

# Preserving a Potential State Record Fish

Hunter Hatcher<sup>1</sup>, Andy Strickland<sup>2</sup>, and Scott Bisping<sup>2</sup>

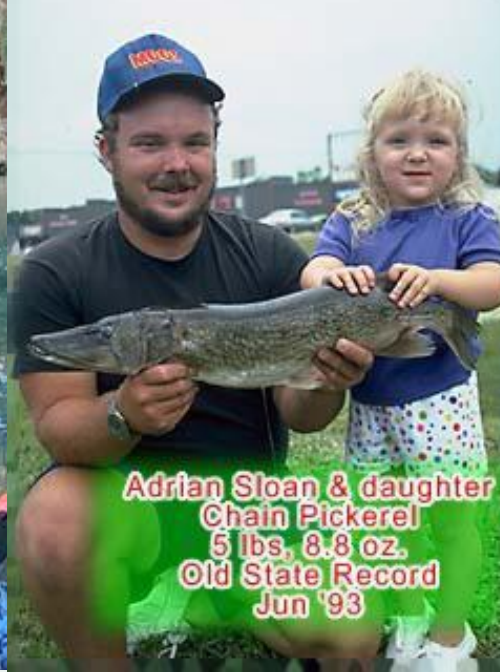
*1. Virginia Department of Game and Inland Fisheries*

*2. Florida Fish and Wildlife Conservation Commission*





**Sheldon Grace**  
**Shoal Bass**  
**5.95 pounds, November 2017**



**Adrian Sloan & daughter**  
**Chain Pickerel**  
**5 lbs, 8.8 oz.**  
**Old State Record**  
**Jun '93**



**Charles Patchen**  
**Florida record Flathead Catfish**  
**63.80 pounds, May 2016**



**Ronnie Everett**  
**Suwannee Bass**  
**3 lbs, 14.24 oz**  
**2 March '85**



**John LeMaster**  
**Bluegill**  
**2 lbs, 15.25 oz.**  
**19 Apr '89**



**Billy O'Berry**  
**Florida record Largemouth Bass**  
**17.27 pounds, July 1986**



# Missing out on a milestone

- Effort focused on weekends
- Delay in certification



# Missing out on a milestone

## How To Certify a State Record Freshwater Fish

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2. The fish must have been caught legally using an active hook-and-line method (bush hooks, snatch hooks, set lines, trotlines, etc. are excluded) in fresh waters of Florida.
3. If possible, keep the fish alive. If it is not possible to keep the fish alive, place it in ice water. Avoid freezing the fish, because it will dehydrate causing it to lose weight.
4. Before contacting the Florida Fish and Wildlife Conservation Commission (FWC), weigh the fish to determine if a possible state record exists.
5. Make arrangements with the local FWC office during business hours to have the fish species certified by a biologist, and to have a FWC employee witness the official weighing, on a certified scale, and take measurements.

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# Objective

**Identify the best handling practices to minimize change in weight post-catch in four fish species.**

# Which Species?



# Which Species?





# Which Species?



# Which Species?



# Treatments



# Treatments

- Live





# Treatments

- Live
- Ice-bath
- Ice



# Treatments

- Live
- Ice-bath
- Ice
- Frozen – 24 hr
  - 6 hr thaw
- Frozen – 48 hr
  - 6 hr thaw



# Experimental Design

- $\geq 10$  replicates per treatment
- 4 replicates per treatment per trial
- 3 trials per species



# Fish Collections

- Boat Electrofishing
- Transported alive
- Fish weighed and measured
- Treatment assigned
- Weighed at 6, 12, 24, & 48 hours





# Data Analysis

- Proportion change in weight – arcsine transformed
- Analysis of Variance (ANOVA)
  - 24 and 48 hours
  - Live, Ice, Ice-bath, Frozen, and Thaw
- Tukey Honest Significant Difference (HSD)





# Data Analysis

- Proportion change in weight – arcsine transformed
- Repeated Measures ANOVA
  - All time intervals
  - Live, Ice, and Ice-bath
- Contrast Analysis



# Data Analysis

- Analysis of Variance (ANOVA)
  - Tukey Honest Significant Difference (HSD)
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- ~~Repeated Measures ANOVA~~
  - ~~Contrast Analysis~~





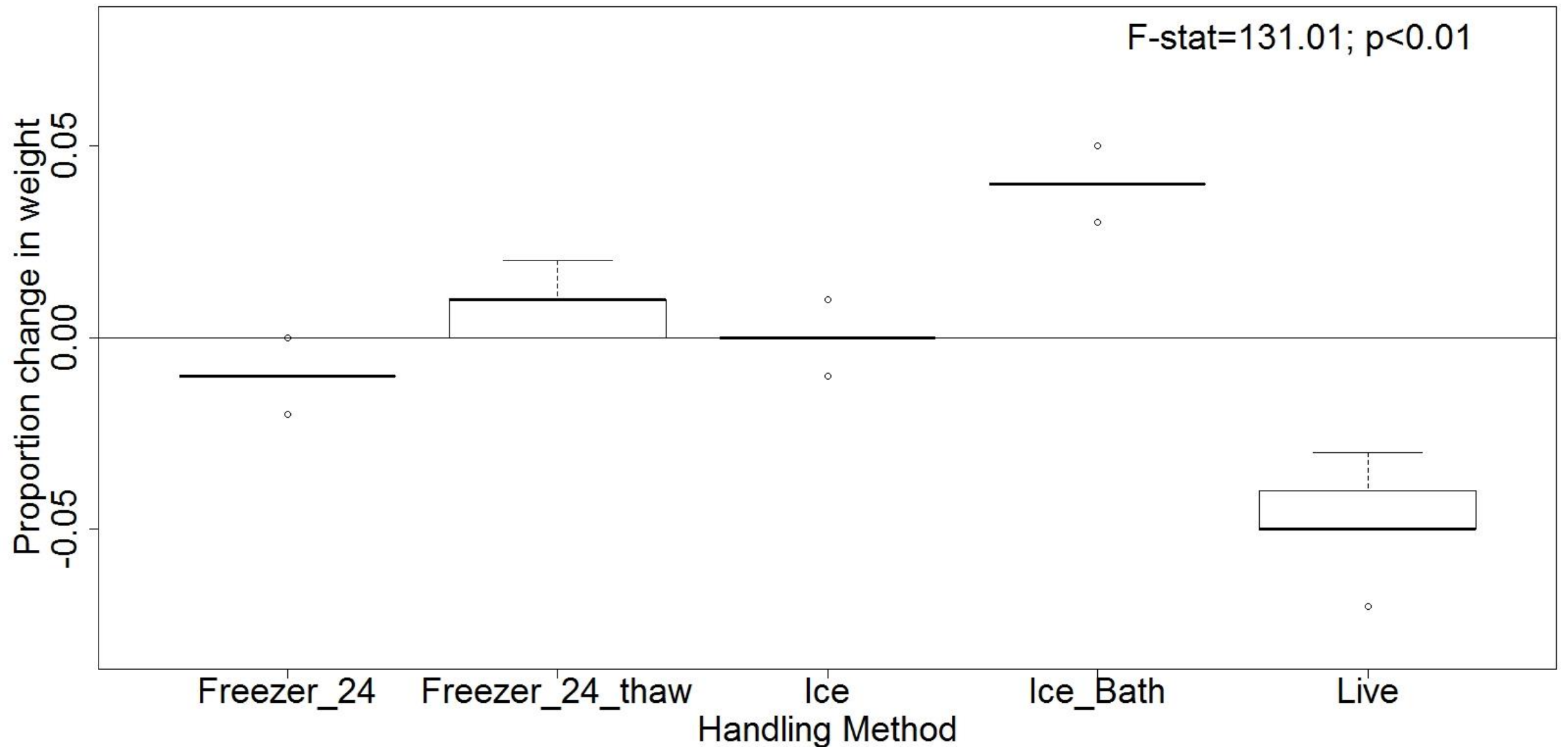


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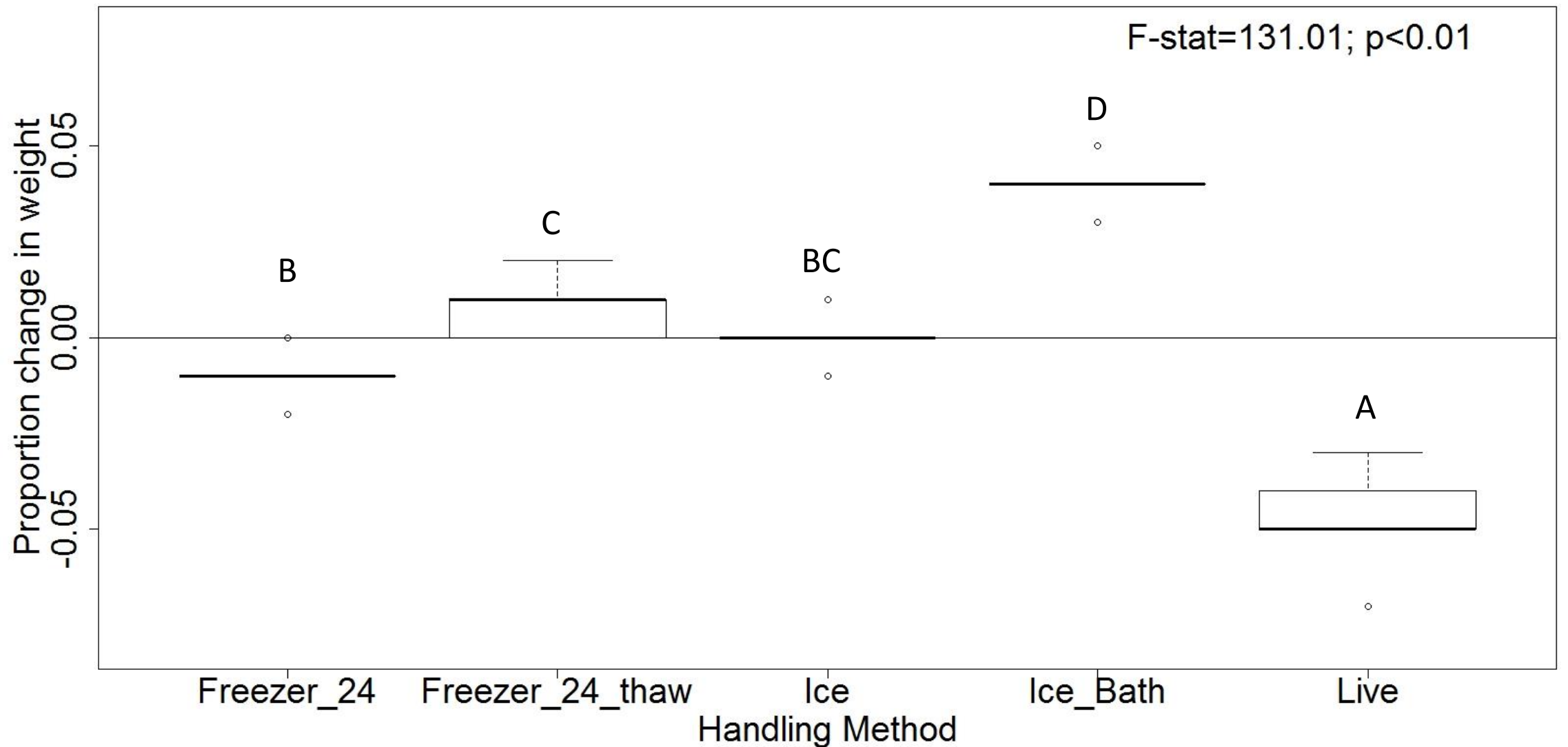
24 hours – ANOVA & Tukey HSD



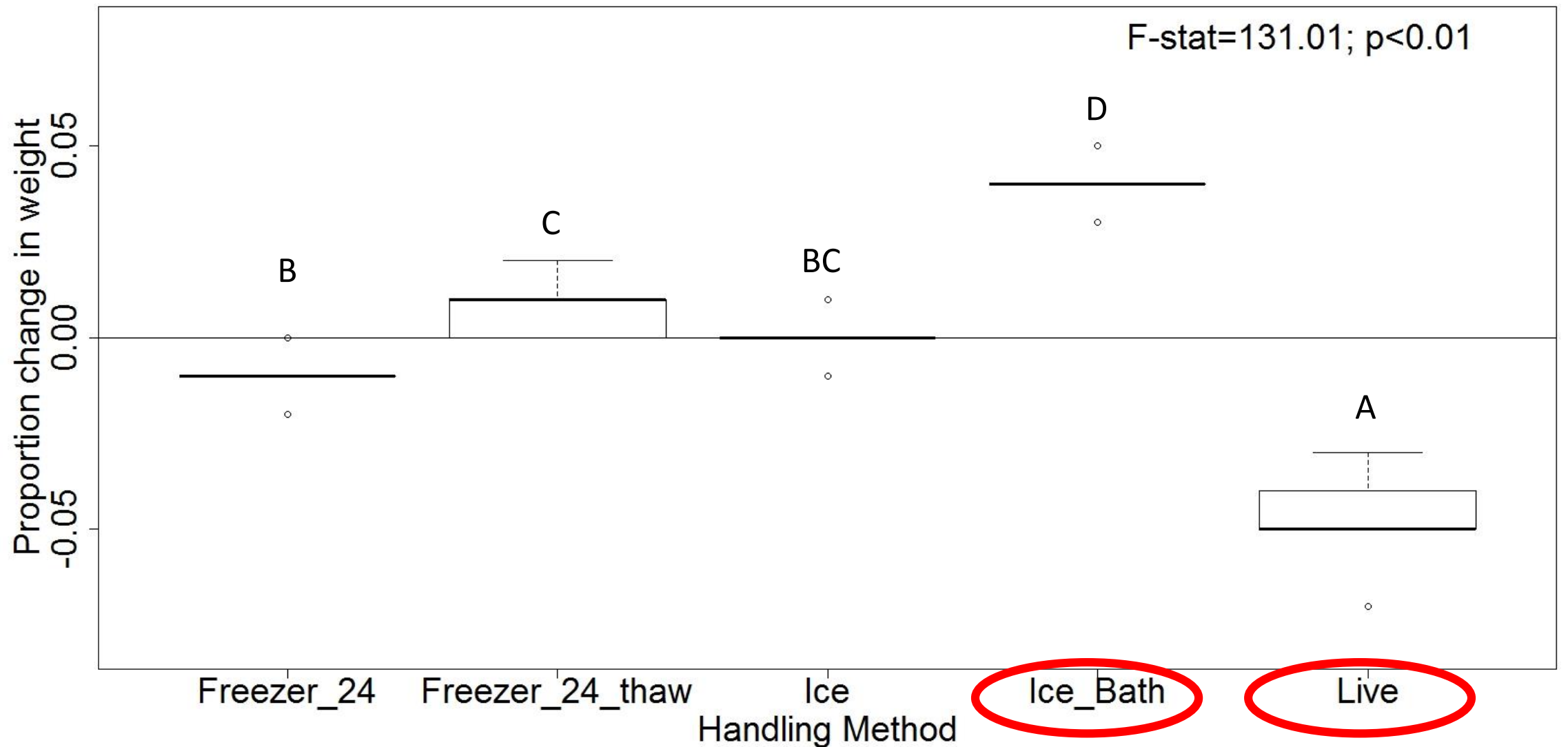
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# 24 hours – ANOVA & Tukey HSD



# How big was the current state record?





# How big was the current state record?





# How big was the current state record?

Held in Ice-Bath  
66.5 lbs



Marvin Griffin  
Flathead Catfish  
69.3 pounds, June 2019

Charles Patchen  
Florida record Flathead Catfish  
63.80 pounds, May 2016



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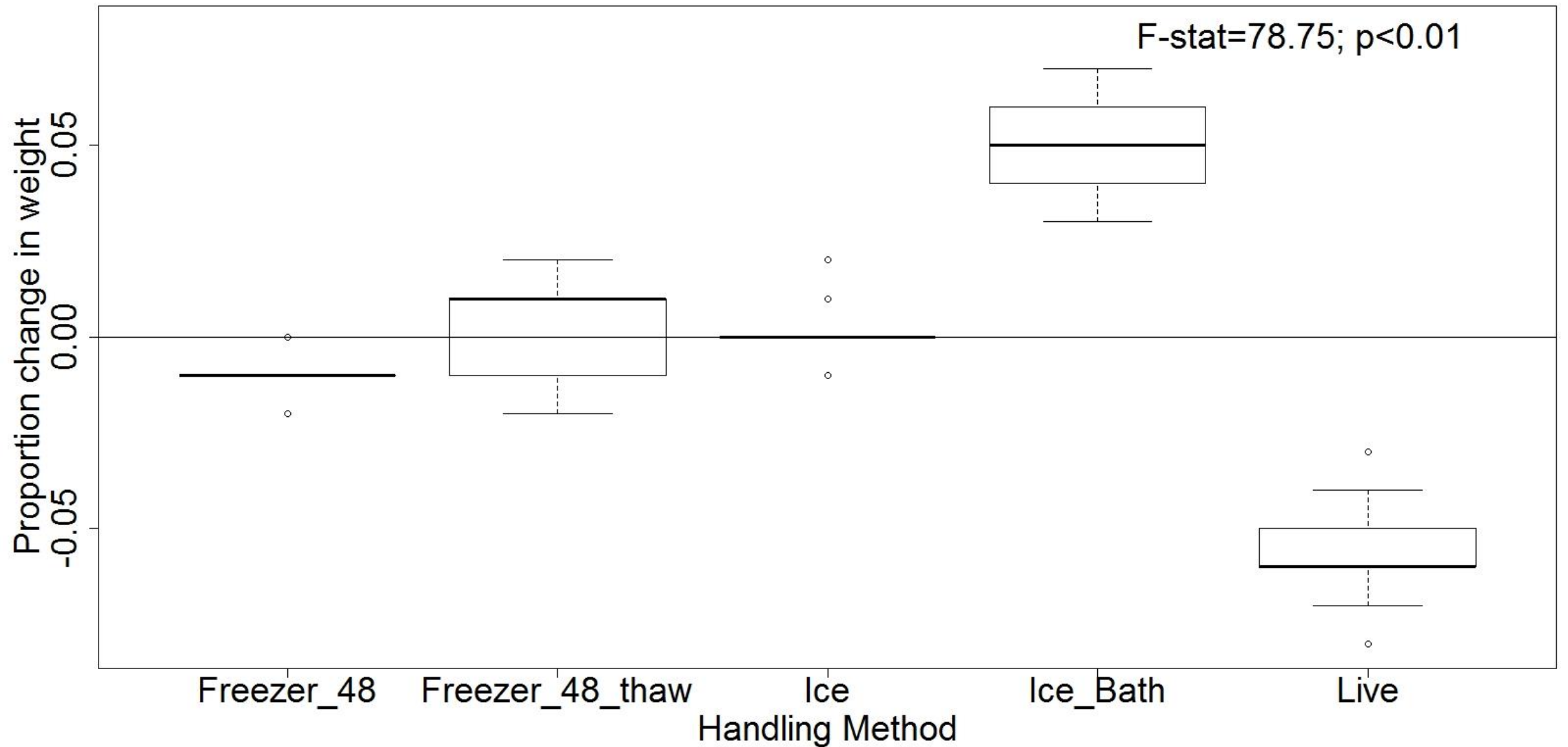


**Held alive  
66.9 lbs**



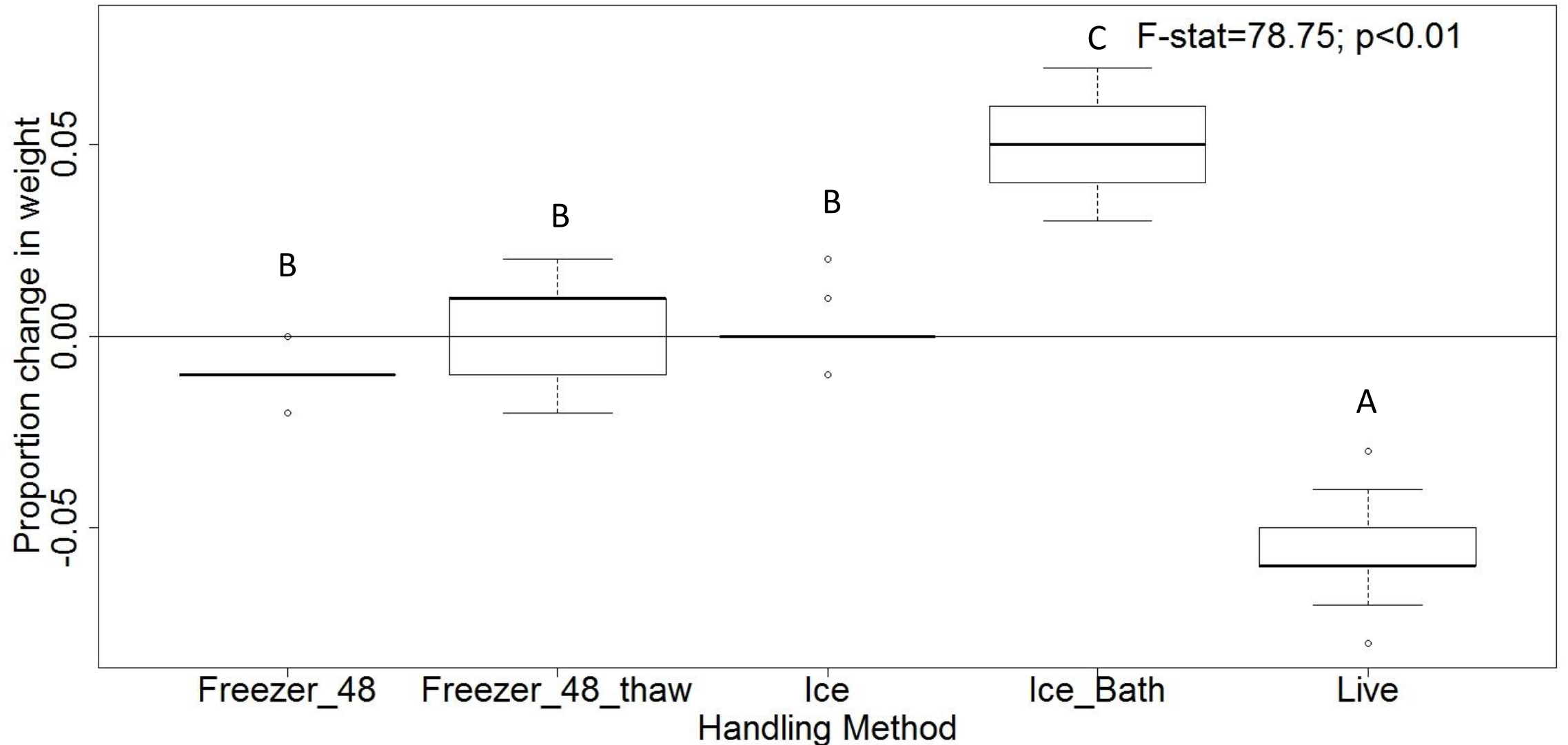
48 hours – ANOVA & Tukey HSD

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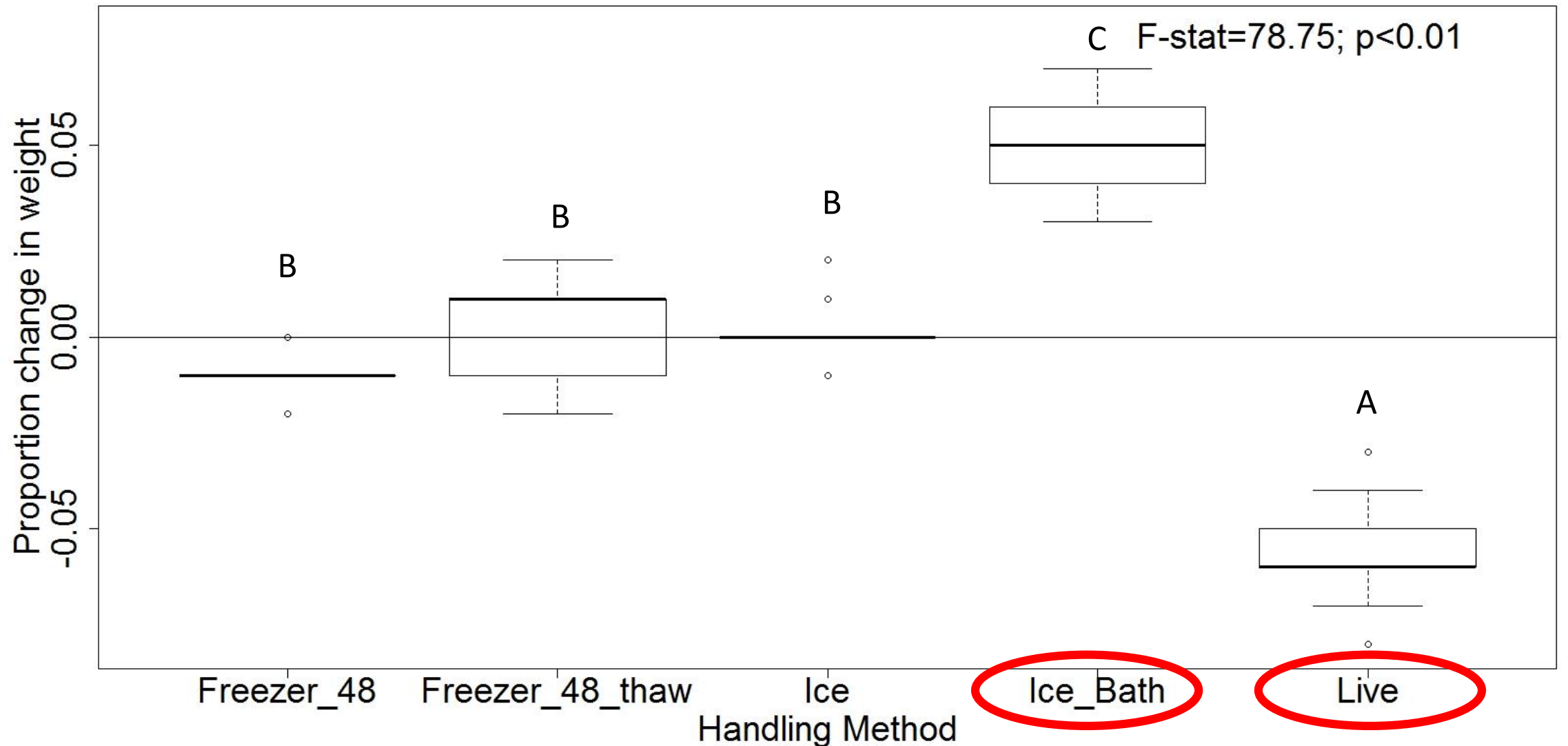




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**Held alive  
67.4 lbs**

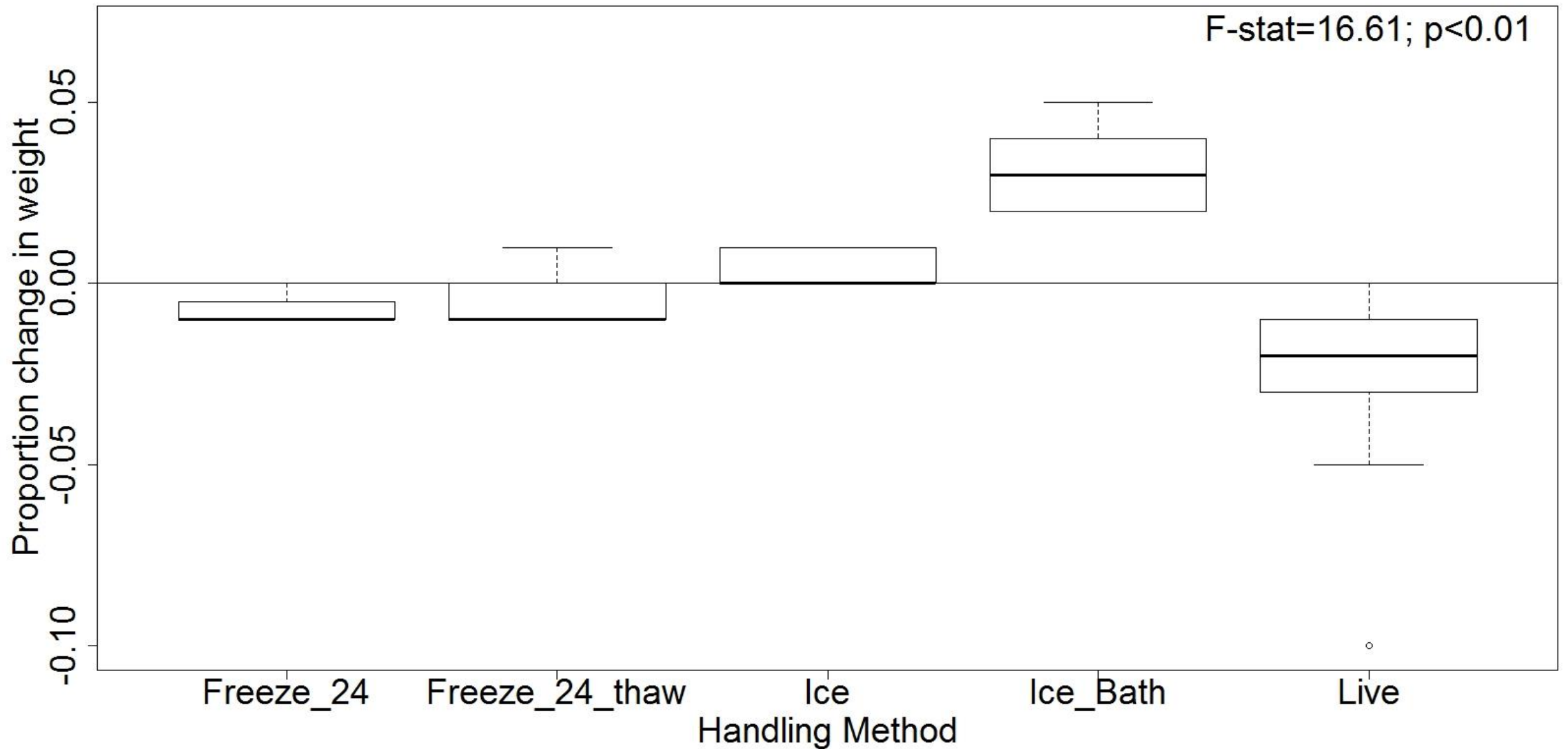


$\geq 18''$



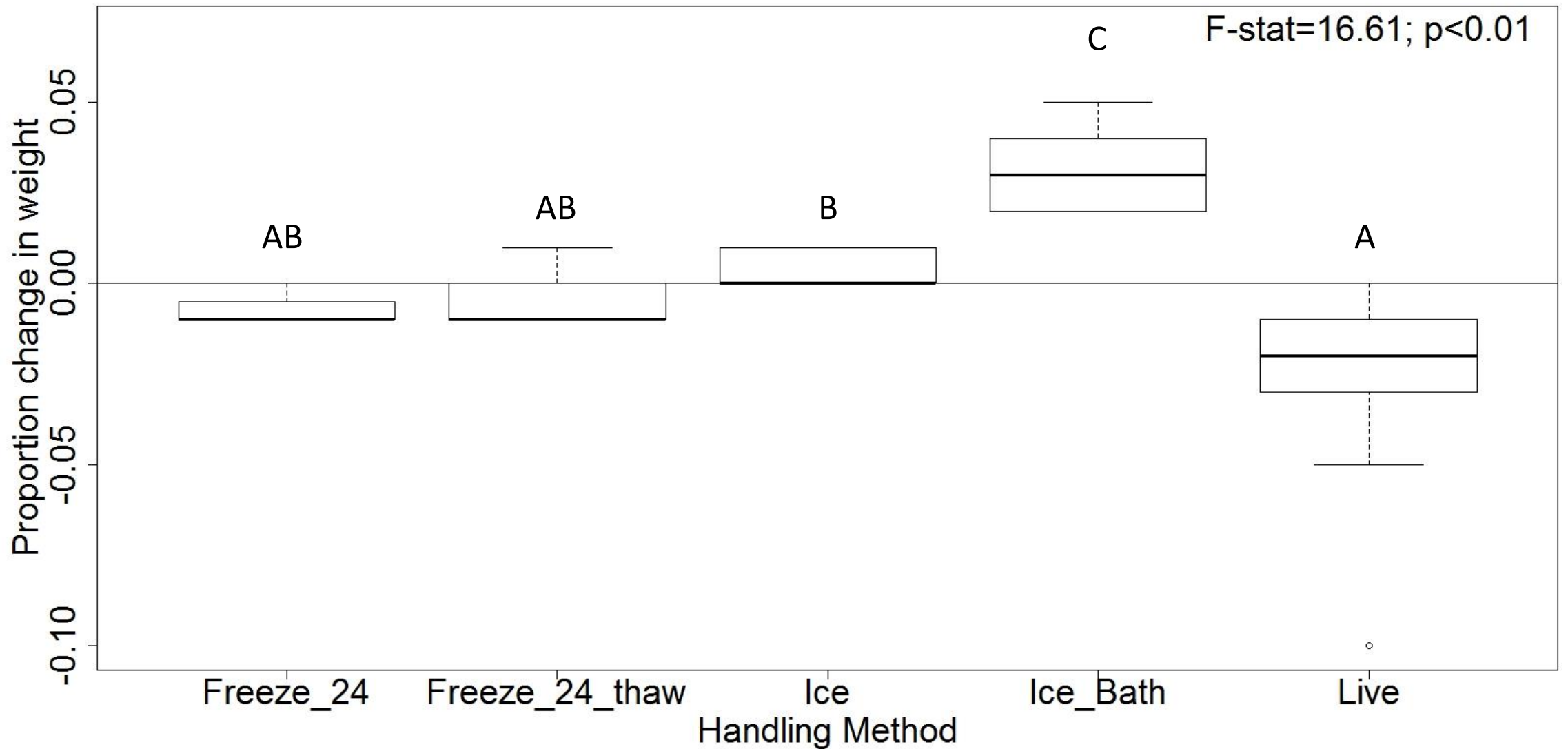
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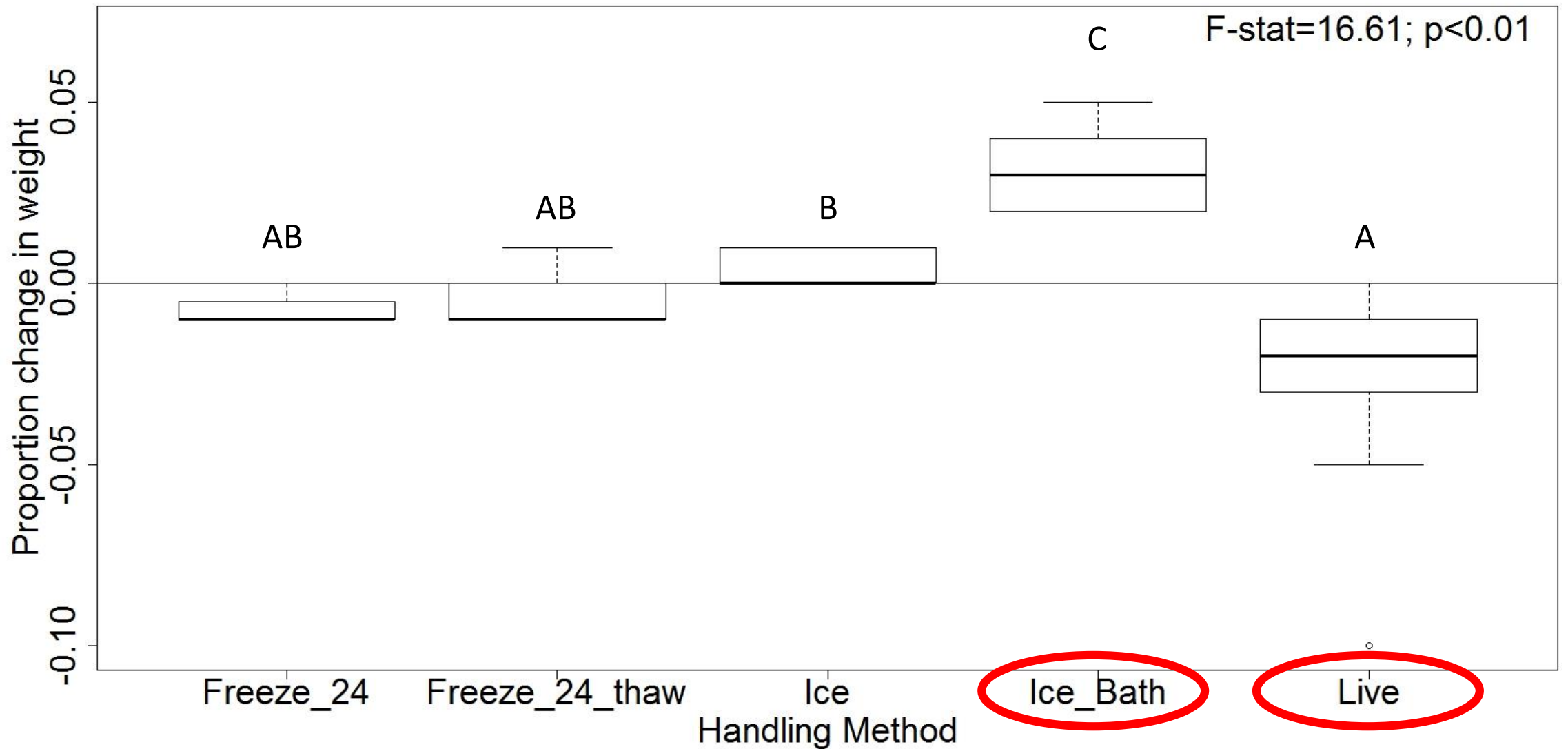




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# How big was the current state record?



16 lbs 4 ozs  
Lake Conner  
1985

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16 lbs 2 ozs  
Briery Creek Lake  
2003

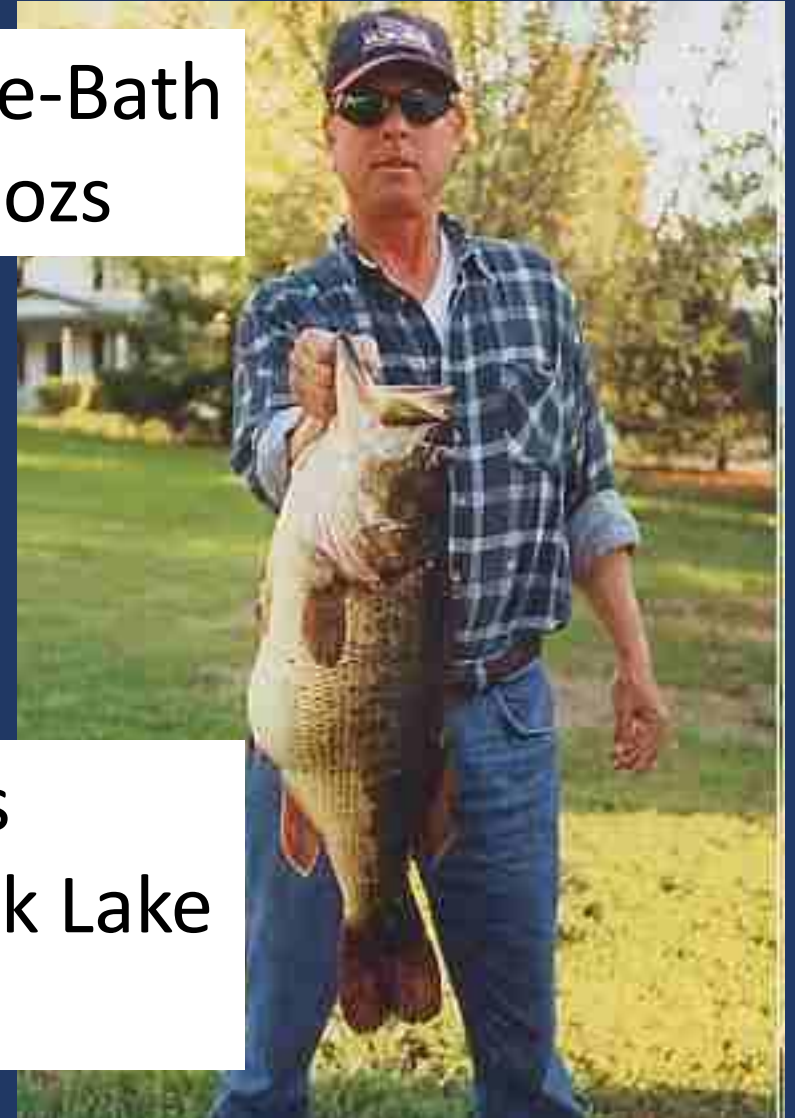


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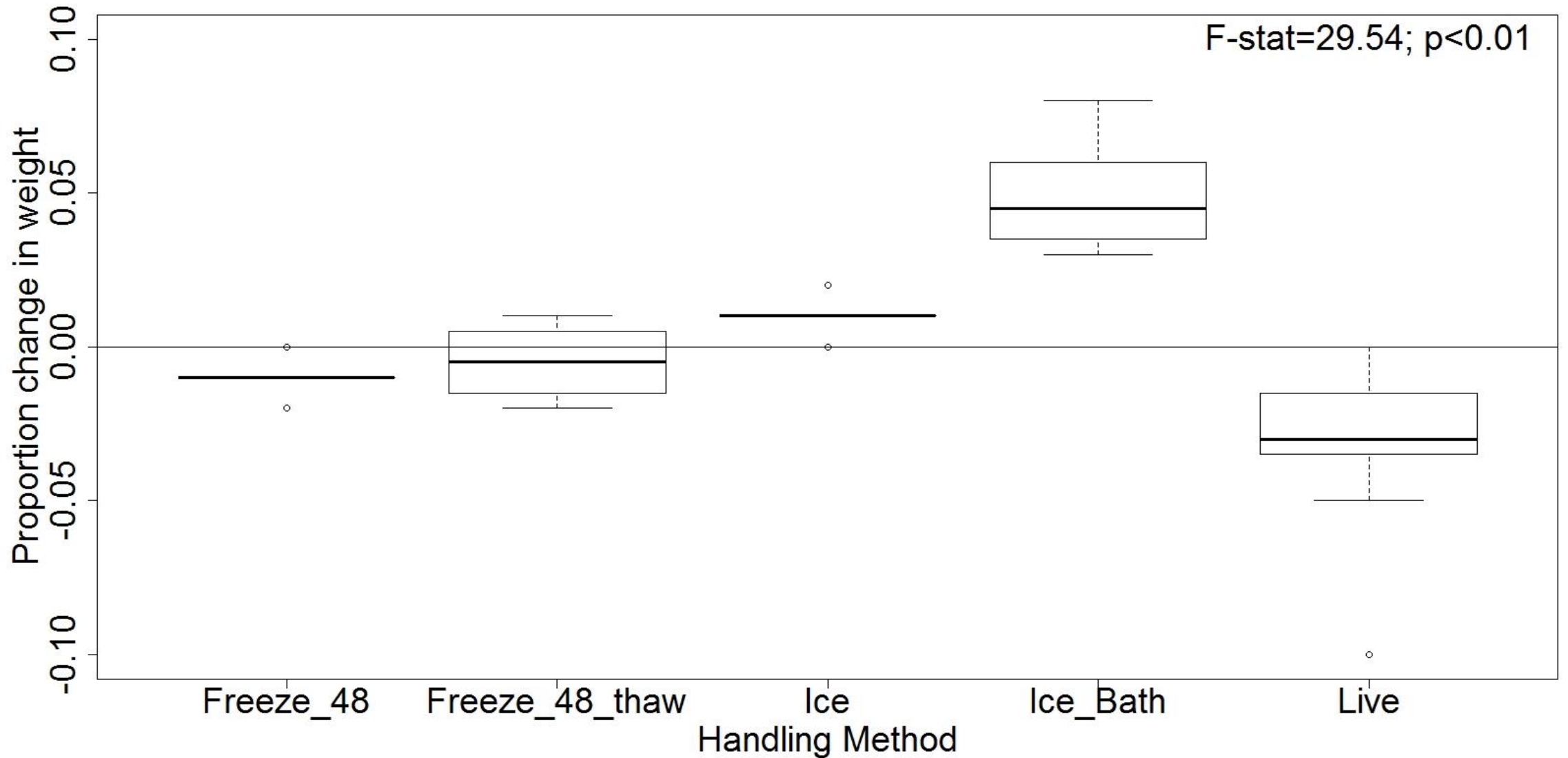
Held in Ice-Bath  
16 lbs 10 ozs



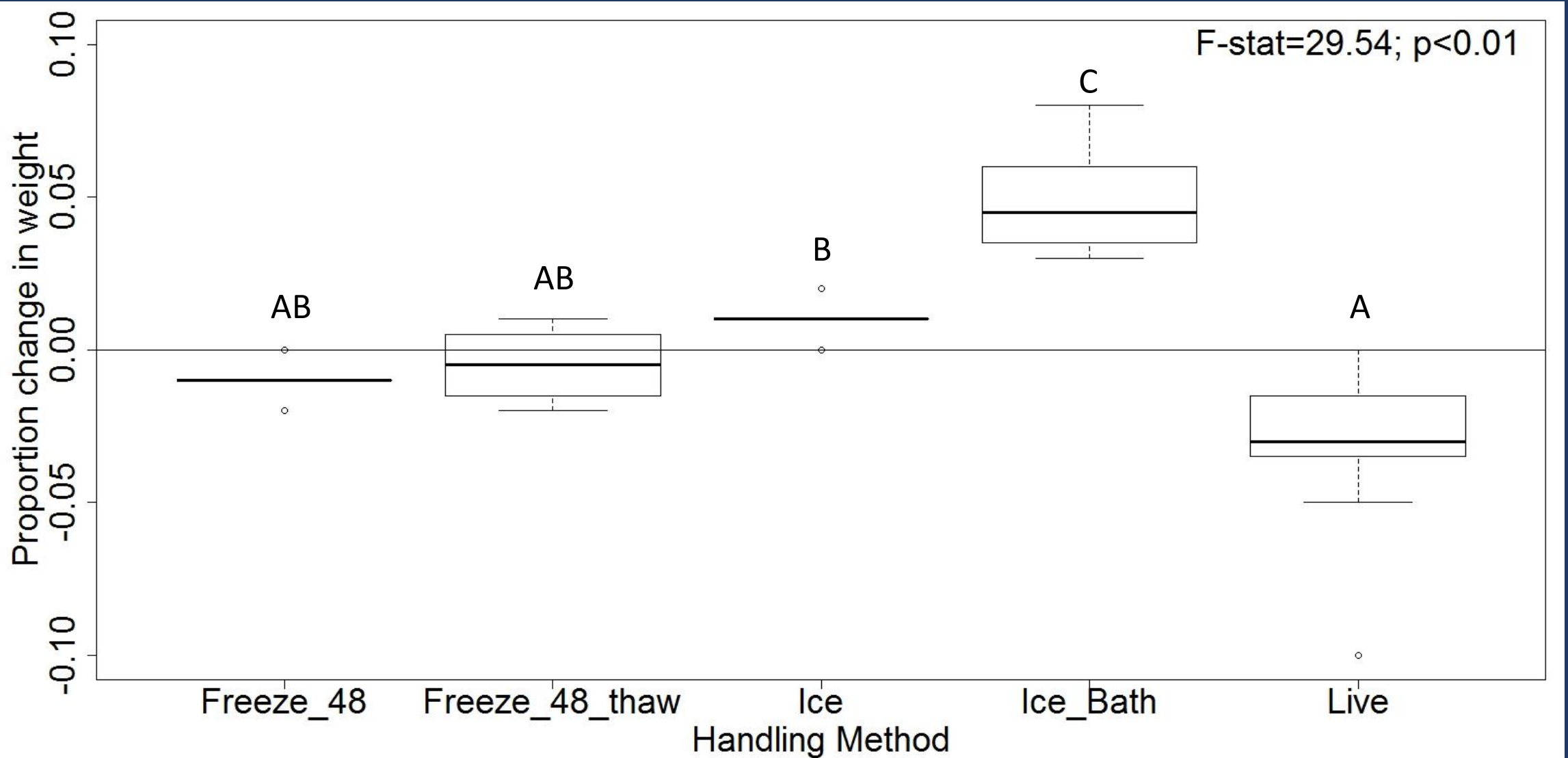
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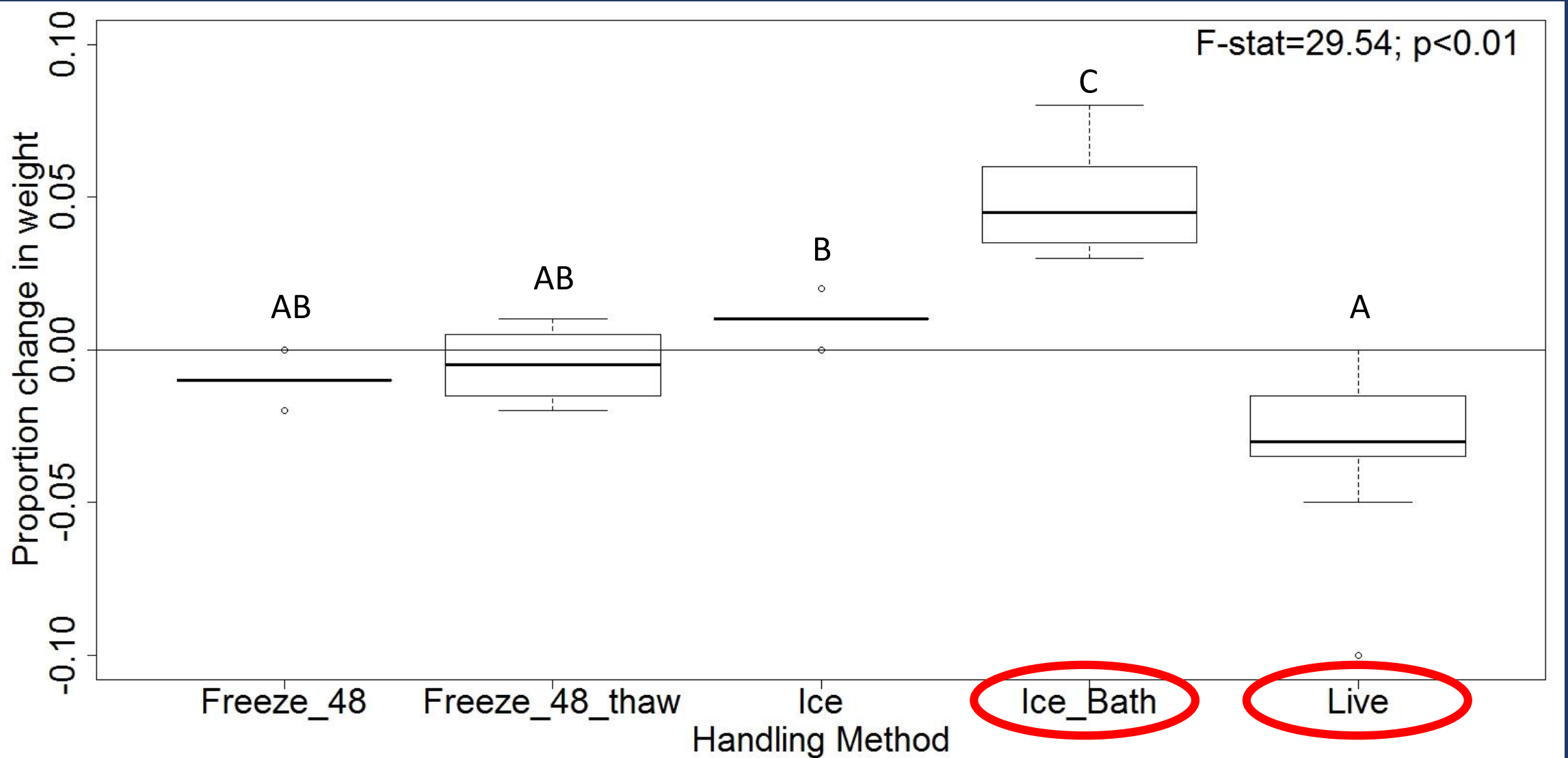


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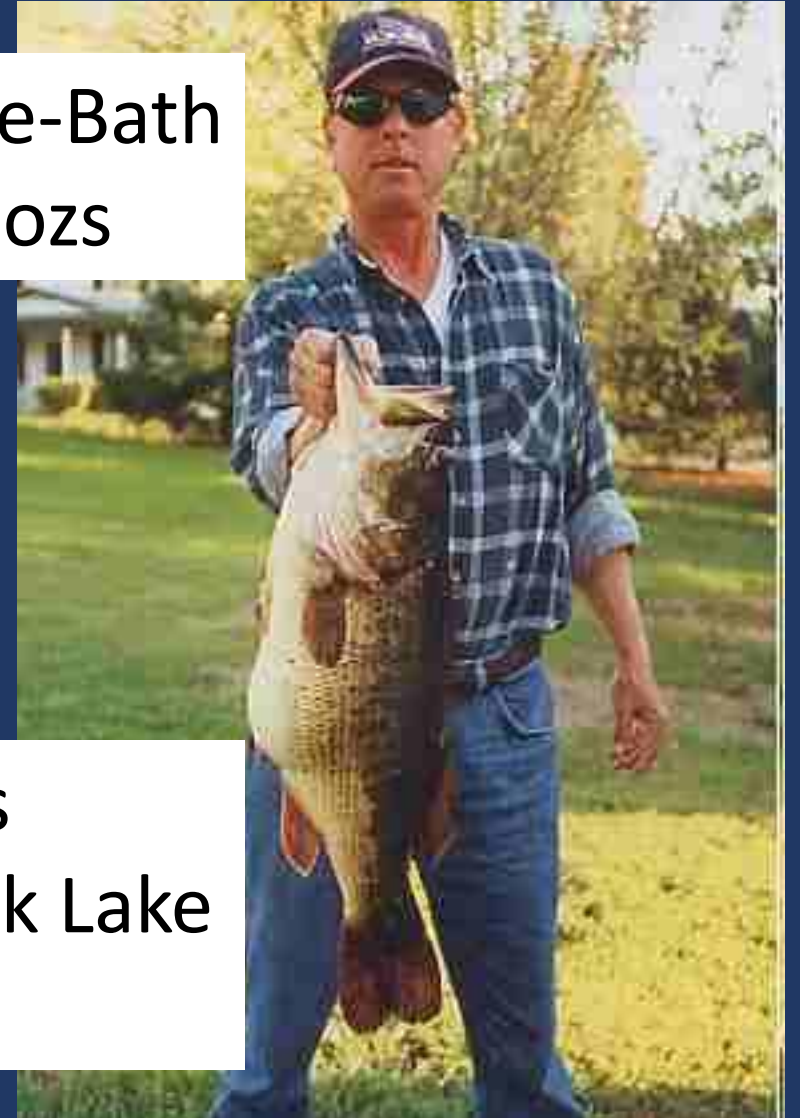
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Held in Ice-Bath  
16 lbs 15 ozs



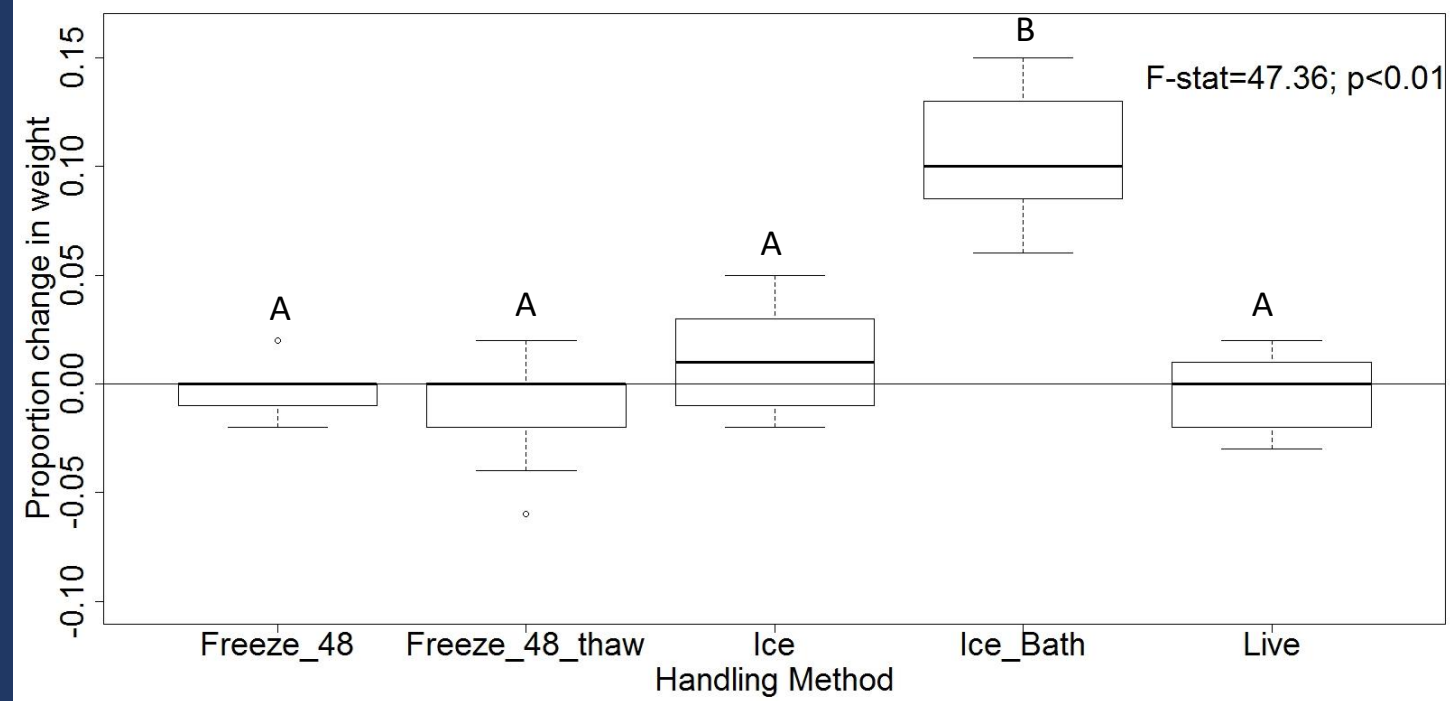
16 lbs 2 ozs  
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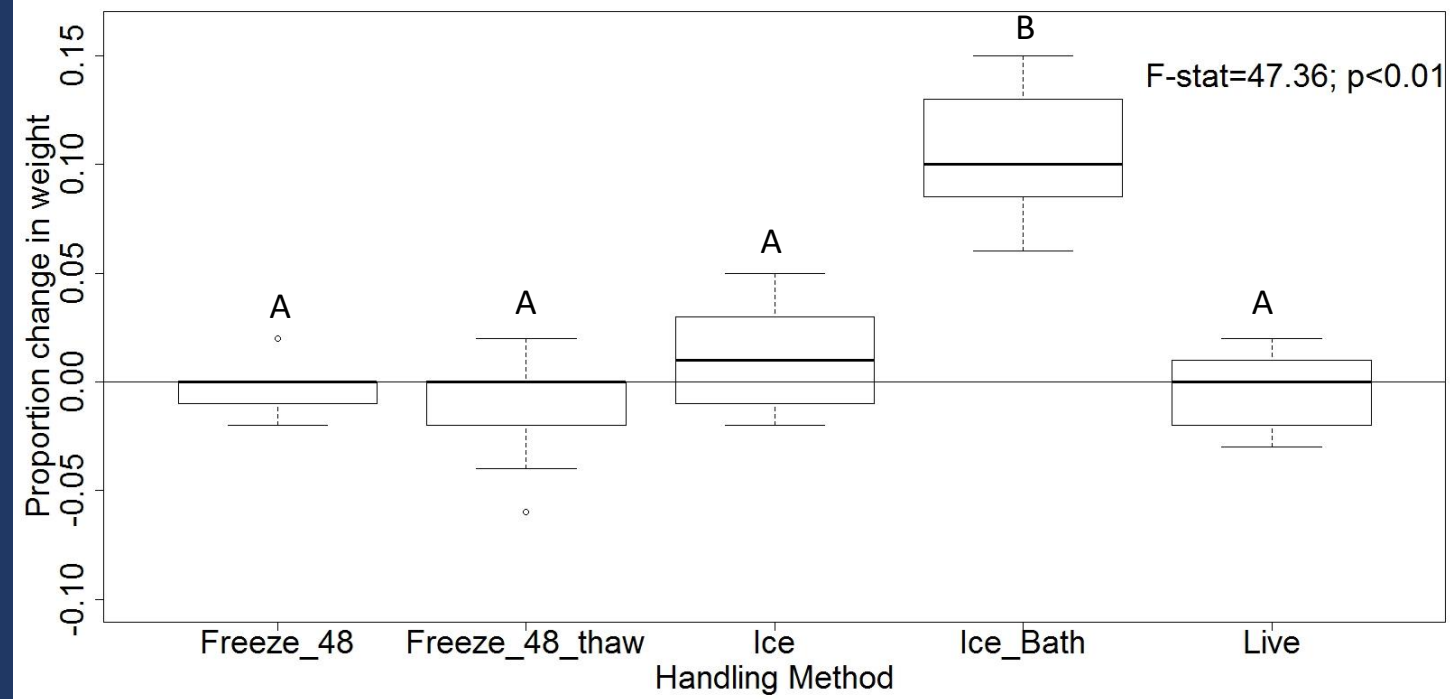


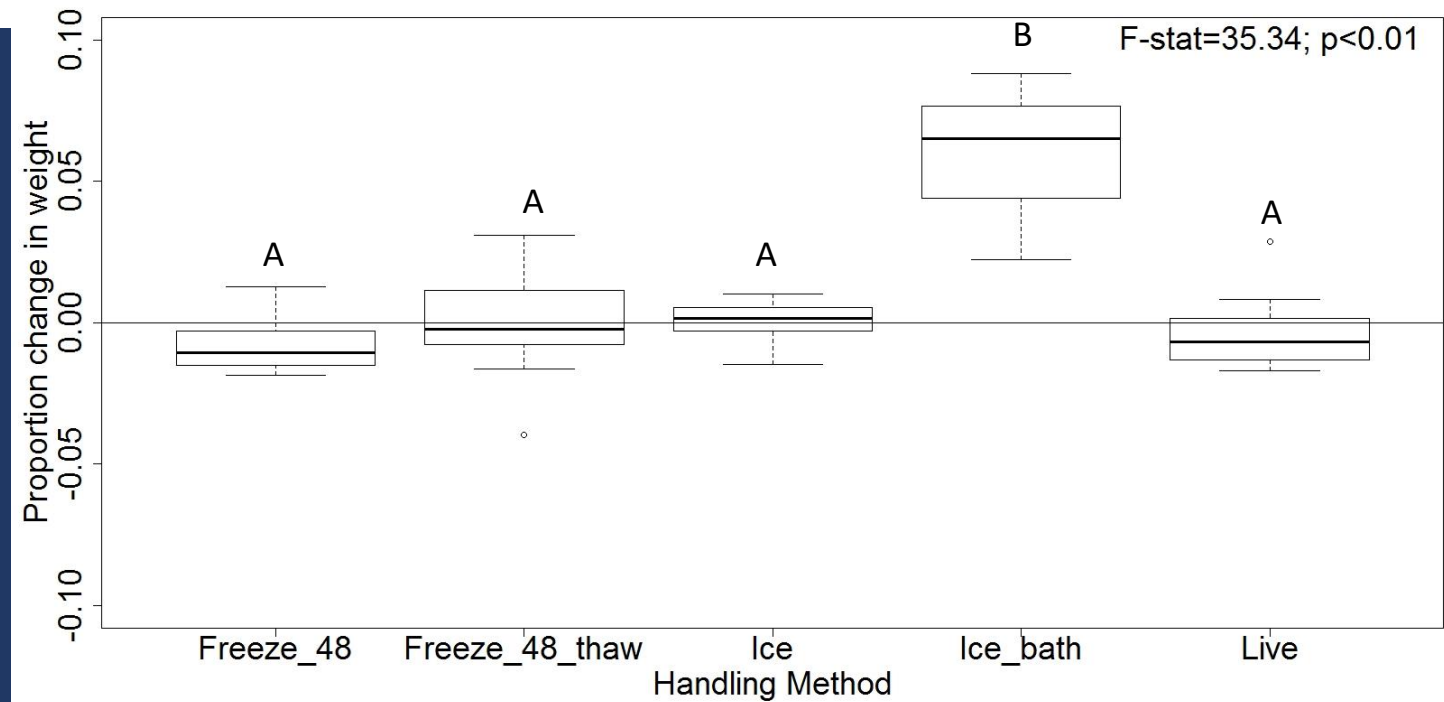
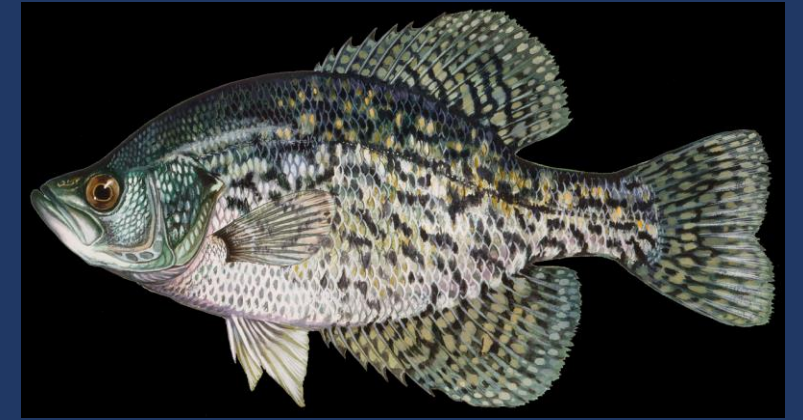
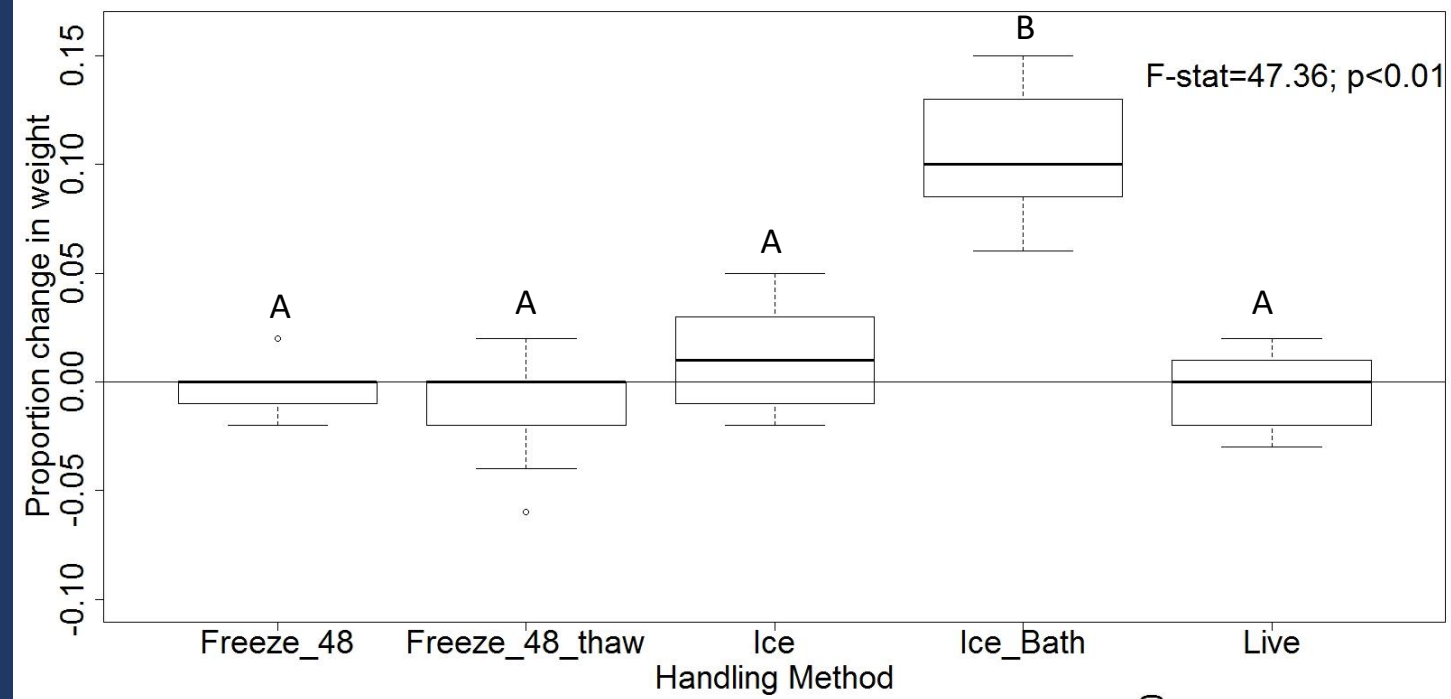














# Conclusions

- Handling method impacts change in weight
- Not all species respond the same



# Management Implications

- Evaluation of handling methods
- Revisions to suggested handling methods

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# Taking Action



## How to Preserve a Potential State Record Fish

Congratulations on catching a potential state record fish! If you haven't done so already, please try to contact your local FWC regional office using the numbers at the bottom of this page to have your catch verified by a biologist. The best way to minimize change in weight after catch is to have the fish weighed and certified as quickly as possible. If you're unable to contact a biologist for immediate certification that's okay. Use the information below to preserve your fish in the best way possible based on the material you have available.

- **Ice:** Preserving a fish in a cooler on ice with the drain plug pulled produces minimal change in weight after catch. Remember to always remove the drain plug to prevent ice from turning in to ice water over time.
- **Frozen:** Preserving a fish in a deep freezer and thawing the fish in water before certification produces minimal change in weight after catch. We recommend placing the fish in a plastic bag prior to freezing. Be sure to allow enough time for the fish to thaw prior to certification. The amount of time will vary by body size and typically take 2-6 hours. If the fish thaws more quickly than anticipated store it in a cooler on ice with the drain plug pulled until it can be certified.
- **Alive:** Preserving a fish alive can allow for change in weight due to stress and regurgitation of food items, this is particularly true for larger fish like bass and catfish. Smaller species such as bream and crappie tend to experience limited change in weight over time when preserved alive.
- **Ice water:** Preserving fish in a cooler with ice water always leads to the greatest change in weight. To minimize change in weight post catch avoid preserving fish in an ice-bath.



# Thank You

- Andy Strickland
- Scott Bisping
- Ryan Henry
- Bill Sagues
- Jacob Gehres







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# QUESTIONS?



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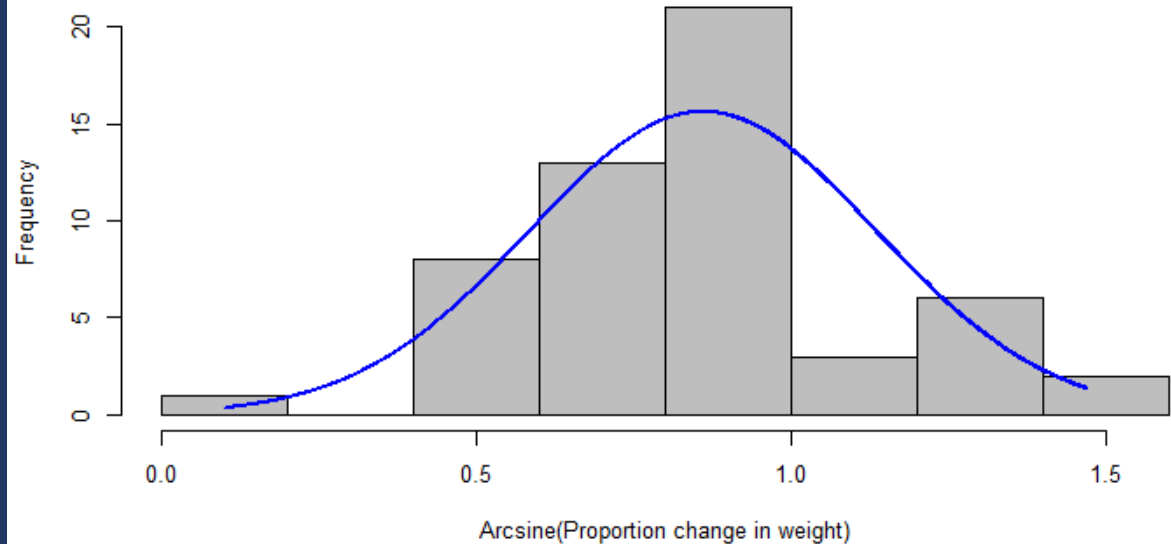
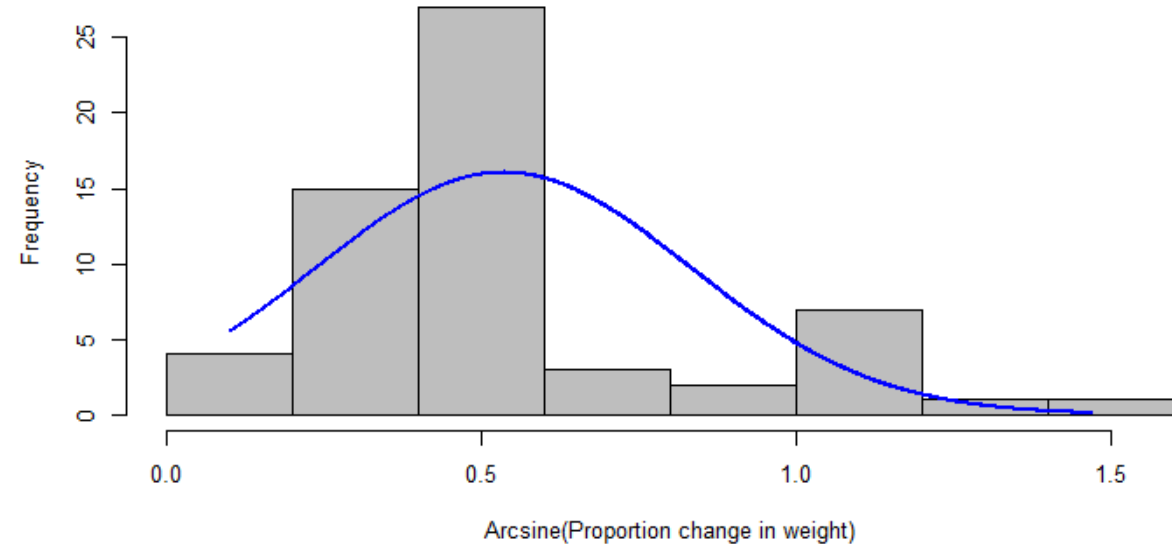
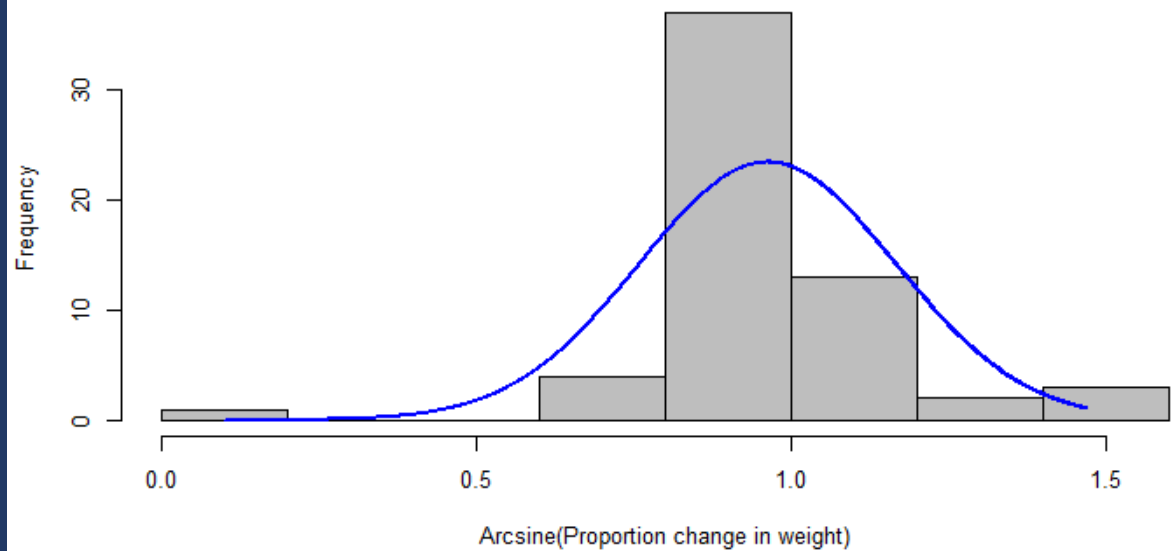
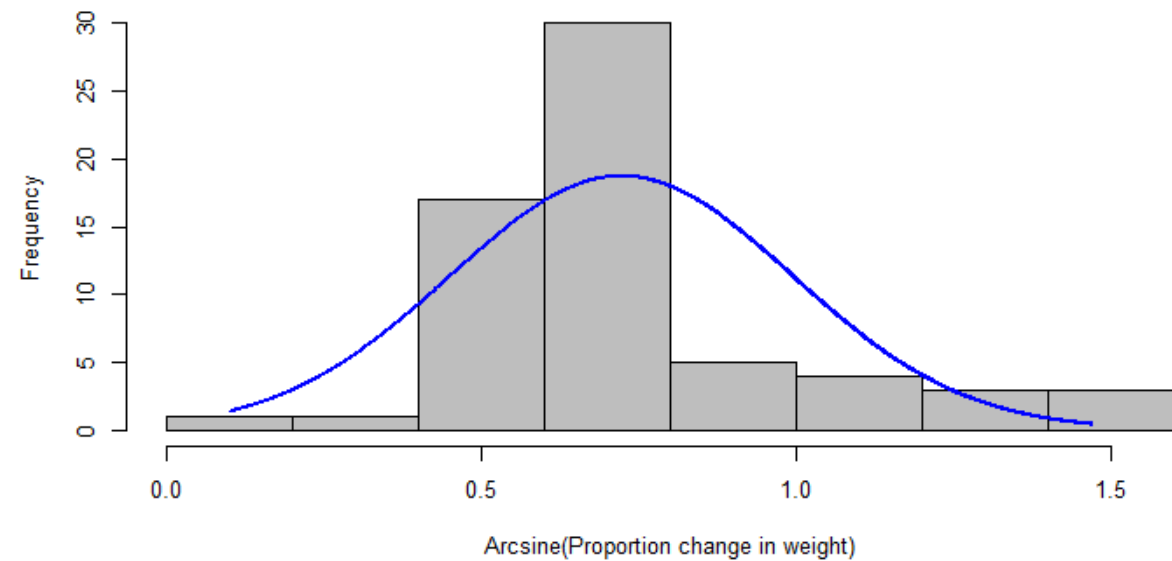


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# Breaking the LMB State Record

- 16 lbs 4 ozs
- Ice Bath
  - Average weight gain at 48 hours: 4.9%
    - $16 \text{ lbs } 4 \text{ ozs} \times 0.951 = \mathbf{15 \text{ lbs } 7 \text{ ozs}}$
  - Max observed weight gain at 48 hours: 8%
    - $16 \text{ lbs } 4 \text{ ozs} \times 0.92 = \mathbf{14 \text{ lbs } 15 \text{ ozs}}$

**Flathead Catfish****Black Crappie****Largemouth Bass****Bluegill**

# Mean Water Temperature

**Black Crappie: 16.43° C or 61.57° F**

**Flathead Catfish: 25.32° C or 77.58° F**

**Flathead Catfish Cooled: 17.81° C or 64.06° F**