



Characterization of North Carolina's Sheepshead Fisheries

Current Trends and Next Steps

DEPARTMENT OF ENVIRONMENTAL QUALITY

Marine Fisheries

Marine Fisheries Commission | Anne Markwith | August 2025



Presentation Overview

- Life history
- Management background
- Current data trends
- Next steps



Life History



- Distribution
 - Nova Scotia through Gulf of Mexico to Brazil
- Atlantic coast and Gulf of Mexico genetically distinct
- Structure oriented
- High site fidelity, with seasonal spawning migration

Life History



- Long lived species
 - Oldest known: 35 (VA)
 - Oldest in NC: 34
- Maturity:
 - 50% mature by 12 inches FL (age 2)
 - 100% mature by 16 inches FL (ages 3 – 5)

Management Background

- Regulations prior to 2012:
 - No size limit
 - Recreational fishery: included in 20-fish aggregate bag limit
 - Commercial fishery: no trip limit
- Removed from South Atlantic Fishery Management Council (SAFMC) Snapper Grouper FMP in 2012
- NCMFC approved sheepshead rule (15A NCAC 03M. 0521) in Nov 2013
 - Requested Nov 2012
 - Effective April 2014



Management Background

- Development of management included public input opportunities
- State management put into place June 1, 2015
 - 10-inch minimum fork length for both sectors
 - Recreational bag limit - 10 fish/person/day
 - Commercial trip limits:
 - None for pound nets
 - 10 fish for gigs/spears
 - 300 pounds for all other gears
- No state or federal FMP
- No peer reviewed stock assessment for North Carolina stock



**FISHERY MANAGEMENT PLAN UPDATE
SHEEPSHEAD
AUGUST 2025**

STATUS OF THE FISHERY MANAGEMENT PLAN**Fishery Management Plan History**

Original FMP Adoption:	None
Amendments:	None
Revisions:	None
Supplements:	None
Information Updates:	None
Schedule Changes:	None
Comprehensive Review:	None

Sheepshead (*Archosargus probatocephalus*) was previously managed in the South Atlantic Fishery Management Council (SAFMC) Snapper Grouper Fishery Management Plan (FMP). The plan restricted recreational anglers to an aggregate 20 fish bag limit, no commercial trip limit, and no size limit. In state waters, North Carolina deferred management to the Council regulations. In April 2012, sheepshead was removed from the SAFMC snapper grouper management complex through the Comprehensive Annual Catch Limit Amendment (Amendment 25; SAFMC 2011). Subsequently, N. C. Division of Marine Fisheries (DMF) Director proclamation authority for sheepshead management was invalidated since sheepshead was no longer part of the North Carolina FMP for Interjurisdictional Fisheries or a Council managed species. In November 2012, the N.C. Marine Fisheries Commission (MFC) requested a rule be developed for sheepshead; and approved the rule in November 2013 that specifies the Director's proclamation authority, including the ability to implement size, bag, and trip limits, as well as season and gear restrictions (NCMFC 15A NCAC 03M .0521). In July 2014, the DMF began developing potential management measures for sheepshead to present to the MFC. In 2015, the Commission implemented new regulations that included size, bag, and trip limits to prevent overharvest, as well as to allow a greater number of fish to spawn before being harvested. There currently is no state or federal FMP for sheepshead.

Management Unit

North Carolina manages sheepshead in state waters (internal joint and coastal fishing waters and 0 to 3 miles in the Atlantic Ocean).

Goal and Objectives

None

DESCRIPTION OF THE STOCK**Biological Profile**

Sheepshead are a relatively large, long-lived member of the porgy family that ranges from Nova Scotia, Canada to Florida and the Gulf of Mexico south to the Atlantic coast of Brazil. They are generally found year-round in North Carolina coastal waters ranging from inshore brackish waters to offshore rocky bottom (Hildebrand and Cable 1938). Juveniles are associated with shallow vegetated habitat as well as hard structures that offer protection (Parsons and Peters 1987; Johnson 2024). As sheepshead grow larger, they move to typical adult habitat including oyster reefs, rocks, pilings, jetties, piers, and wrecks (Johnson 1978).

Data Trends

Data trends monitored annually through annual FMP update document

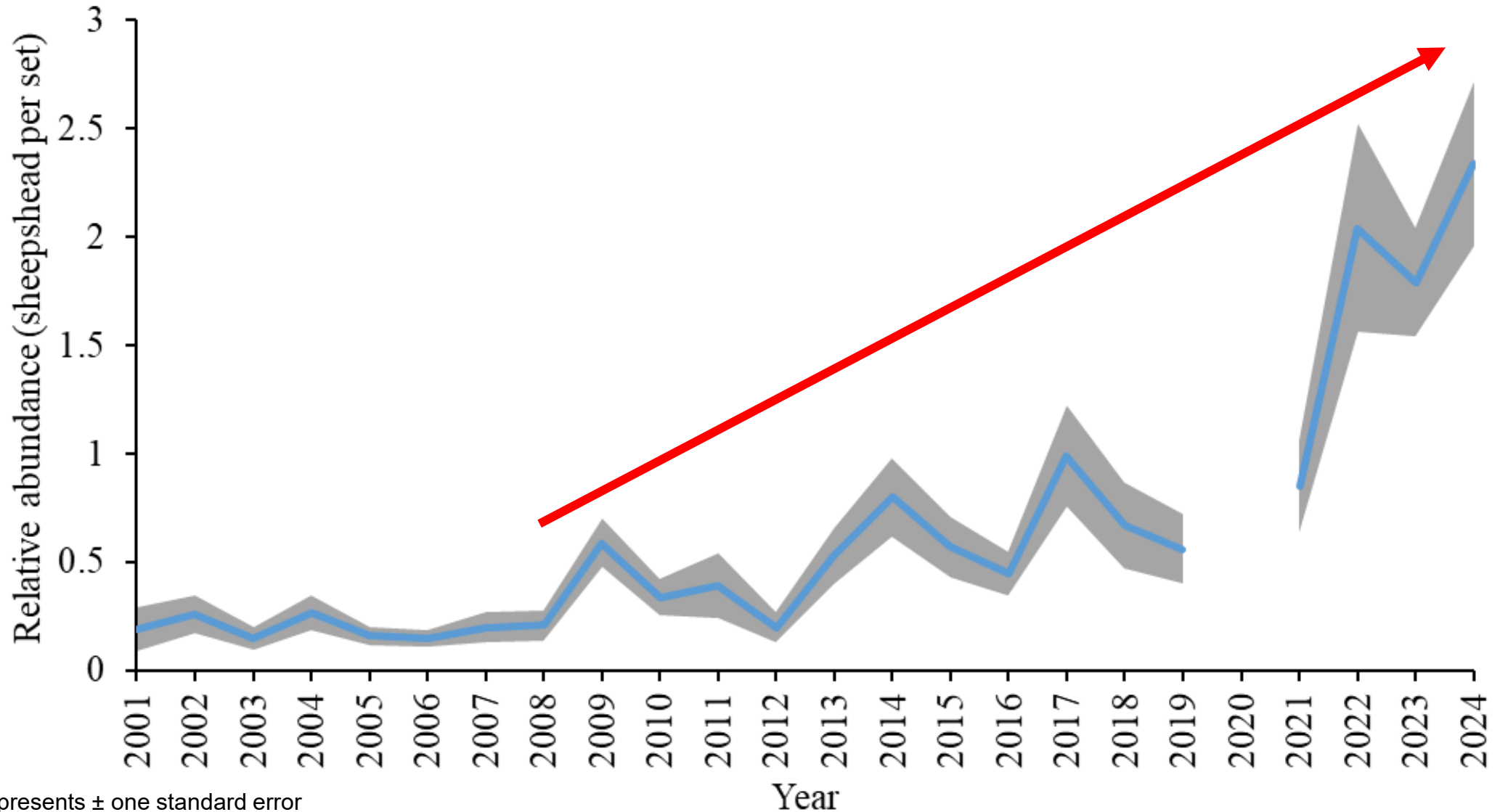
- Relative abundance indices
- Recreational catch
- Commercial catch
- Length composition
- Age composition

Relative Abundance Indices

- Juvenile Index – P120 (Estuarine Trawl Survey)
 - June and July
 - Pamlico Sound
- Adult Index – P915 (Pamlico Sound Gillnet Survey)
 - May through November
 - Eastern side Pamlico Sound

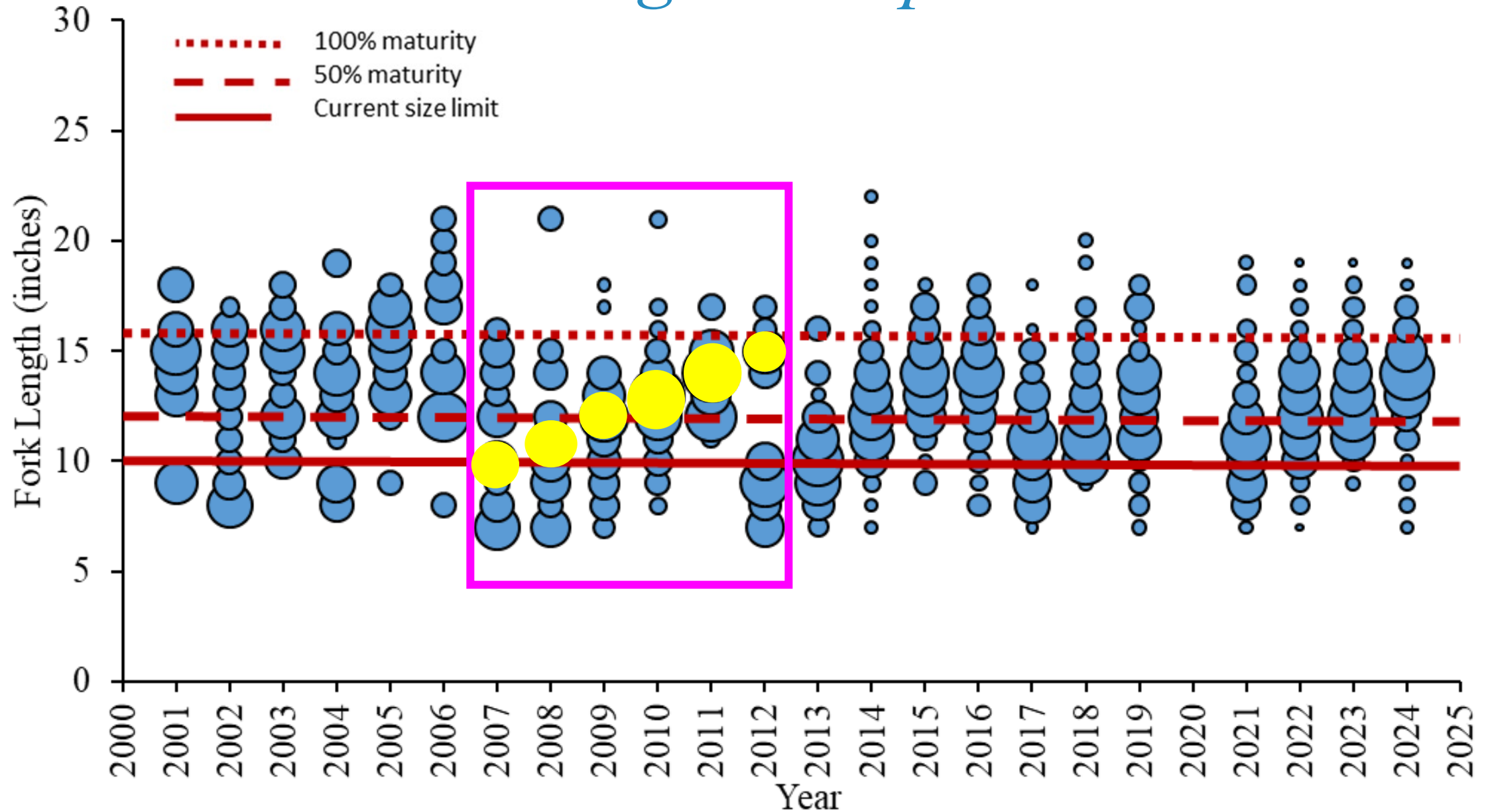


P915 Relative Abundance Index

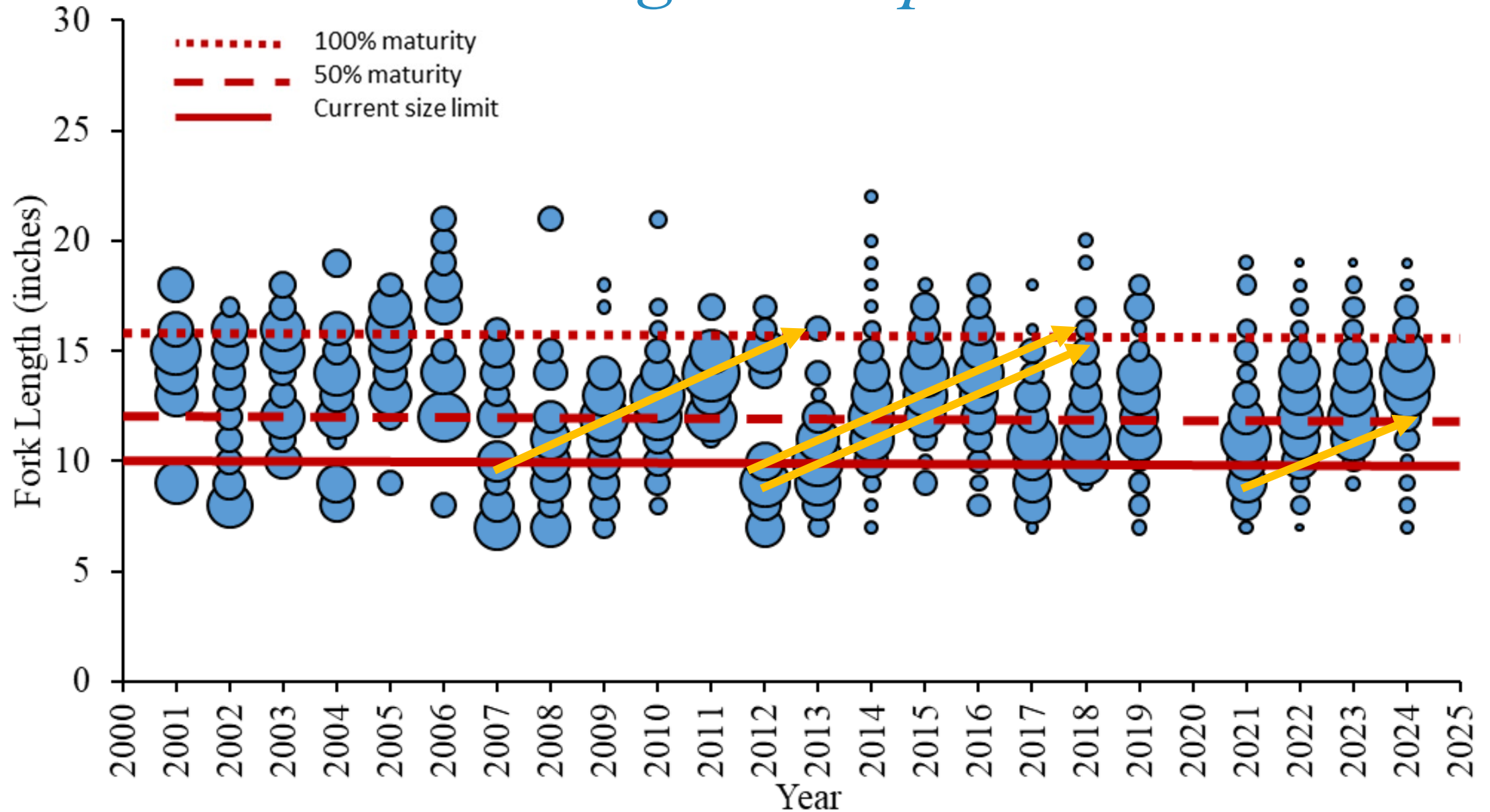


Shaded area represents \pm one standard error

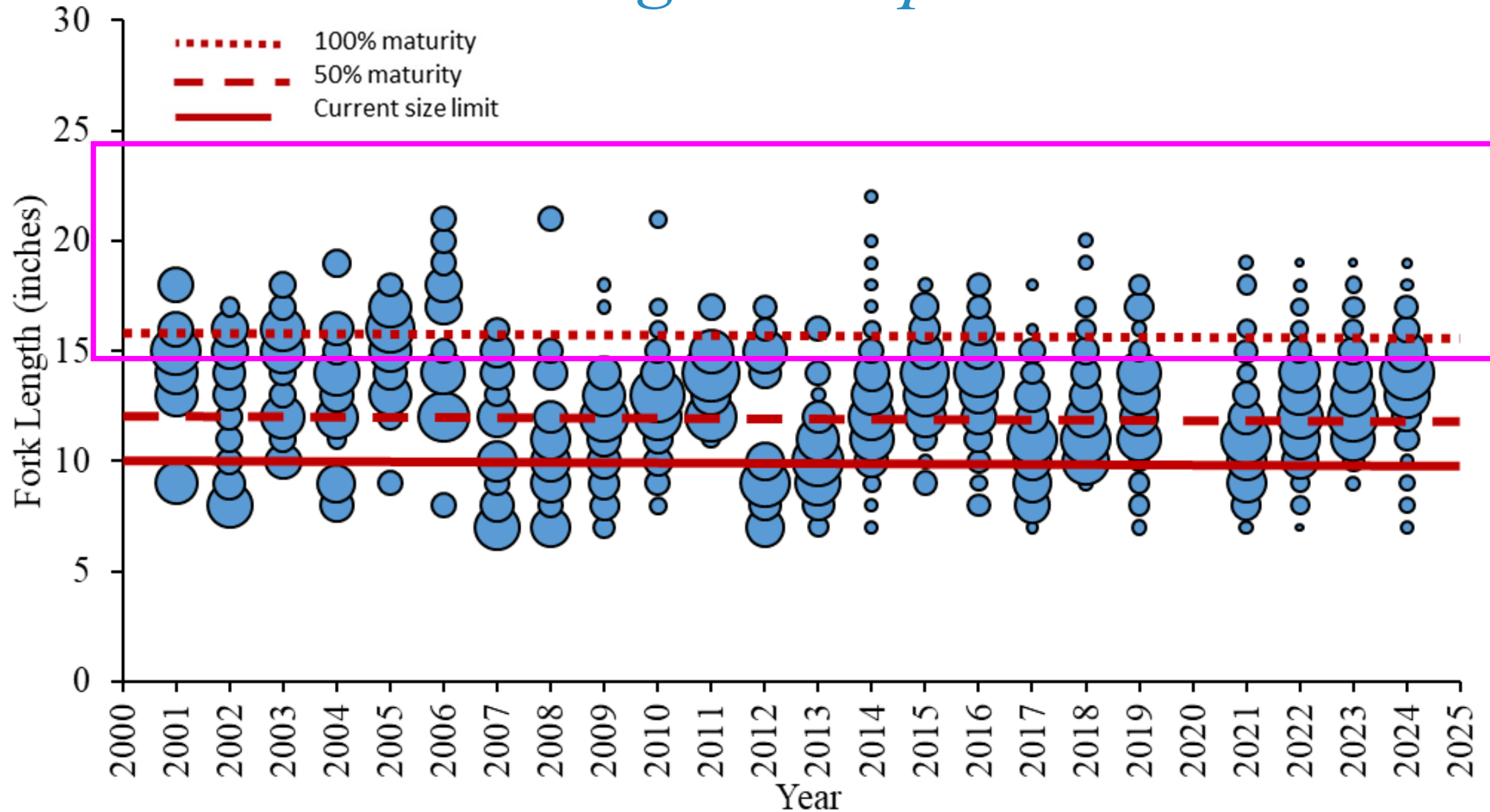
P915 Length Composition



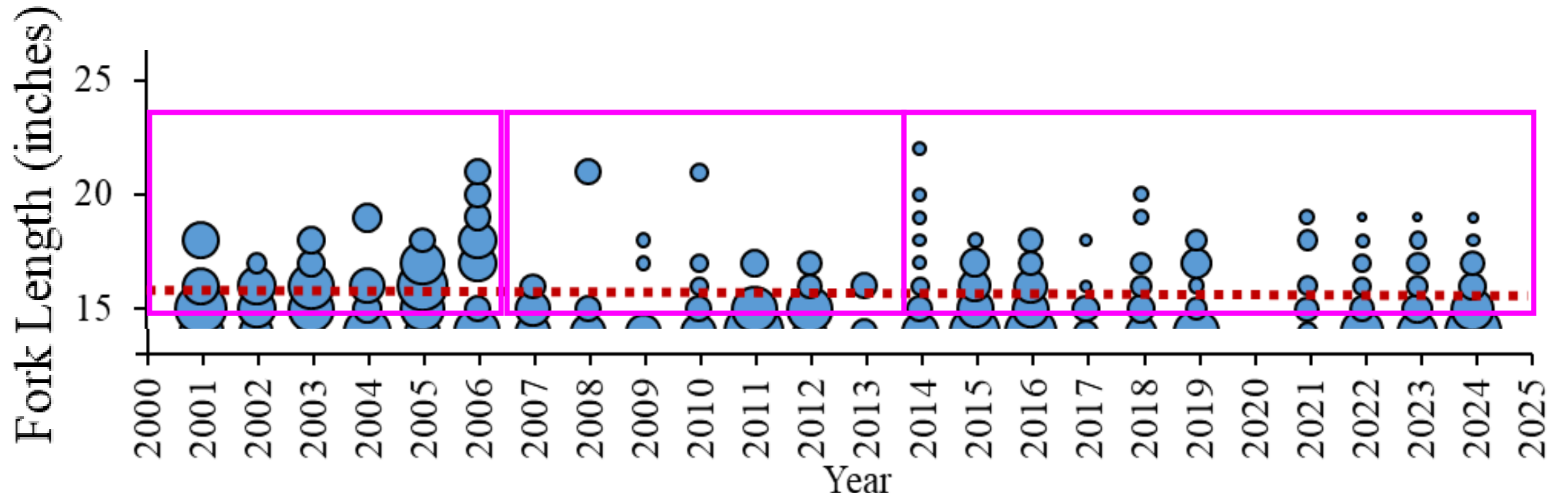
P915 Length Composition



P915 Length Composition



P915 Length Composition

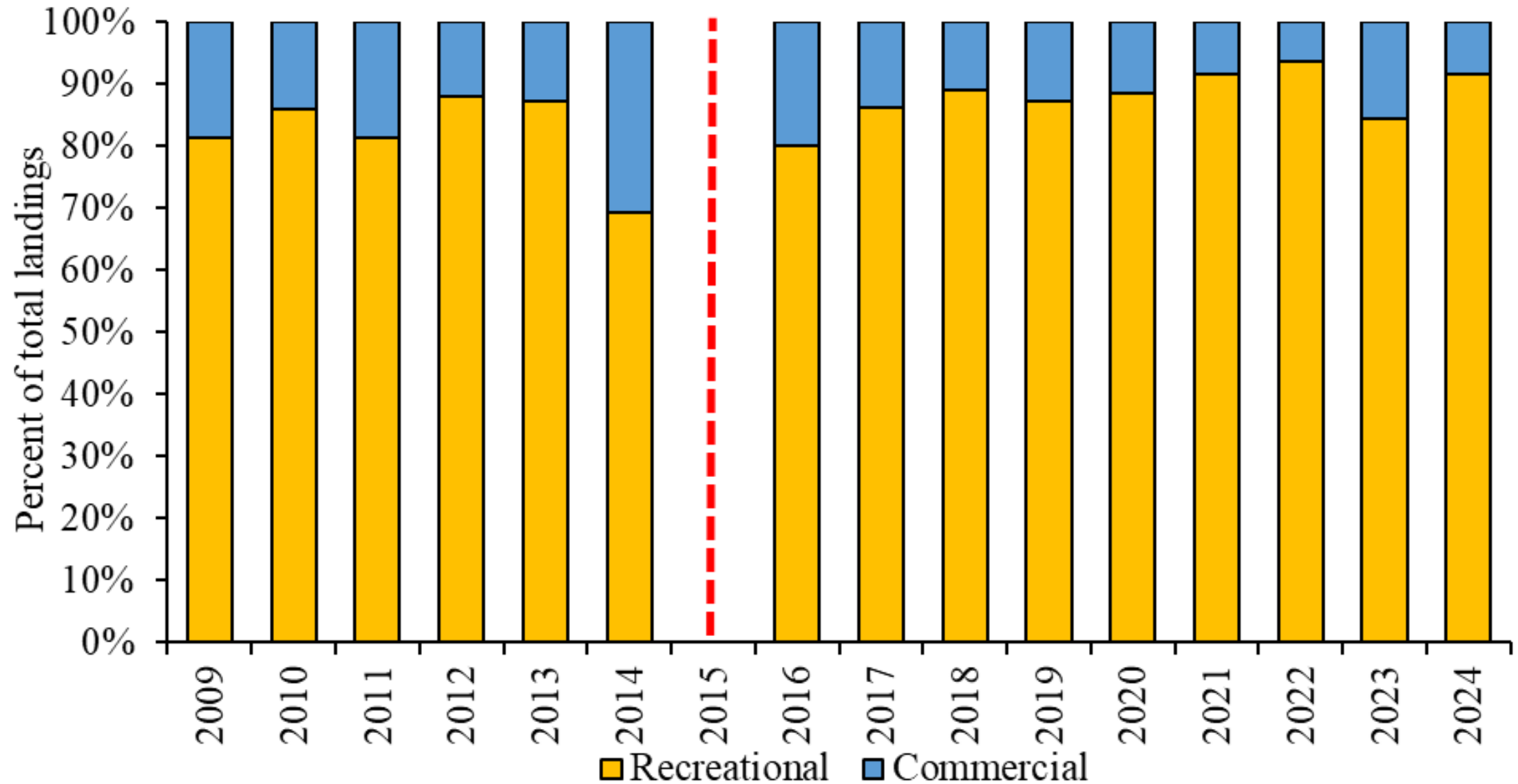


Recreational and Commercial Landings

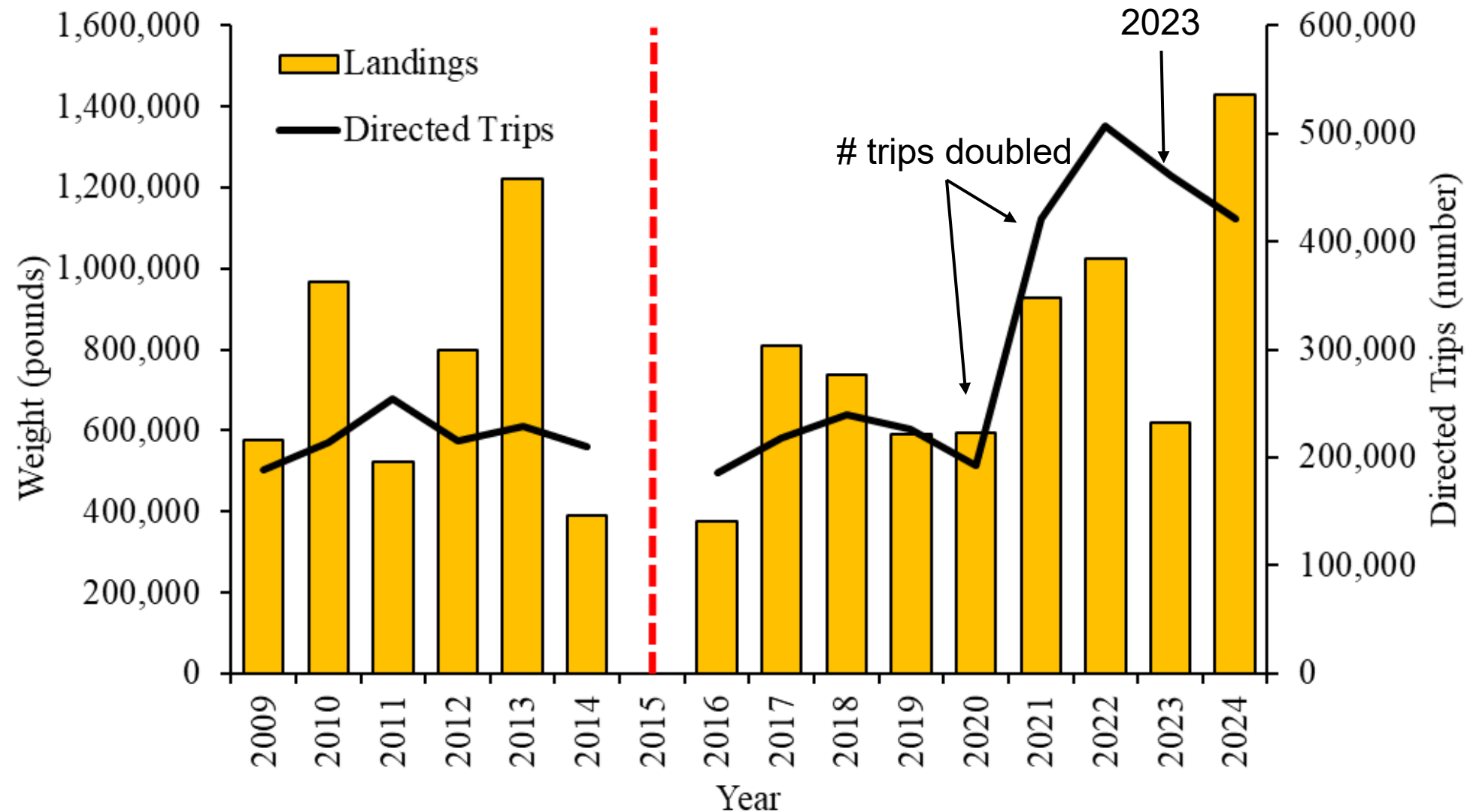


- Data range: 2009 – 2024
- 2015 data not included due to management being enacted mid-year
- Pre-2009, and 2015 data, can be found in annual updates

Recreational and Commercial Landings

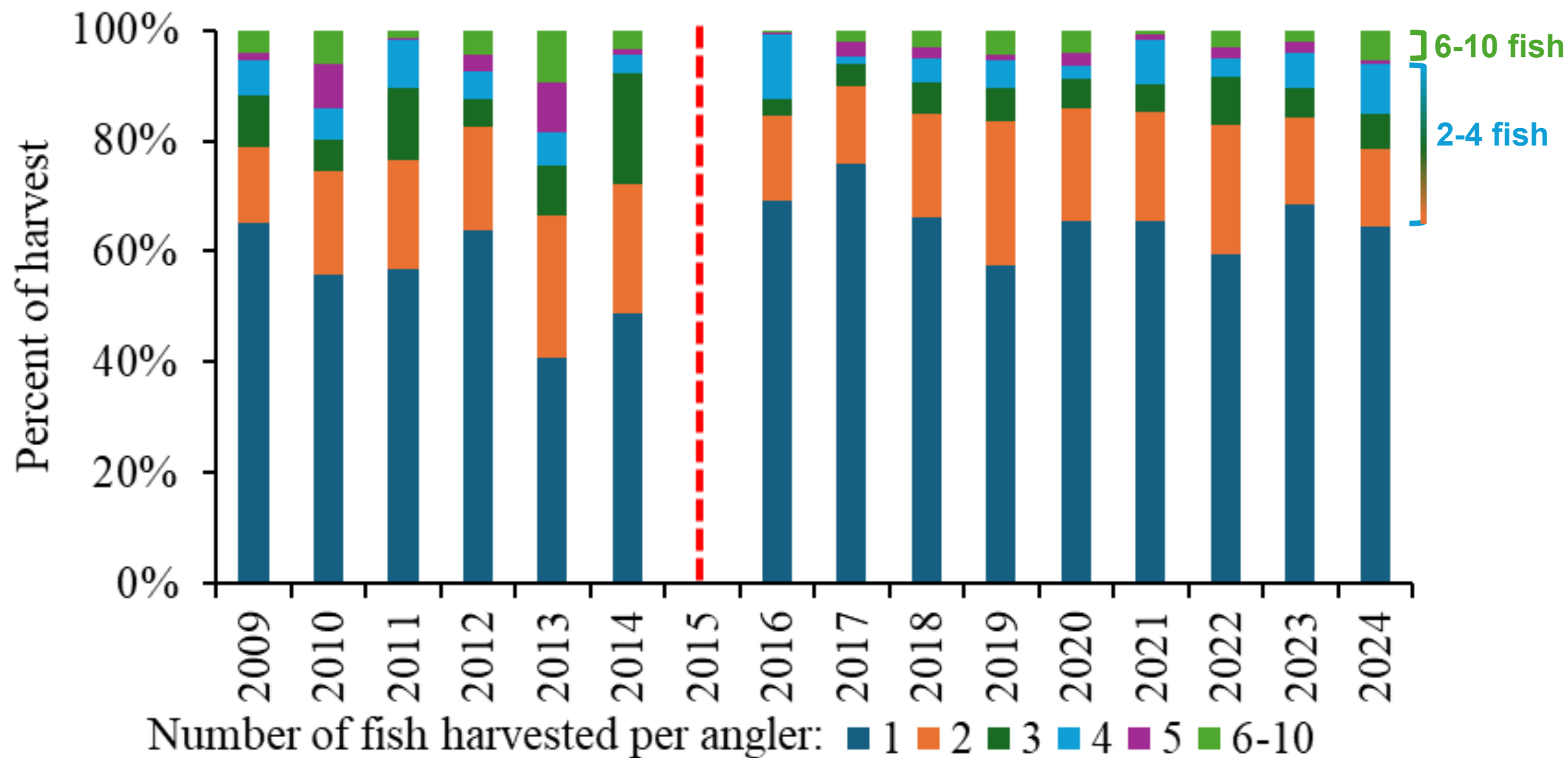


Recreational Landings

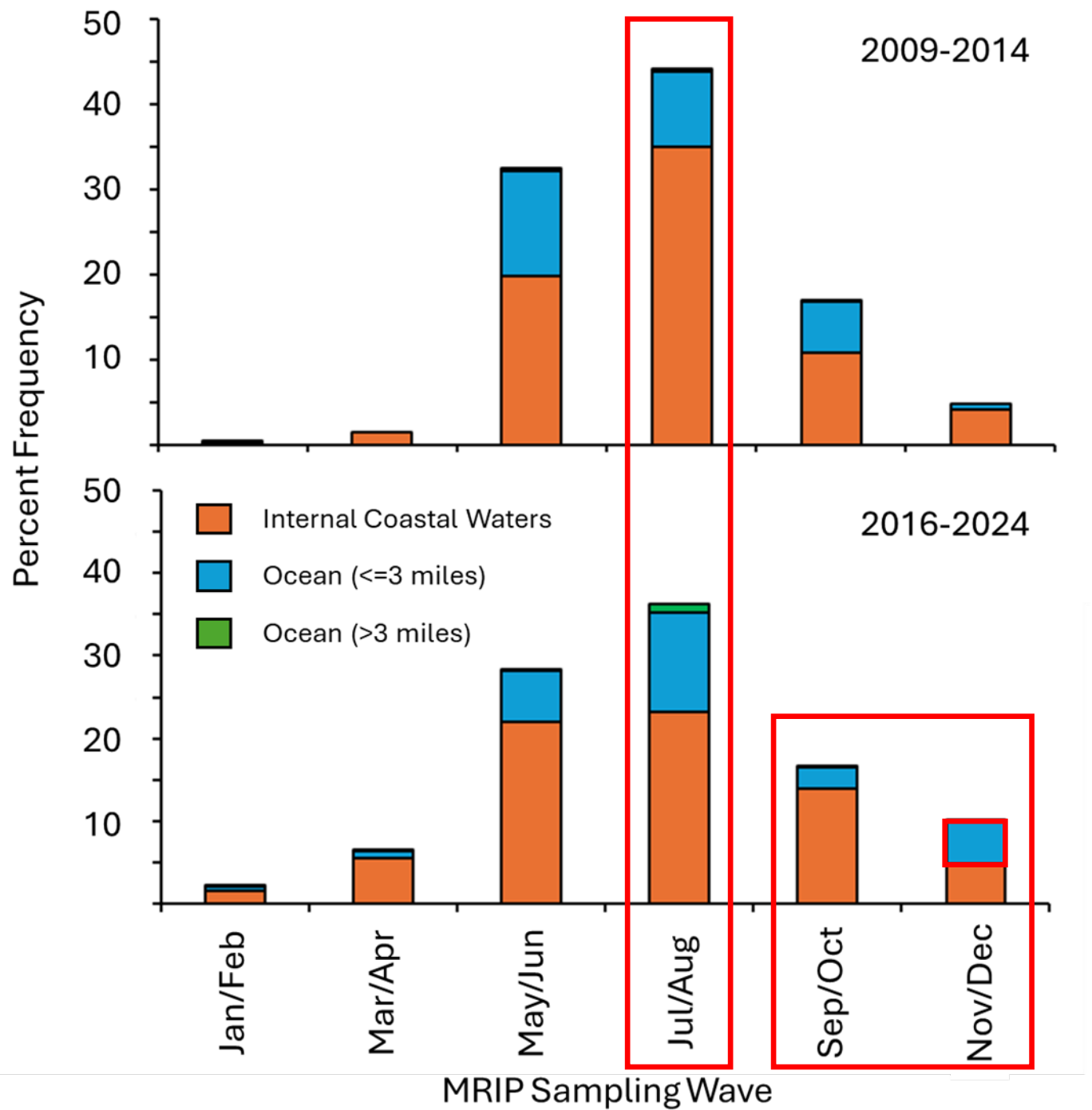


- Landings hook and line and gig/spear combined
- Landings in 2024 highest since management enacted
- Directed trips increased 119% between 2020 and 2021, effort has remained high

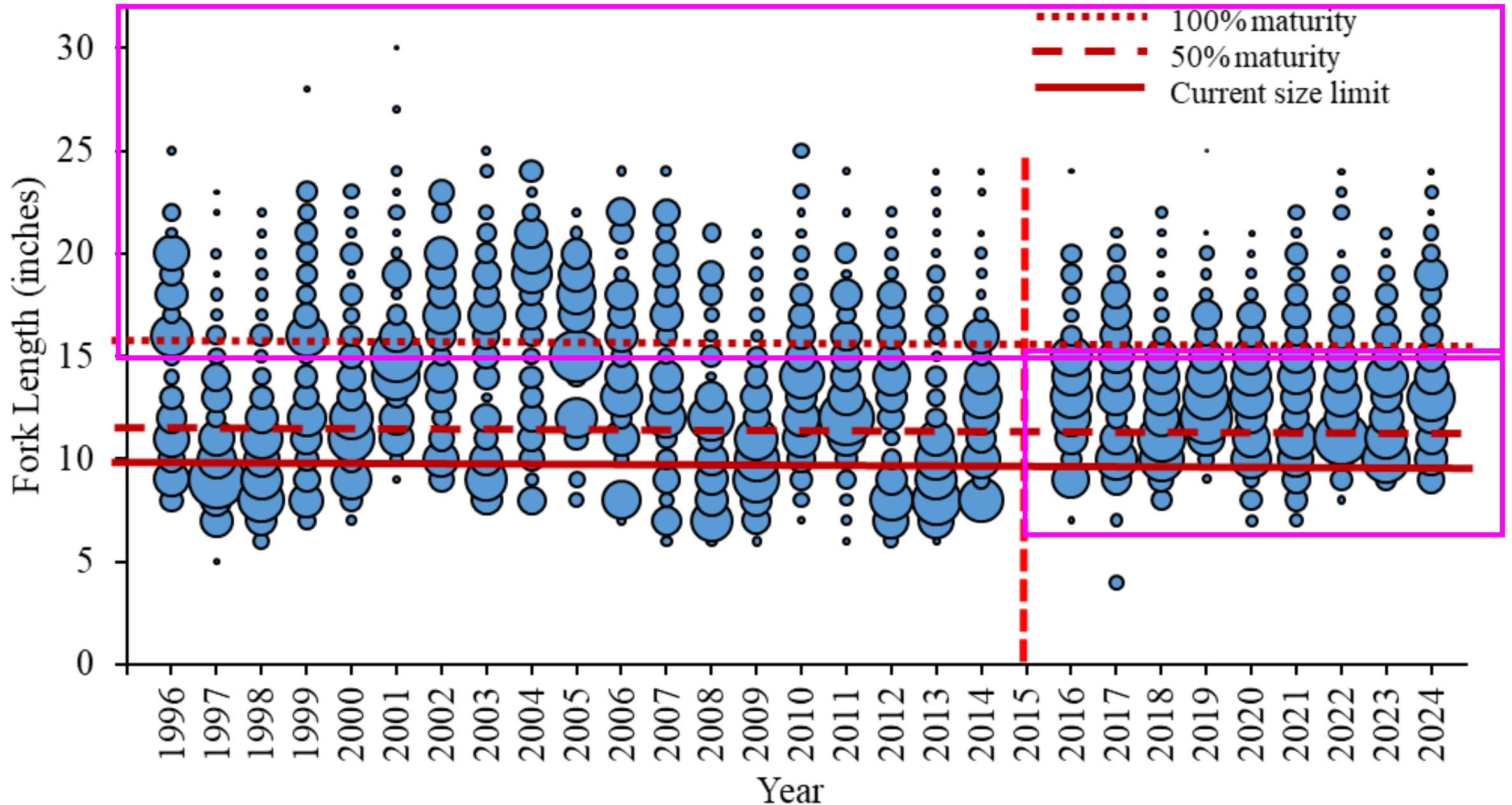
Recreational Landings



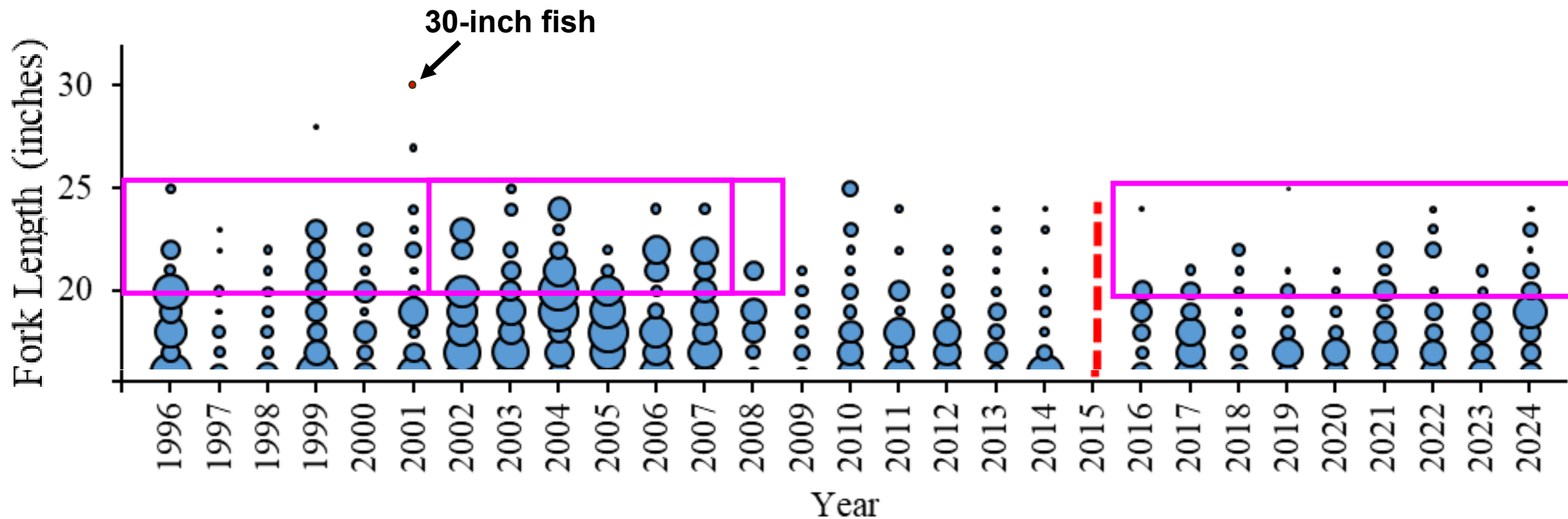
Recreational Landings



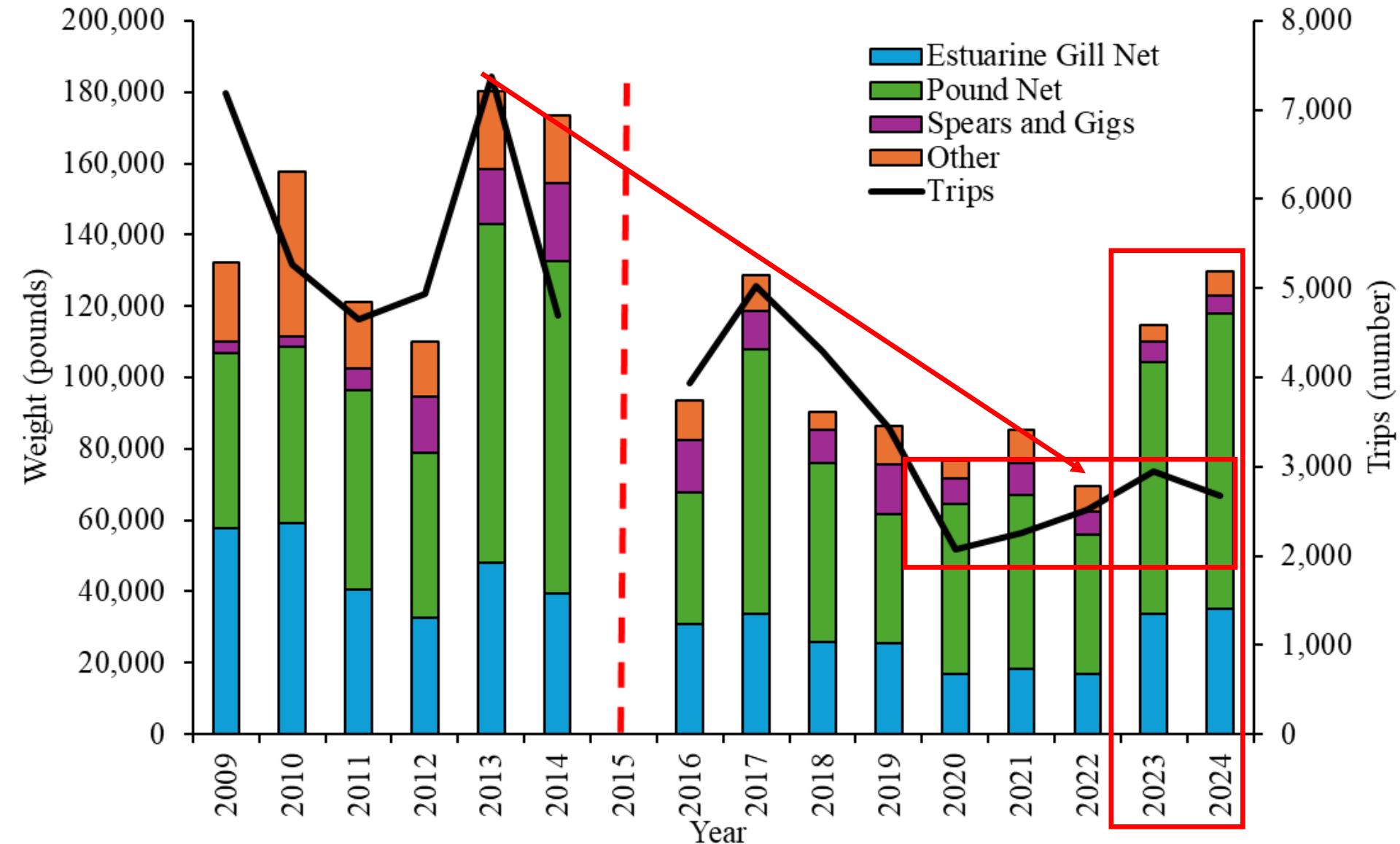
Recreational Length Composition



Recreational Length Composition



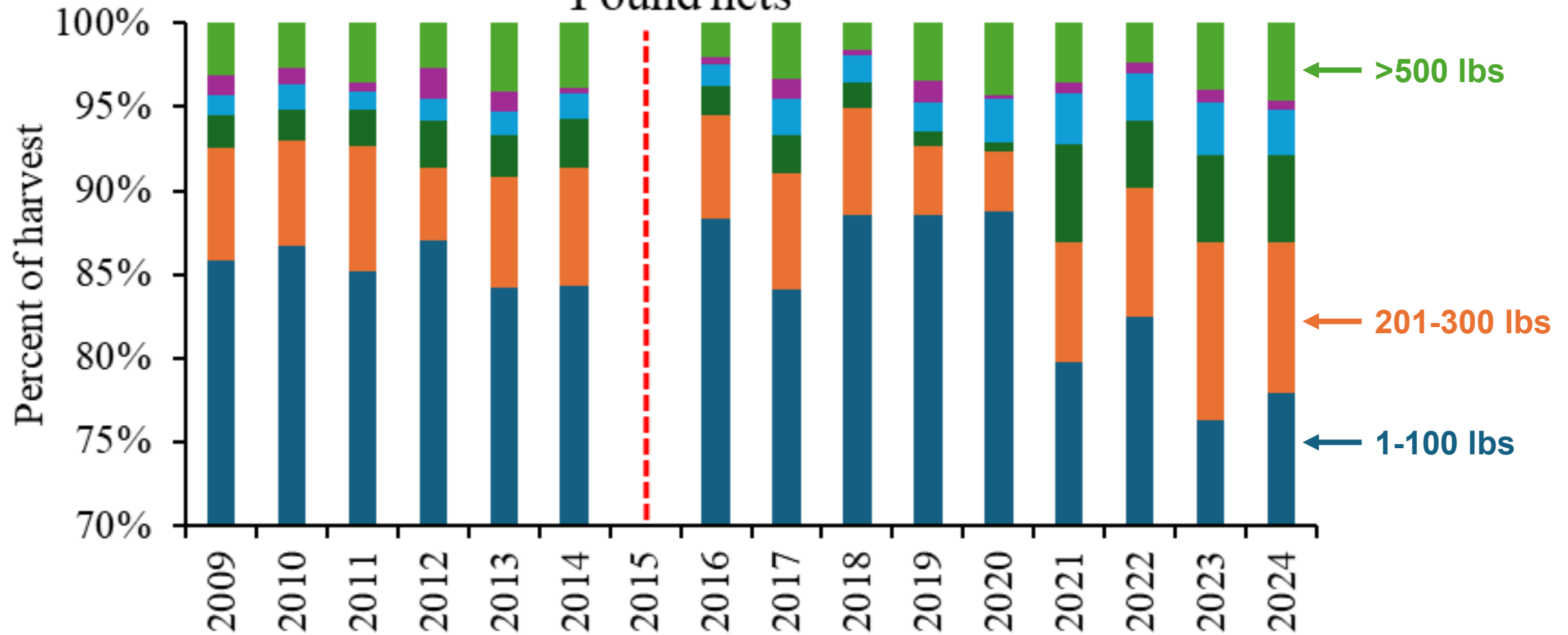
Commercial Landings



- 80% of landings from pound net and estuarine gill net
- Landings in 2024 highest since management enacted; declining trend until 2022
- Trips landing sheephead increasing after low in 2020

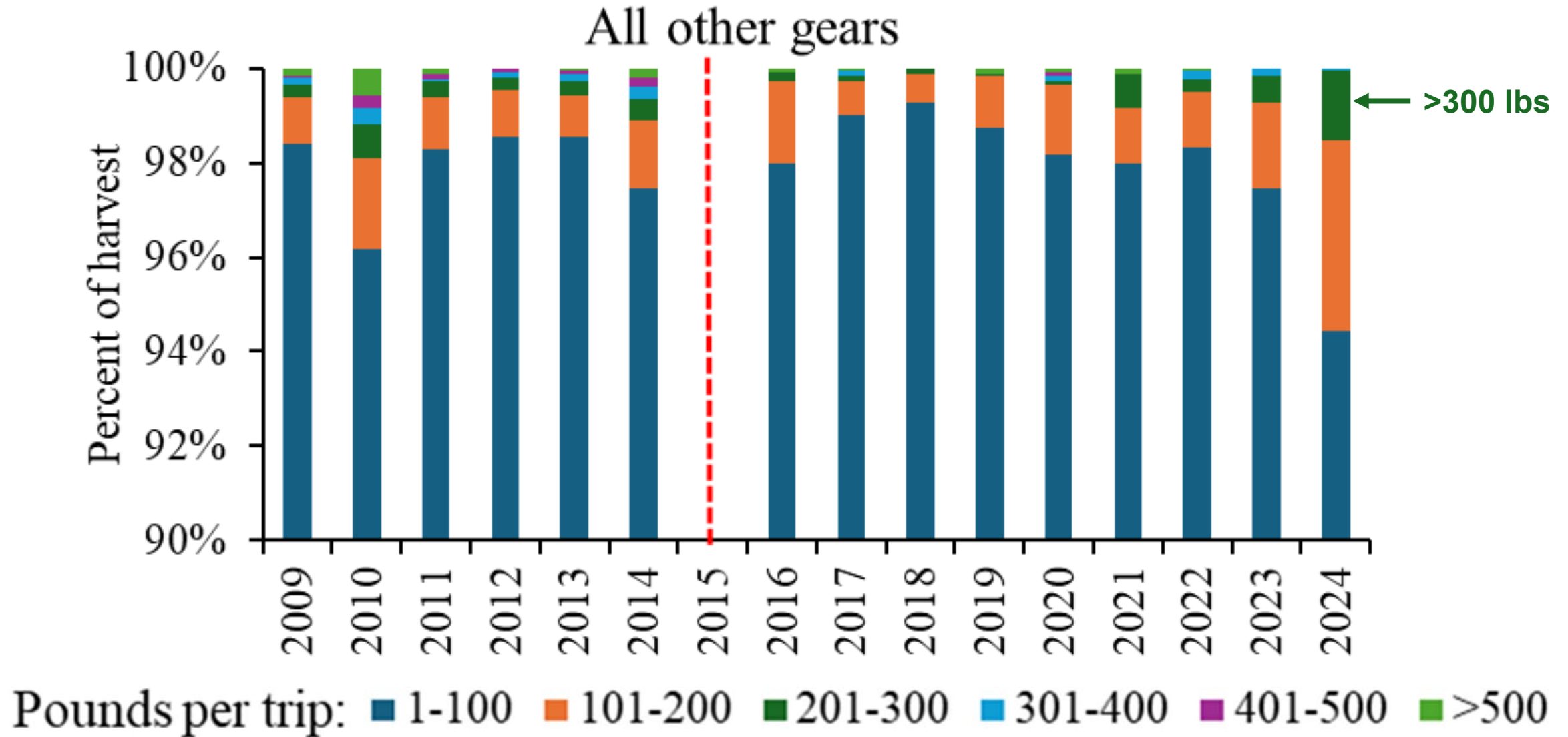
Commercial Landings

Pound nets

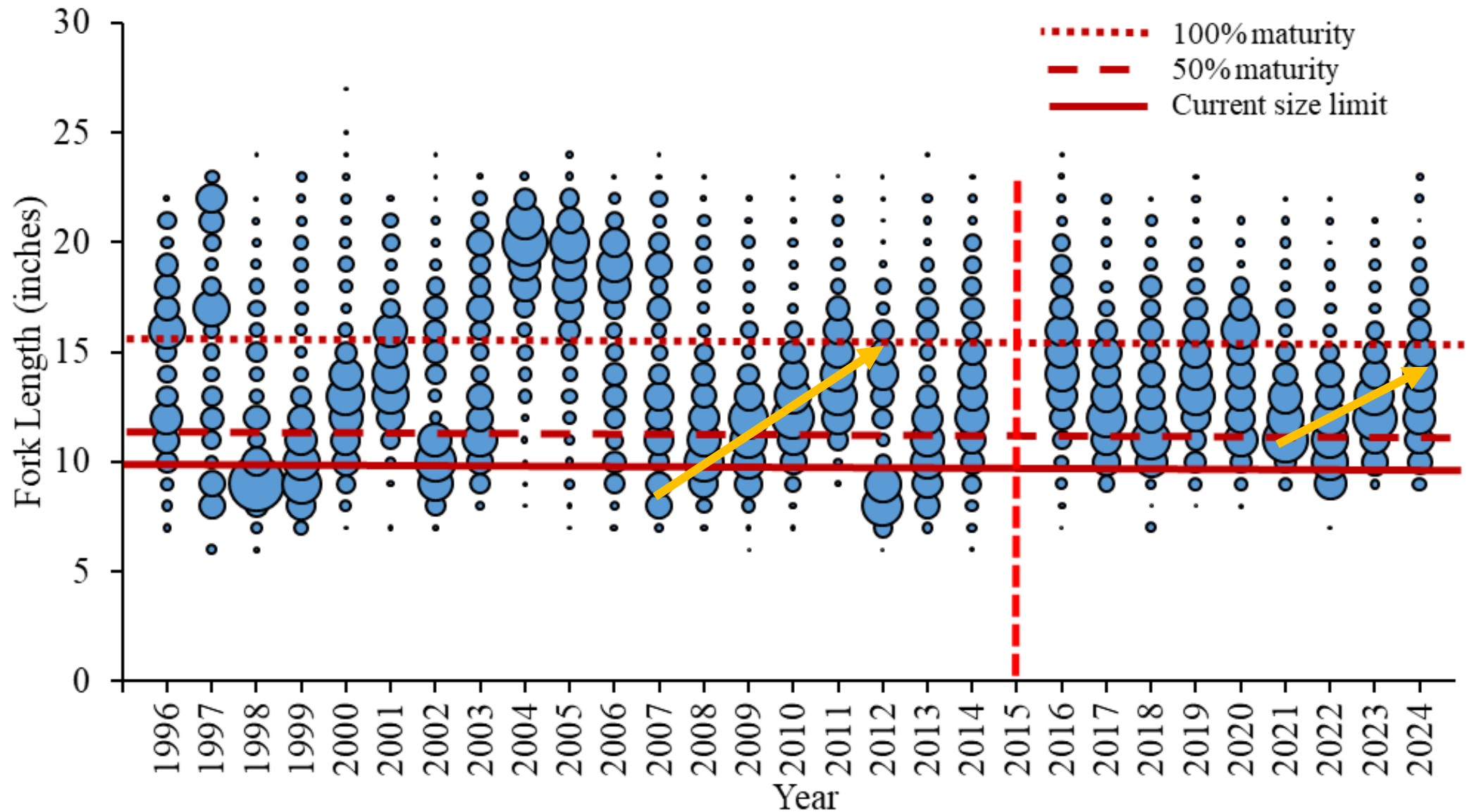


Pounds per trip: ■ 1-100 ■ 101-200 ■ 201-300 ■ 301-400 ■ 401-500 ■ >500

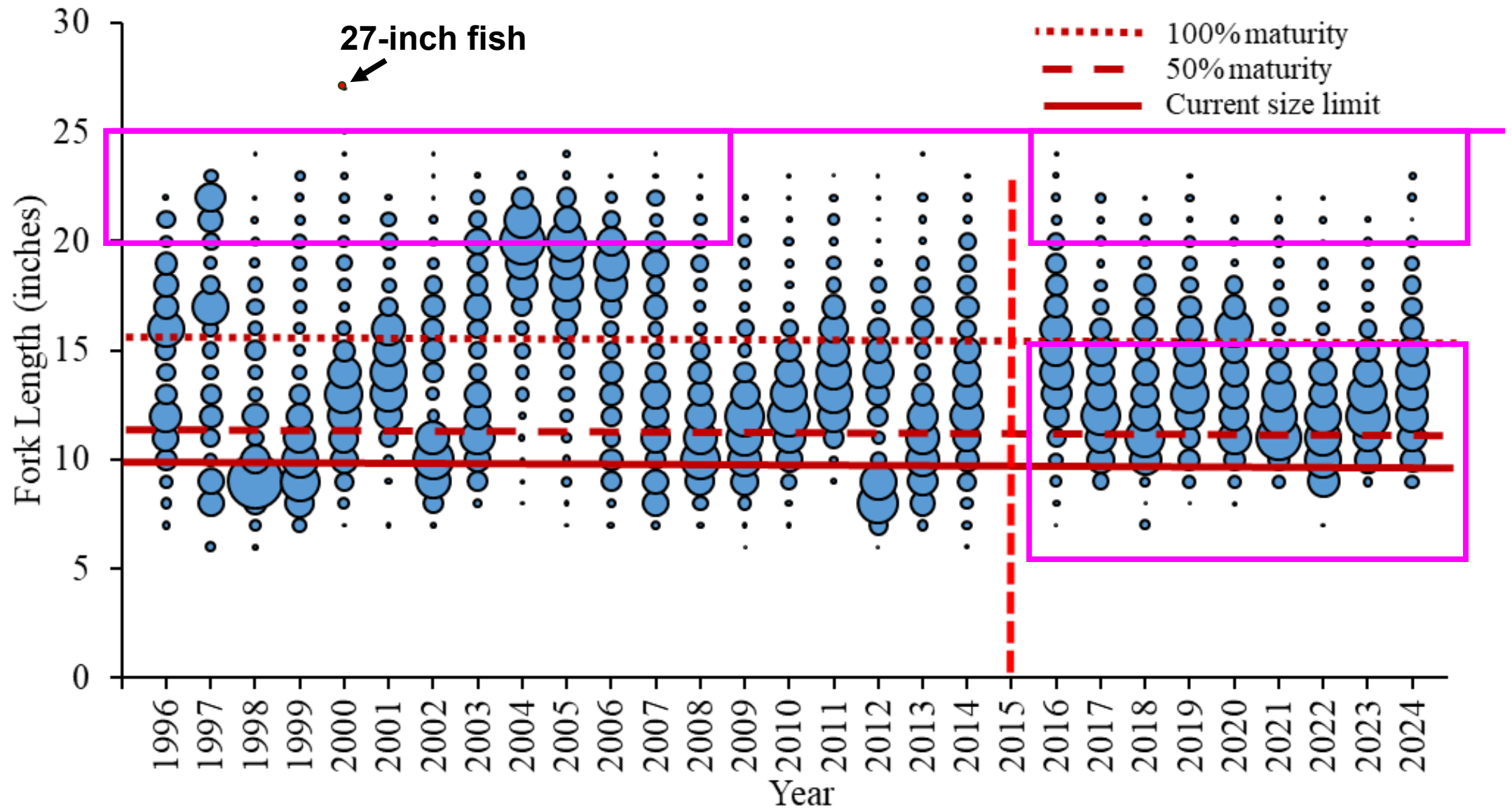
Commercial Landings



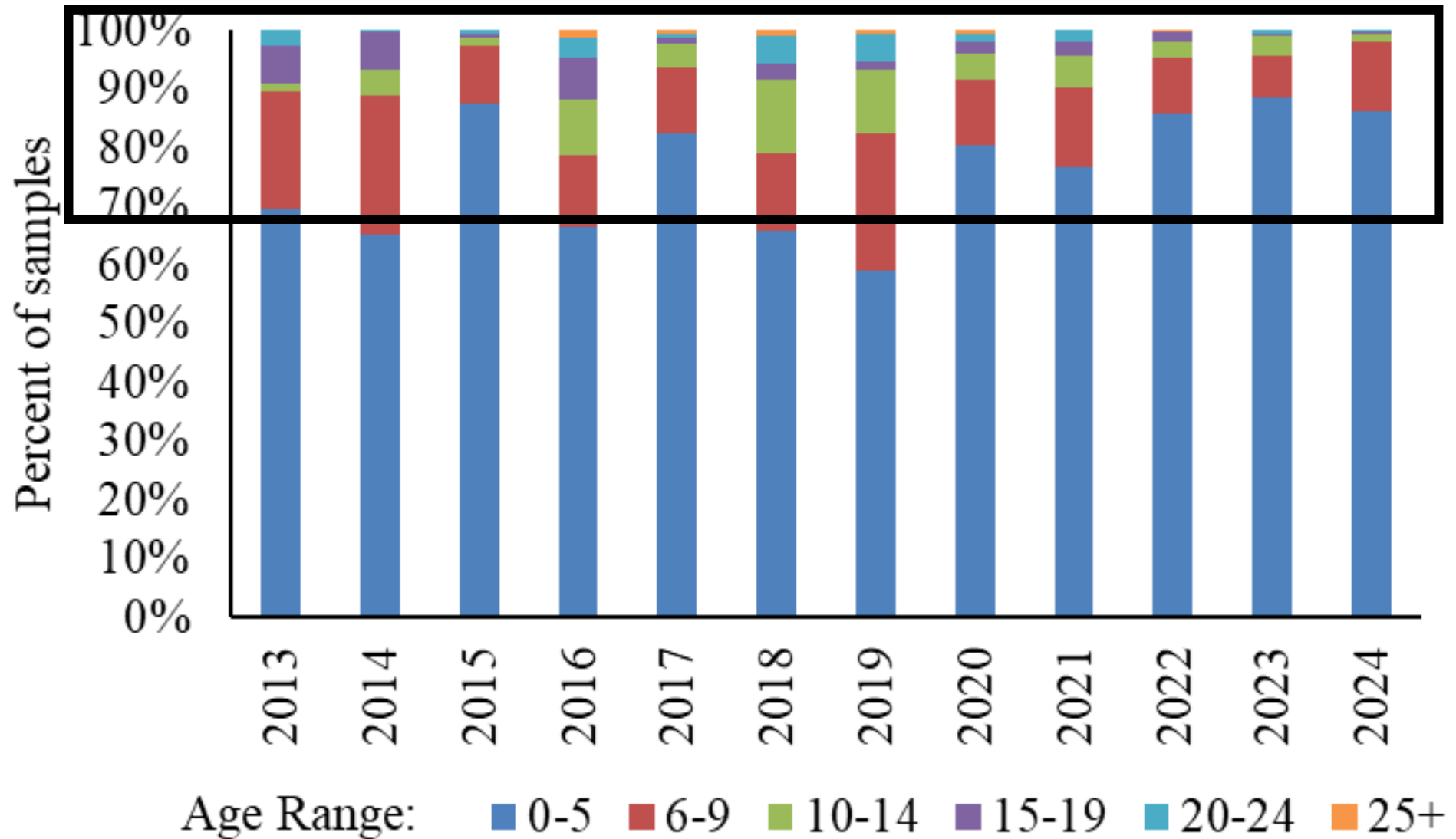
Commercial Length Frequency



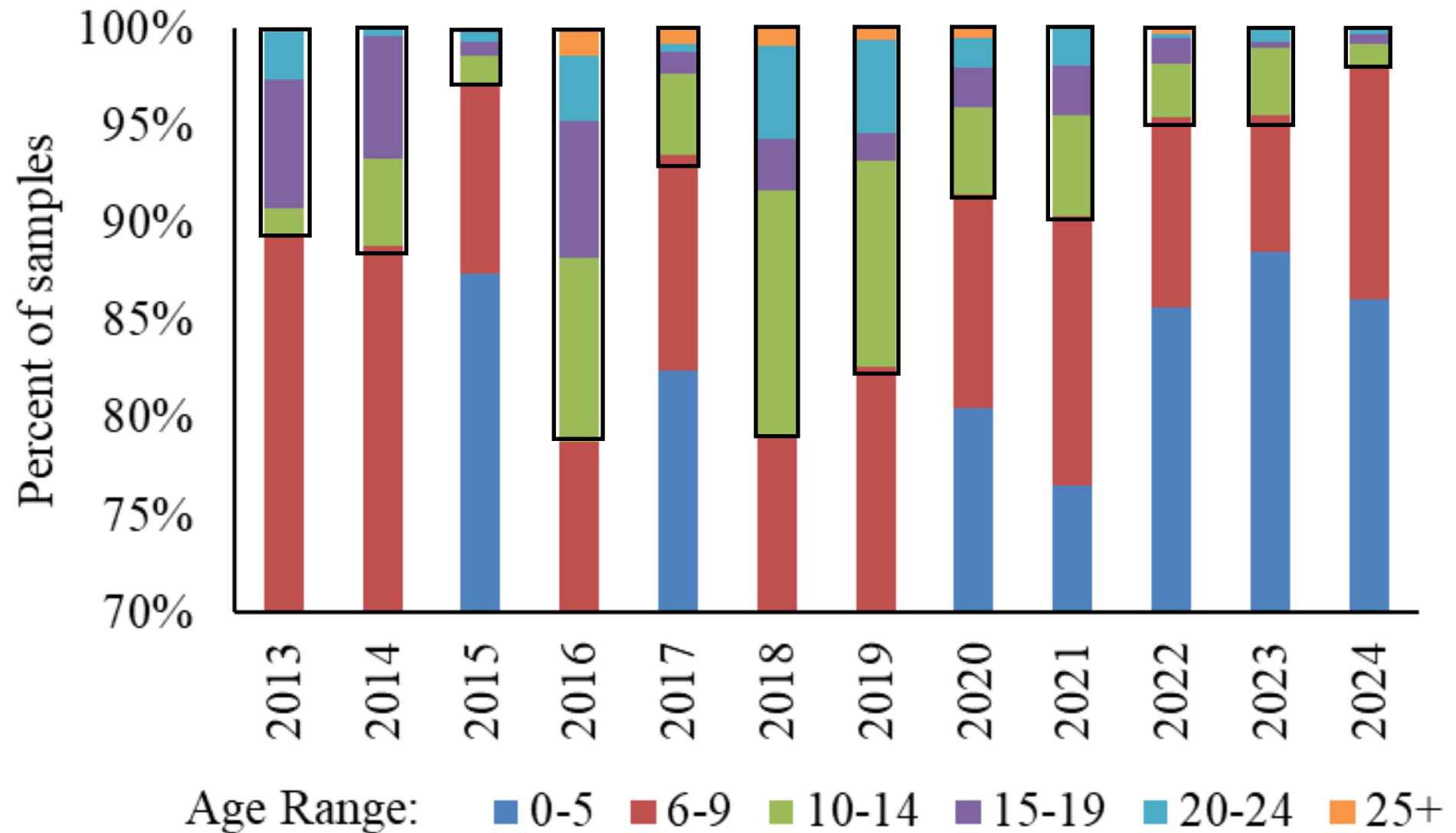
Commercial Length Frequency



Age Composition



Age Composition



Summary

- Directed recreational trips have doubled since 2020, after remaining steady for the time series
- Proportion of recreational anglers harvesting four or more sheepshead is starting to increase (though slowly)
- Commercial effort has been slowly increasing since 2020, after trending down to a historic low
- Commercial landings are consistently less than 100,000 pounds, though they did increase in 2023 and 2024
 - Average pounds per trip is increasing, especially in the pound net fishery
- Landings in 2024 were the highest for both sectors since implementation of management, and some of the highest landings historically
- Majority of sheepshead harvested from 2016-2024 are immature fish with fewer, larger and older fish showing up in samples

Next steps

- Division evaluating potential management changes for sheepshead
- Public hearings in late fall to get input on management changes such as:
 - Minimum size limit
 - Recreational bag limit
 - Implementation of vessel limits
 - Commercial trip limits
- Goal of implementation in 2026



Questions

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