

Cape Fear River Anadromous Species Spawning Stocks – 2018



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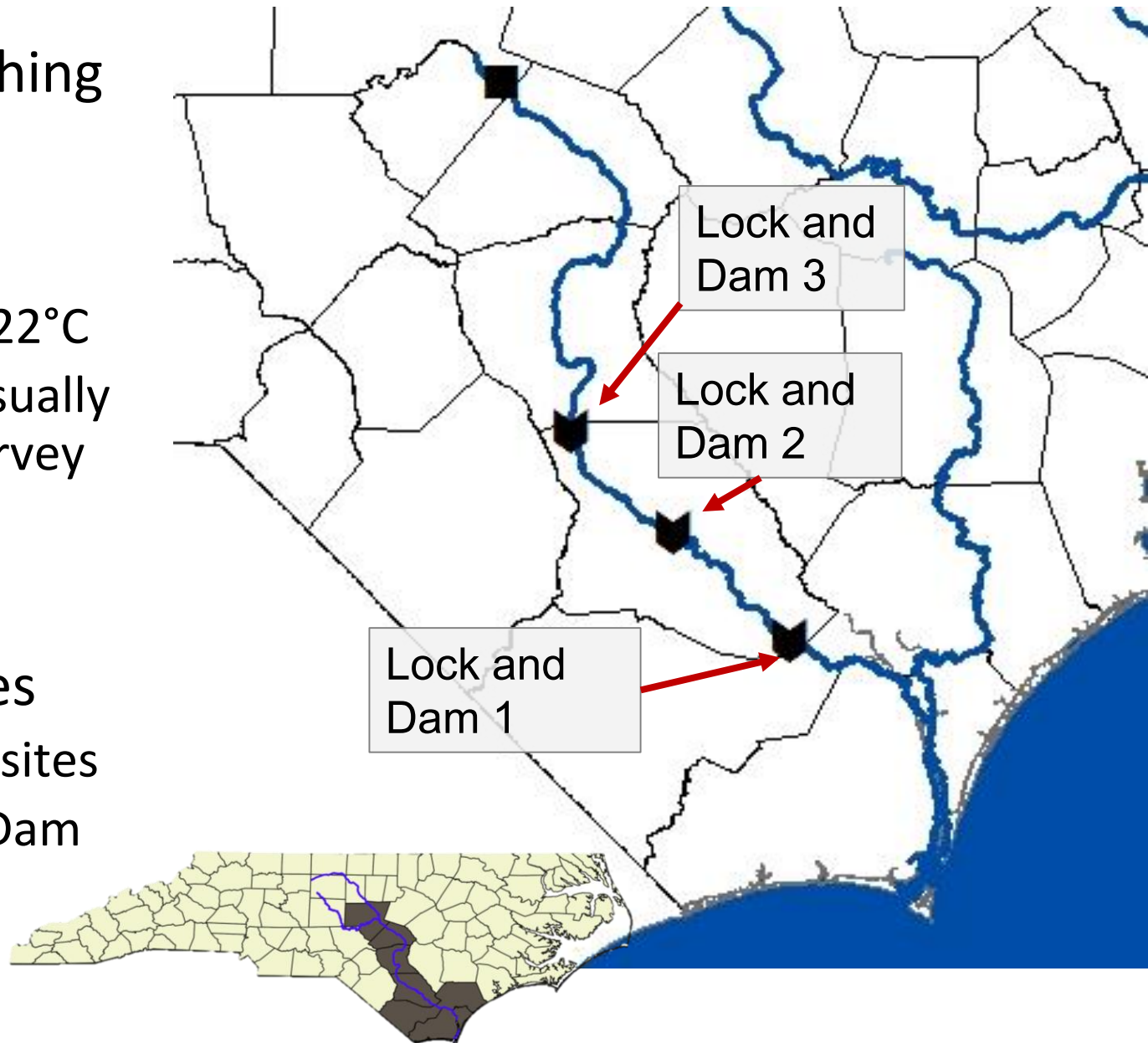
Overview

- Annual monitoring efforts
- Stocking/parentage-based tagging



Methods

- Boat electrofishing
- March–May
 - Typically 14–22°C
 - A few shad usually present at survey end
- Weekly samples
 - Fixed 30-min sites
 - Each Lock & Dam

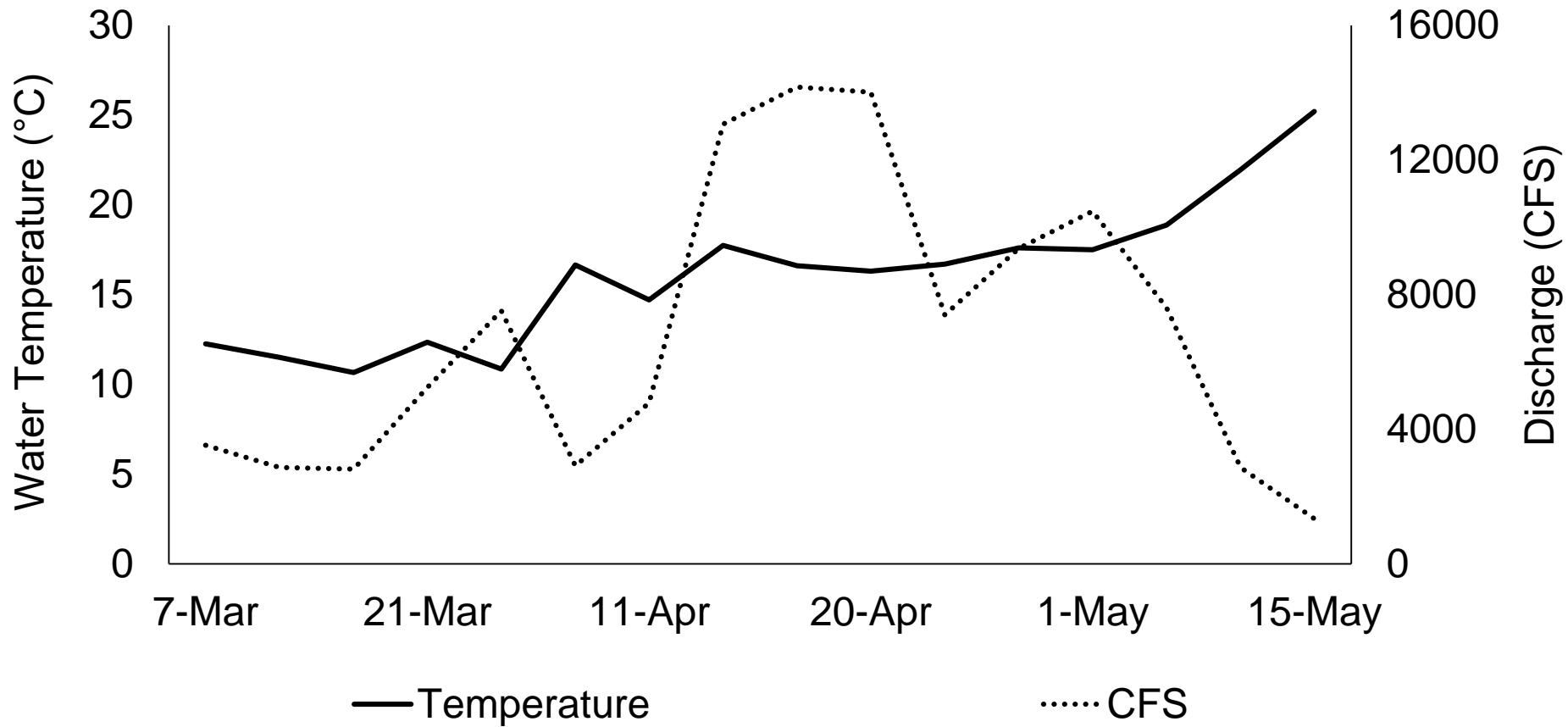


Lock and Dam 2 – 2018

- Closed for business
- Suspended electrofishing efforts at LD2 during 2018



2018 Overview

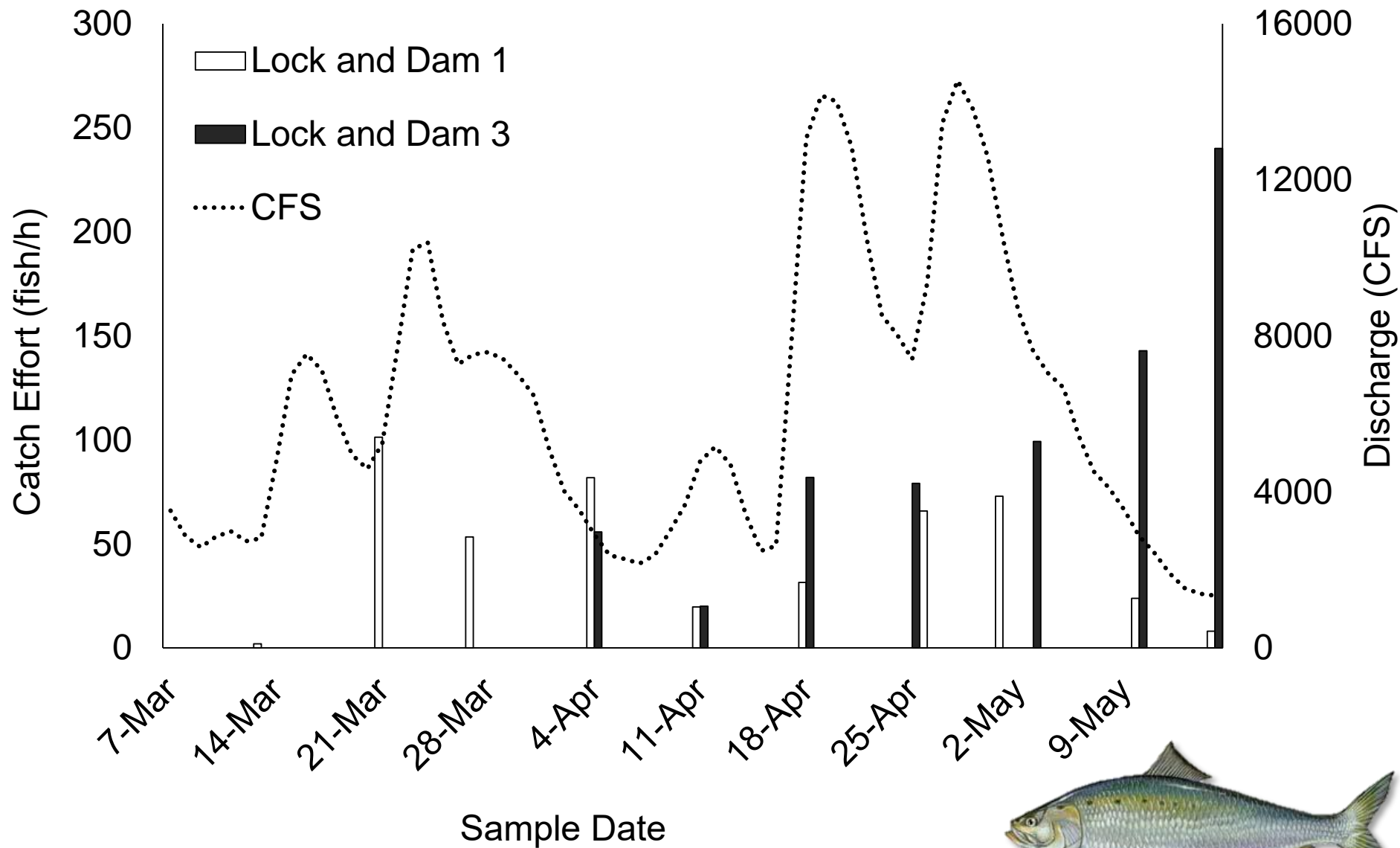


2018 Overview

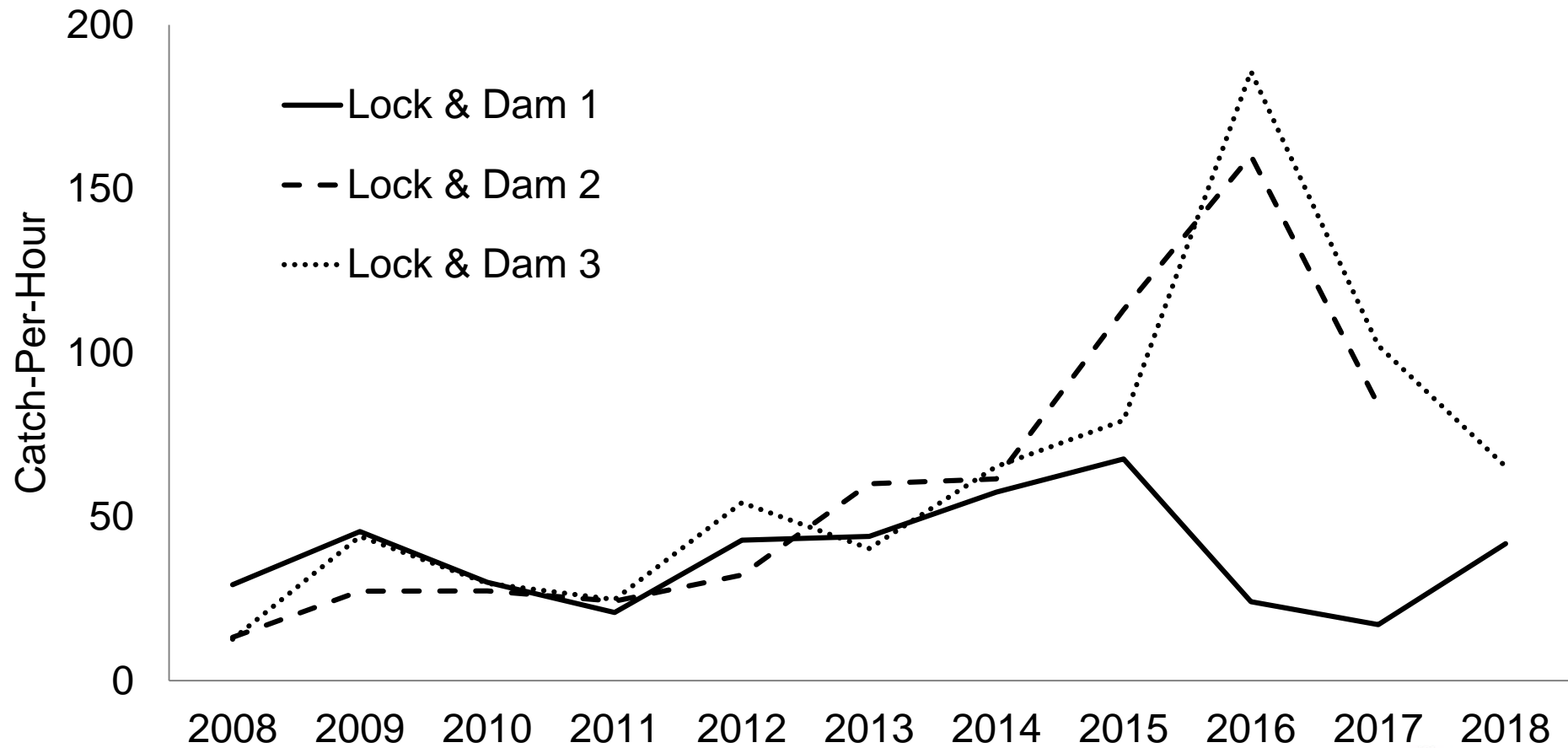
- 14.5 electrofishing hours
 - **American Shad:**
 - 655 individuals
 - 1.4:1 M:F
 - **Striped Bass:**
 - 123 individuals
 - 0.9:1 M:F
 - **Hickory Shad:**
 - 27 individuals
 - 4.4:1 M:F



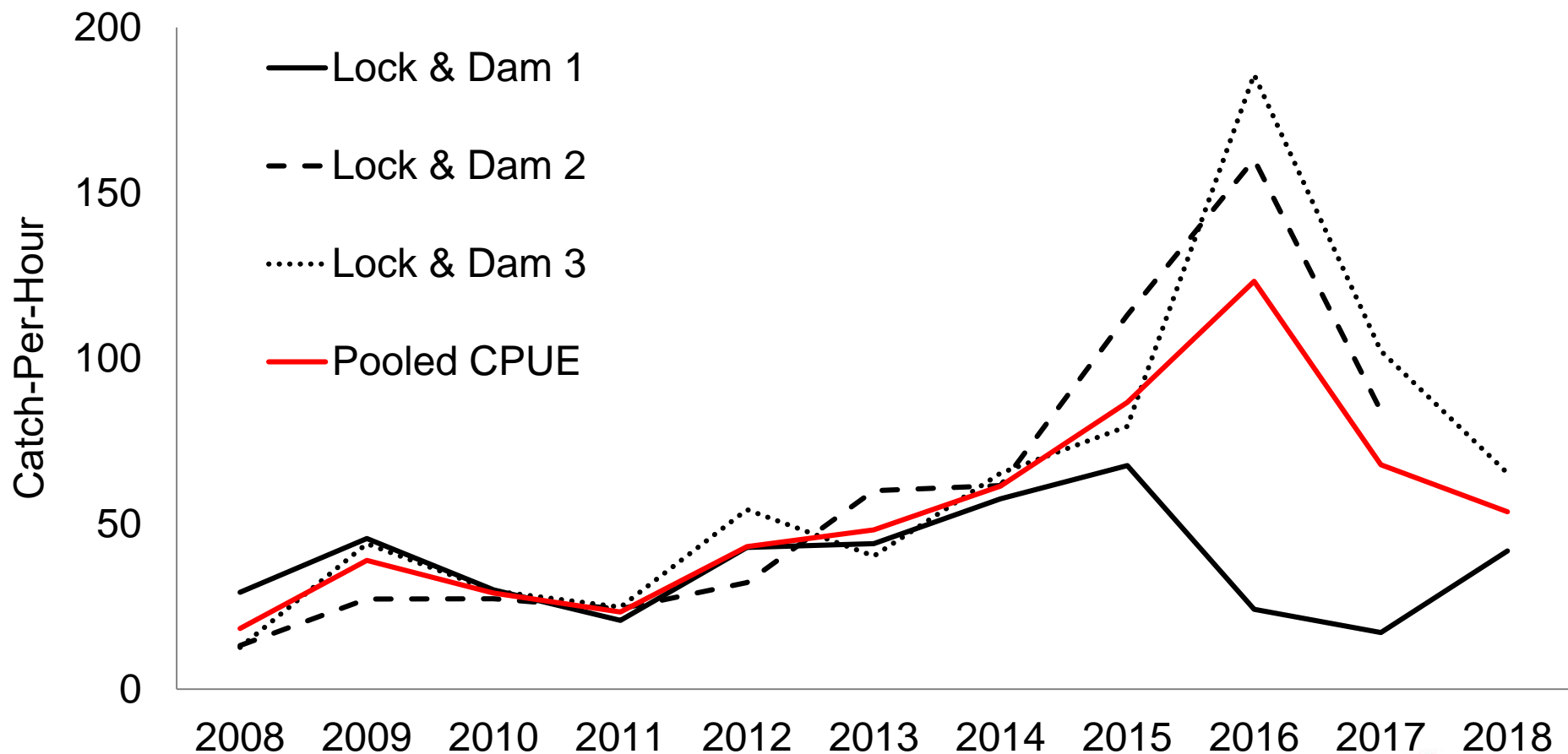
American Shad 2018



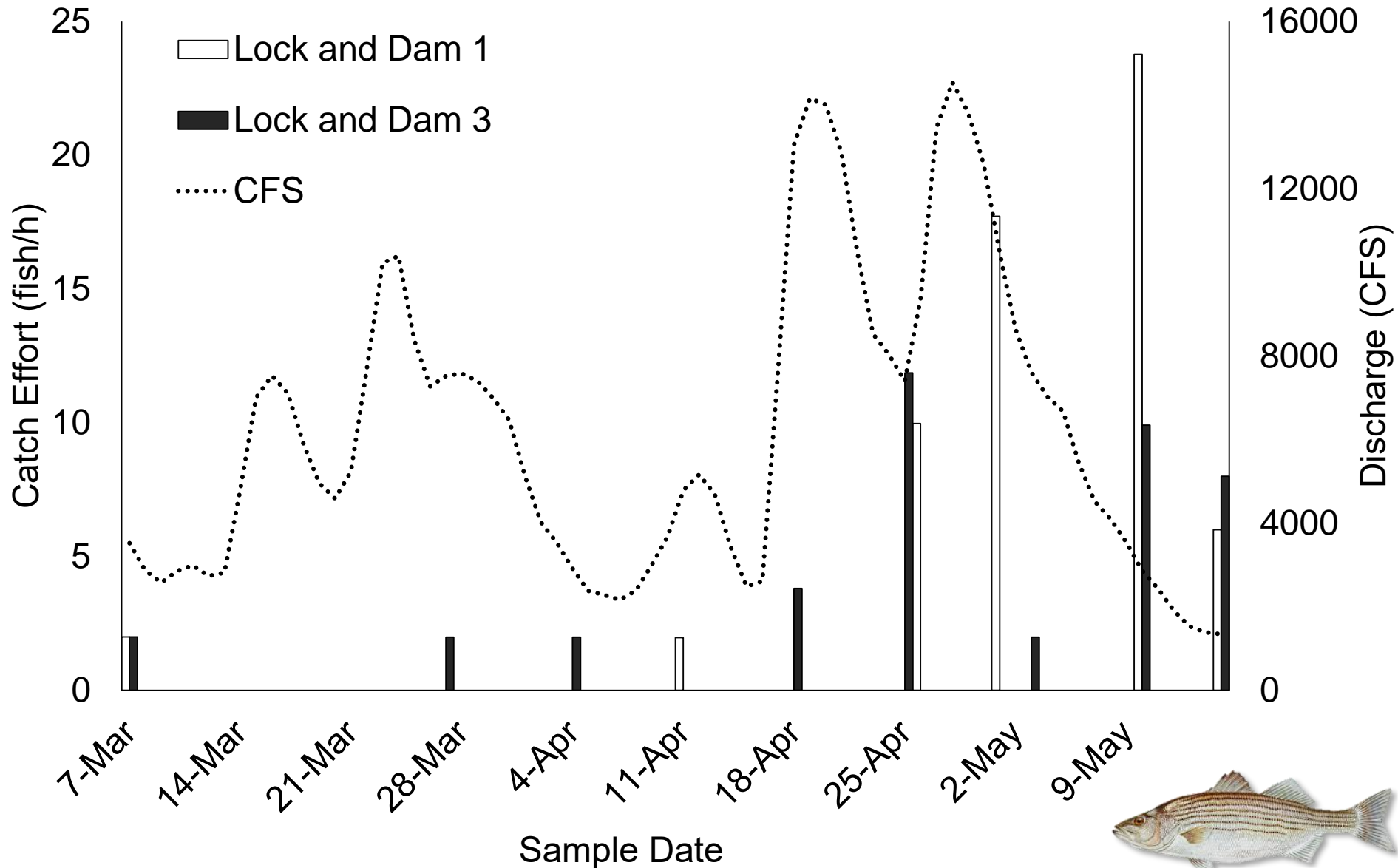
American Shad



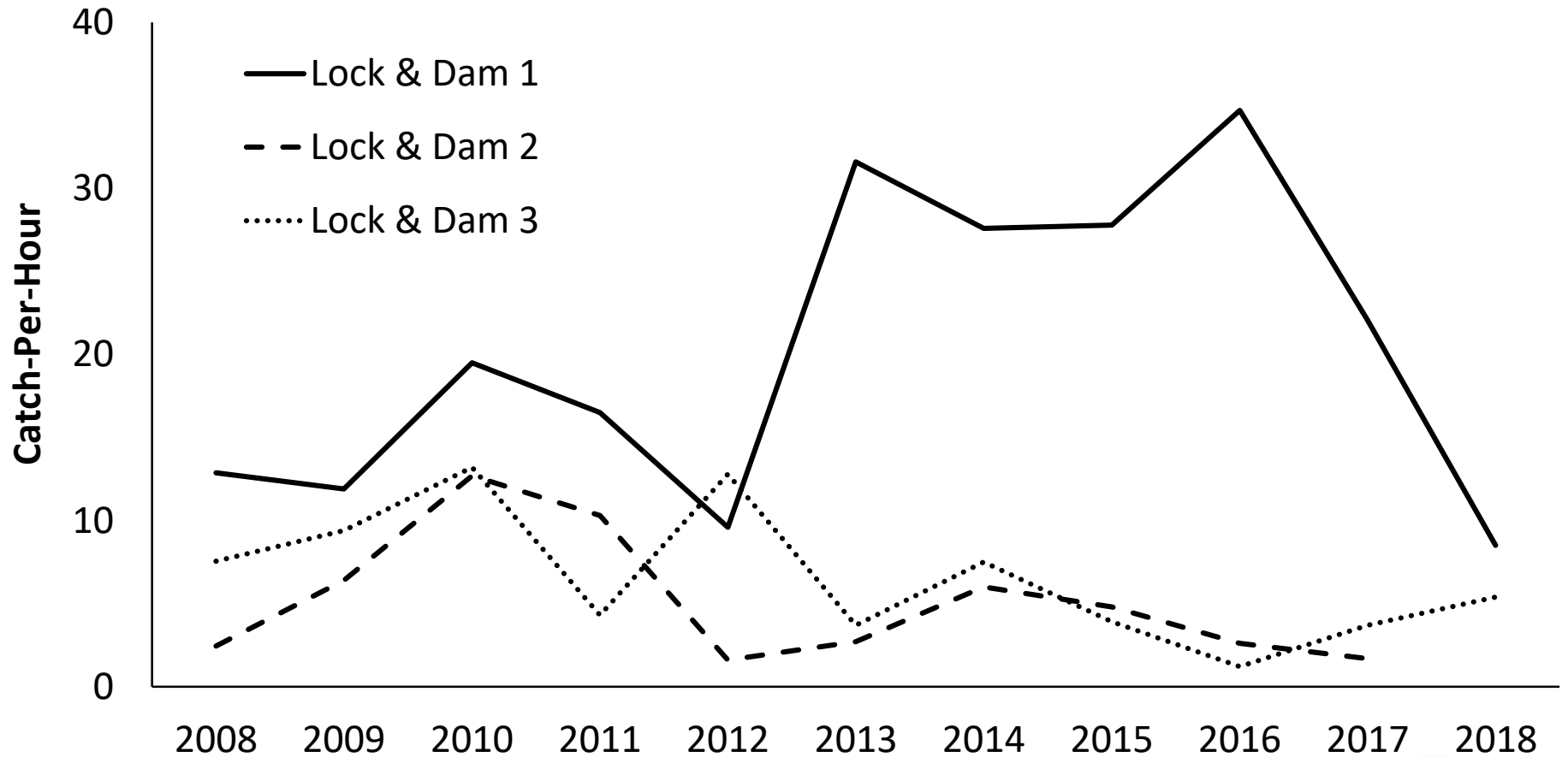
American Shad



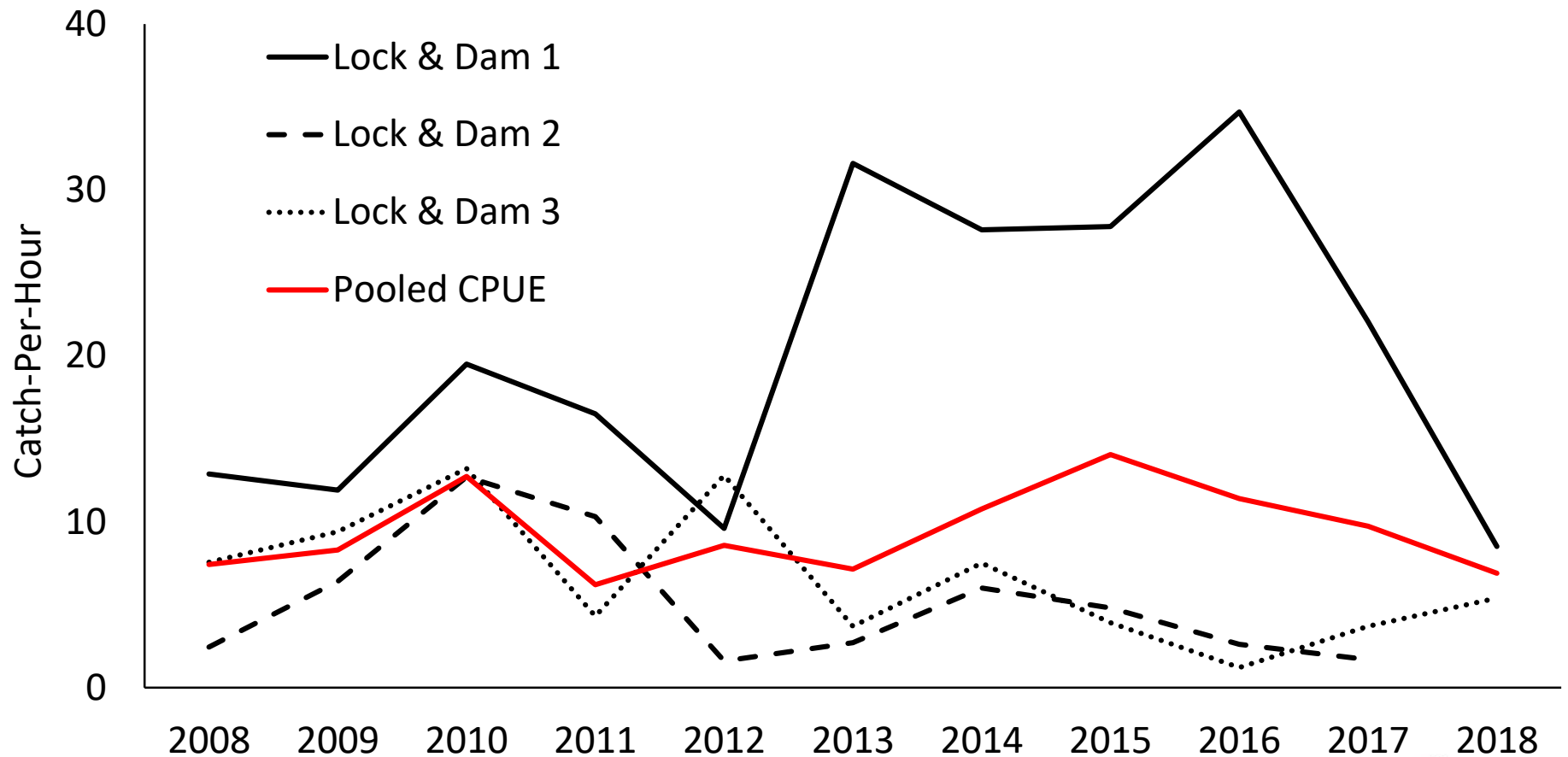
Striped Bass 2018



Striped Bass



Striped Bass



Take Home Points:

- American Shad:
 - Similar trends as 2017
 - Overall mean CPUE still above pre-2012 levels
- Striped Bass:
 - Some inter-annual variation in pooled CPUE
 - Lower 2018 levels than recent years



Overview

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- Stocking/parentage-based tagging



Stocking and Parentage-Based Tagging

- Stocking:
 - Target stocking 100,000 6-8" Striped Bass each year
 - Lock and Dam 1
 - Lock and Dam 2
 - Basin reservoirs stocked with Cape Fear origin Striped Bass
 - Fin clip taken from parents for parentage-based tagging



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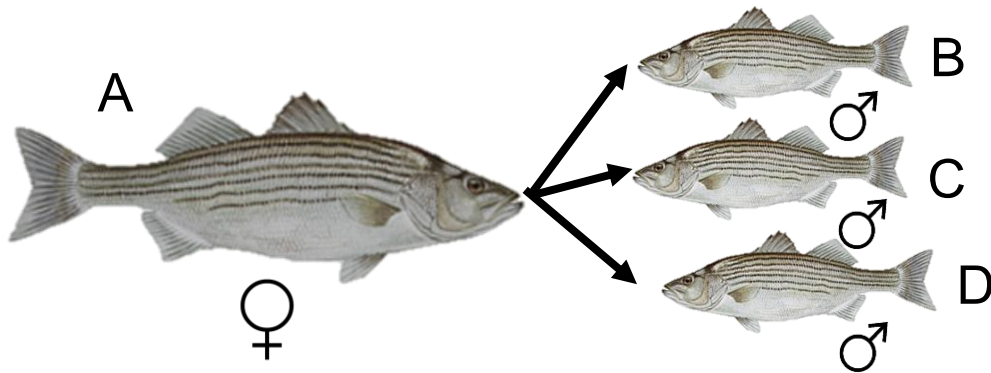
Stocking and Parentage-Based Tagging



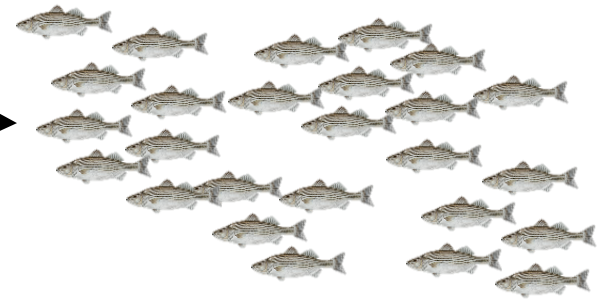
- Parentage-Based Tagging:
 - Utilizes genetic microsatellite markers
 - Identifies origin of fish
 - Hatchery vs. non hatchery
 - One year lag time for results

Broodstock Production

Spring 2010 tank spawned



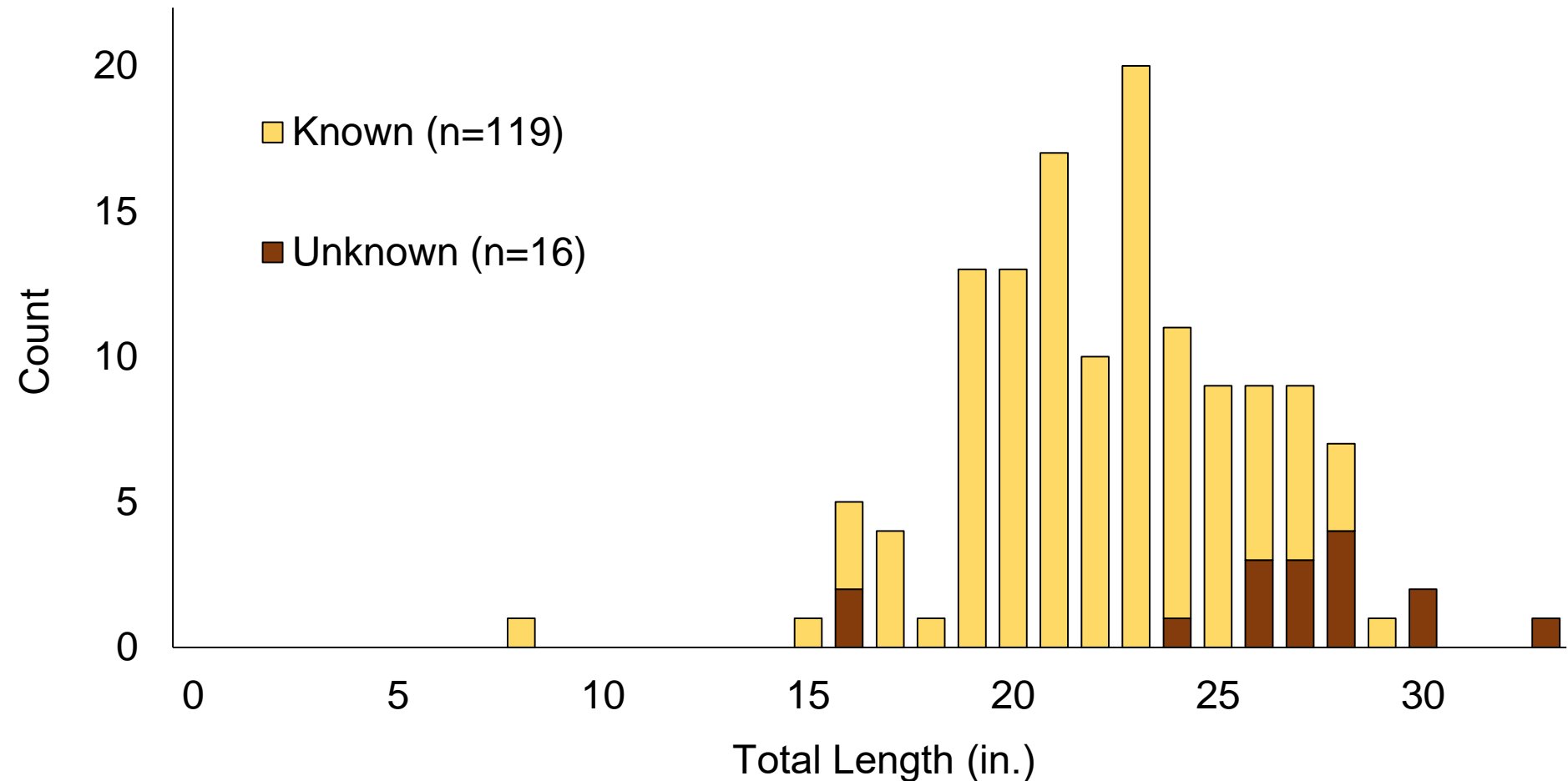
Stocked in December 2010



Recaptured in spring 2017

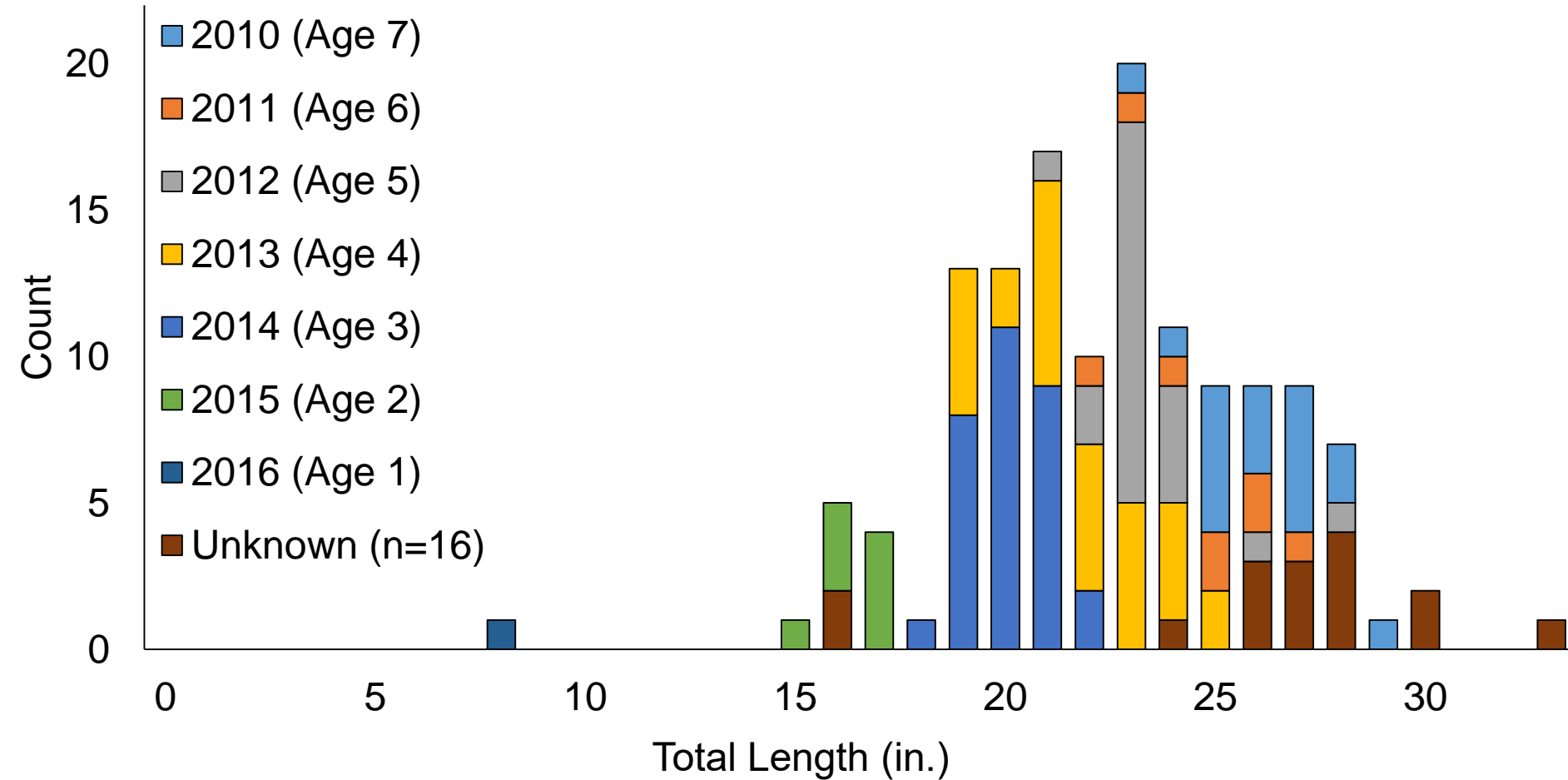


2017 Parentage-Based Tagging



- **>90% of Striped Bass are hatchery-origin**
- Only 2 fish of a size (16-in) likely to indicate wild origin

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Take Home Points:

- PBT results:
 - High hatchery contribution >90%
 - Reservoir contribution:
 - 36% 2012 YC (Age 5) reservoir stocked
 - 22% 2013 YC (Age 4) reservoir stocked
 - 45% 2014 YC (Age 3) reservoir stocked
 - At least **25%** of 2017 Striped Bass stocked into upstream reservoirs

