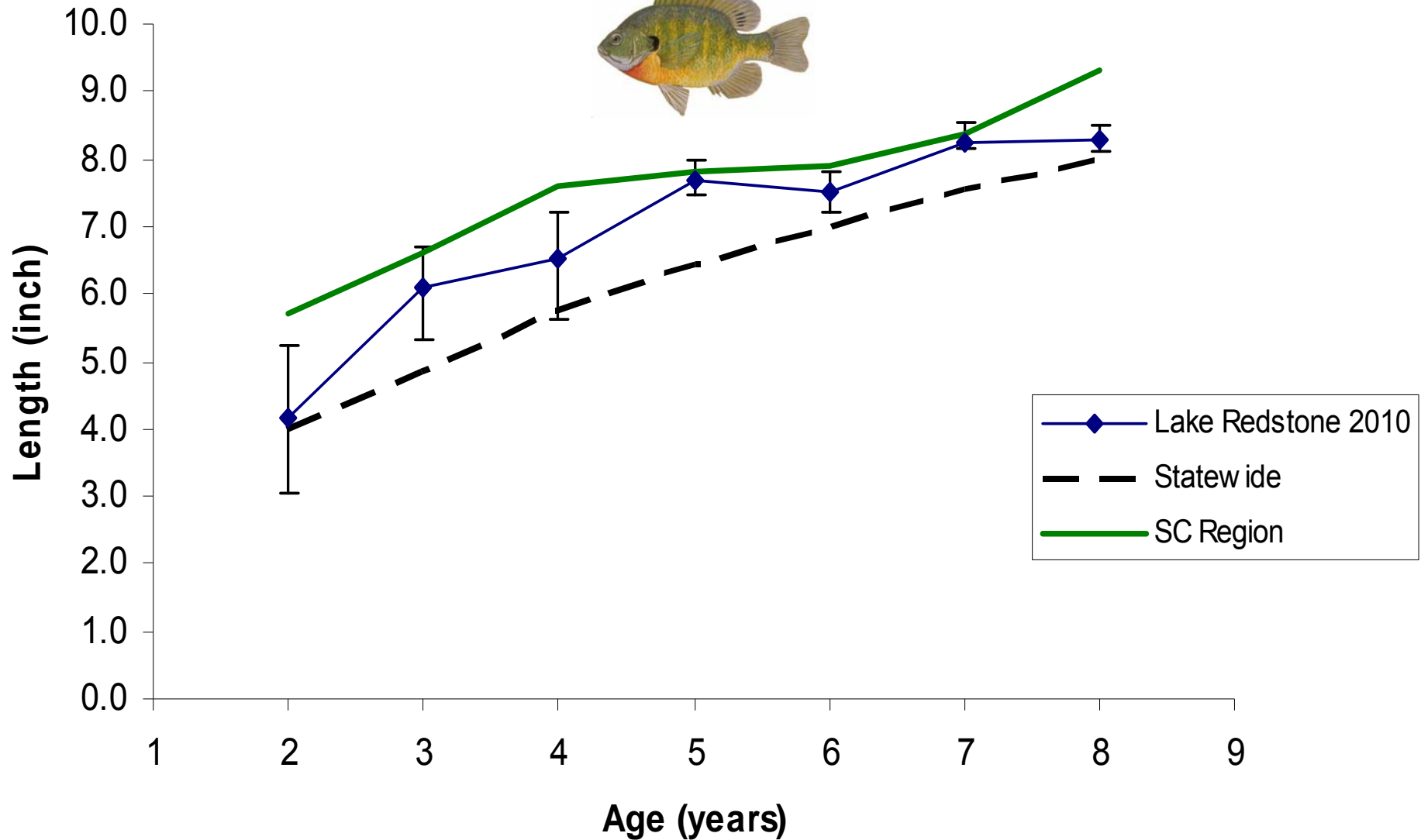
- Bluegill
 - CPUE = 10.5/mile.
 - 12th percentile of statewide average.



Length Frequency of Bluegill Lake Redstone, WI Spring 2010

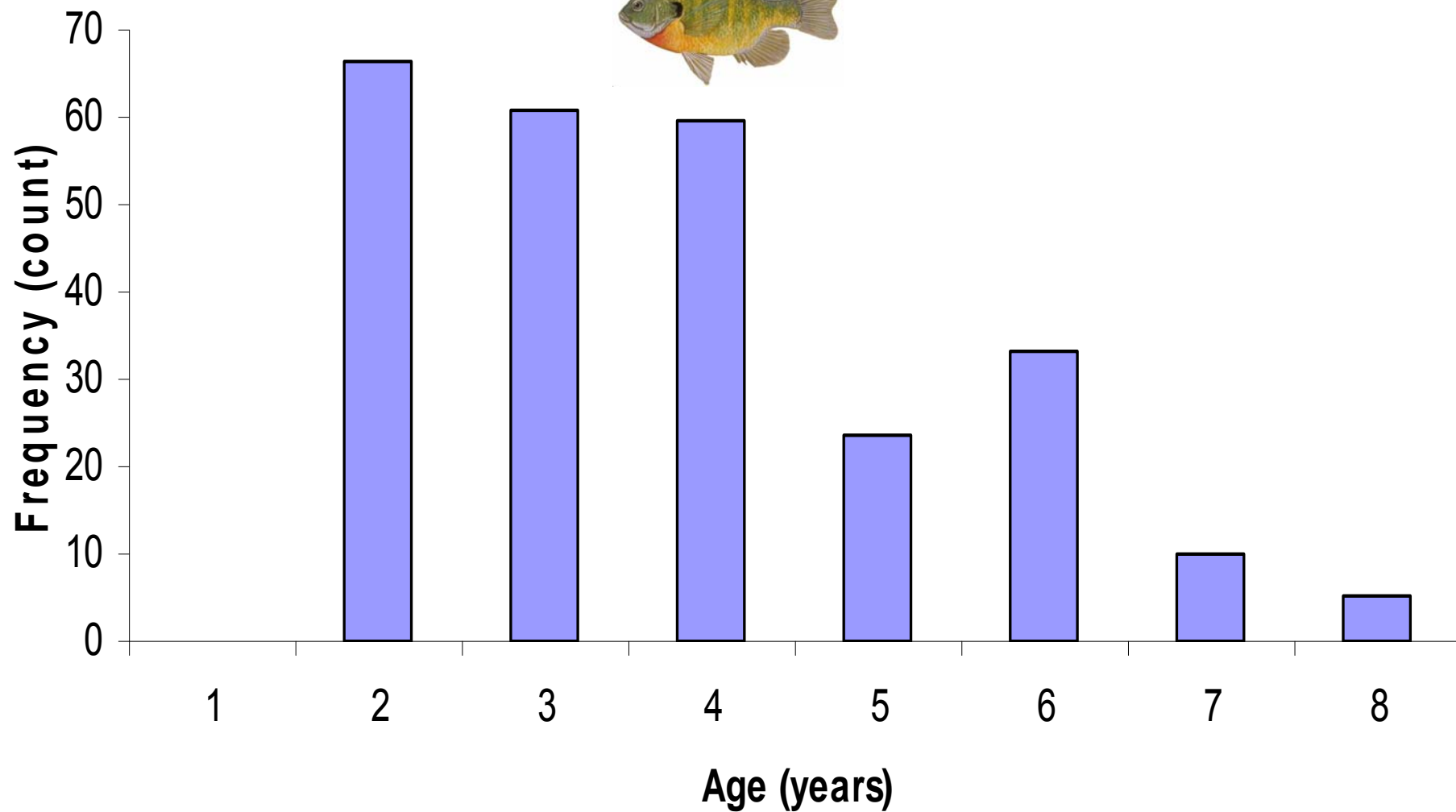


Length at Age for Bluegill Lake Redstone, Spring 2010



Age Frequency of Bluegill

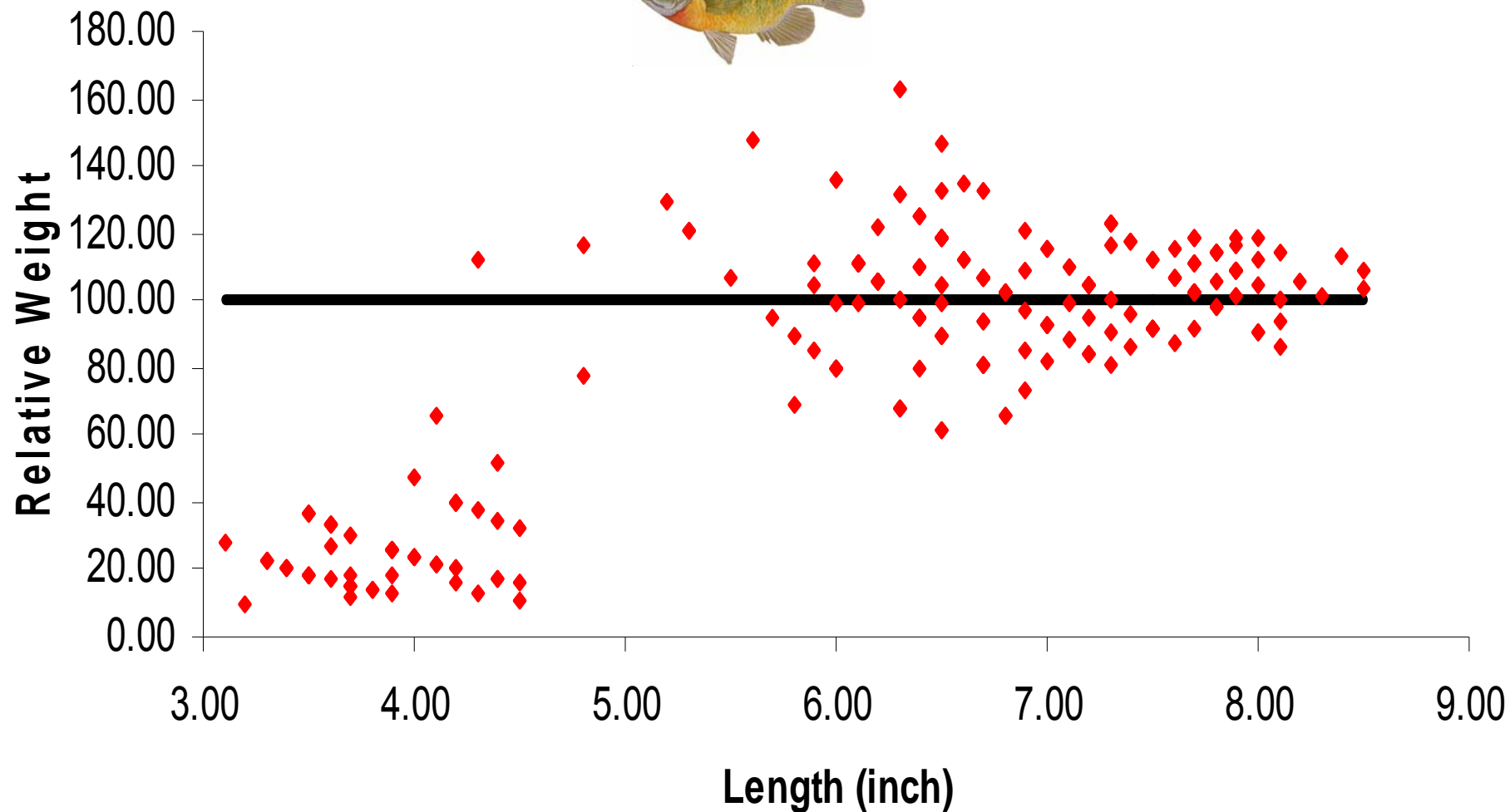
Lake Redstone, WI Spring 2010





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Relative Weight of Bluegill Lake Redstone, WI Spring 2010



An underwater photograph showing a large number of small, yellowish-orange fish swimming in a body of water. A large, light-colored net is visible, partially enclosing the fish. The water is a deep blue-green color. The text "Conclusions & Recommendations" is overlaid in white, bold, sans-serif font in the center of the image.

Conclusions & Recommendations

Conclusions & Recommendations

- Walleye population looks great!
 - Population density (4.3/acre)
 - Future studies should track any population changes.
 - Goals
 - 2-3 adults/acre
 - RSD15 (Fish at least 15" or greater) = 20%



Conclusions & Recommendations

- **Muskellunge also look good**
 - Adult densities (0.34/acre & 0.33/acre) at range for a potential “trophy” fishery.
 - Age distribution associated well with years of stocking.
 - Future studies looking at regulation change to 50” minimum.
 - Goals
 - Maintain 0.33 adults/acre
 - RSD45 (Fish at least 45” or greater) = 15-20%



Conclusions & Recommendations

- **Smallmouth Bass increasing in size and numbers**
 - 1998-1999 stockings took off.
 - Future studies should continue to track the population.
 - Lake is better suited for smallmouth bass
 - Goals
 - Combine "Bass" CPUE of 8" = 20-30/mile
 - RSD 14 (Fish at least 14" or greater) = 20%





Conclusions & Recommendations

- **Gizzard Shad impact**
 - New species in the lake (since 2004)
 - Evidence supporting they might be competing with bluegill and crappies.
 - If shad persist in high numbers, additional management (size limits, habitat, additional stocking).

An underwater photograph showing a large number of small, yellowish-orange fish, possibly juvenile snappers or similar species, swimming in a shallow, clear blue-green water. The fish are concentrated around a large, fine-meshed net that is partially visible, suggesting a fishing or aquaculture activity. The net is made of a light-colored material, possibly nylon or polyethylene, and is supported by dark vertical poles. The fish are of various sizes, mostly small, and are swimming in different directions. The overall scene is somewhat dimly lit, with the light coming from above, creating a slightly hazy or filtered effect on the water and the fish. The word "Questions?" is superimposed in the center of the image in a large, white, bold font with a black outline.

Questions?