

Snake River Fall Chinook

Then and now



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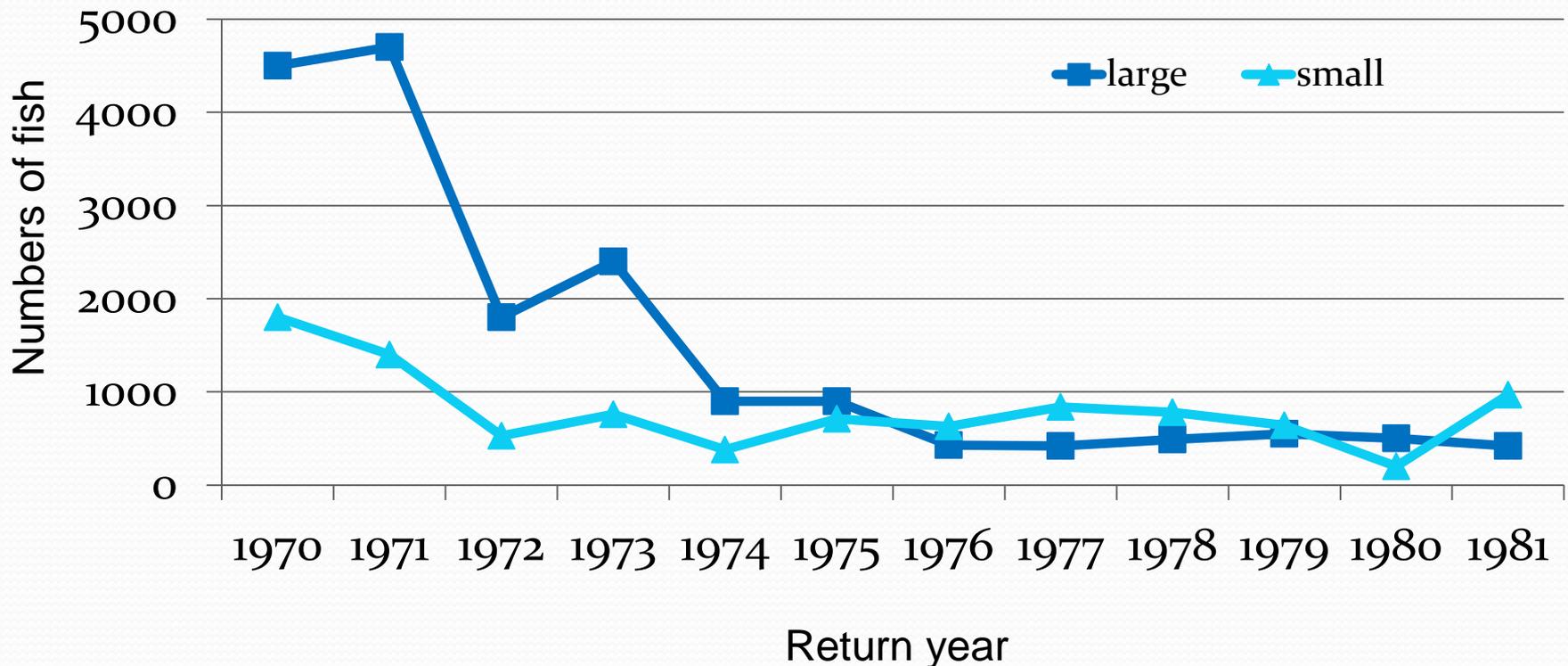


Questions

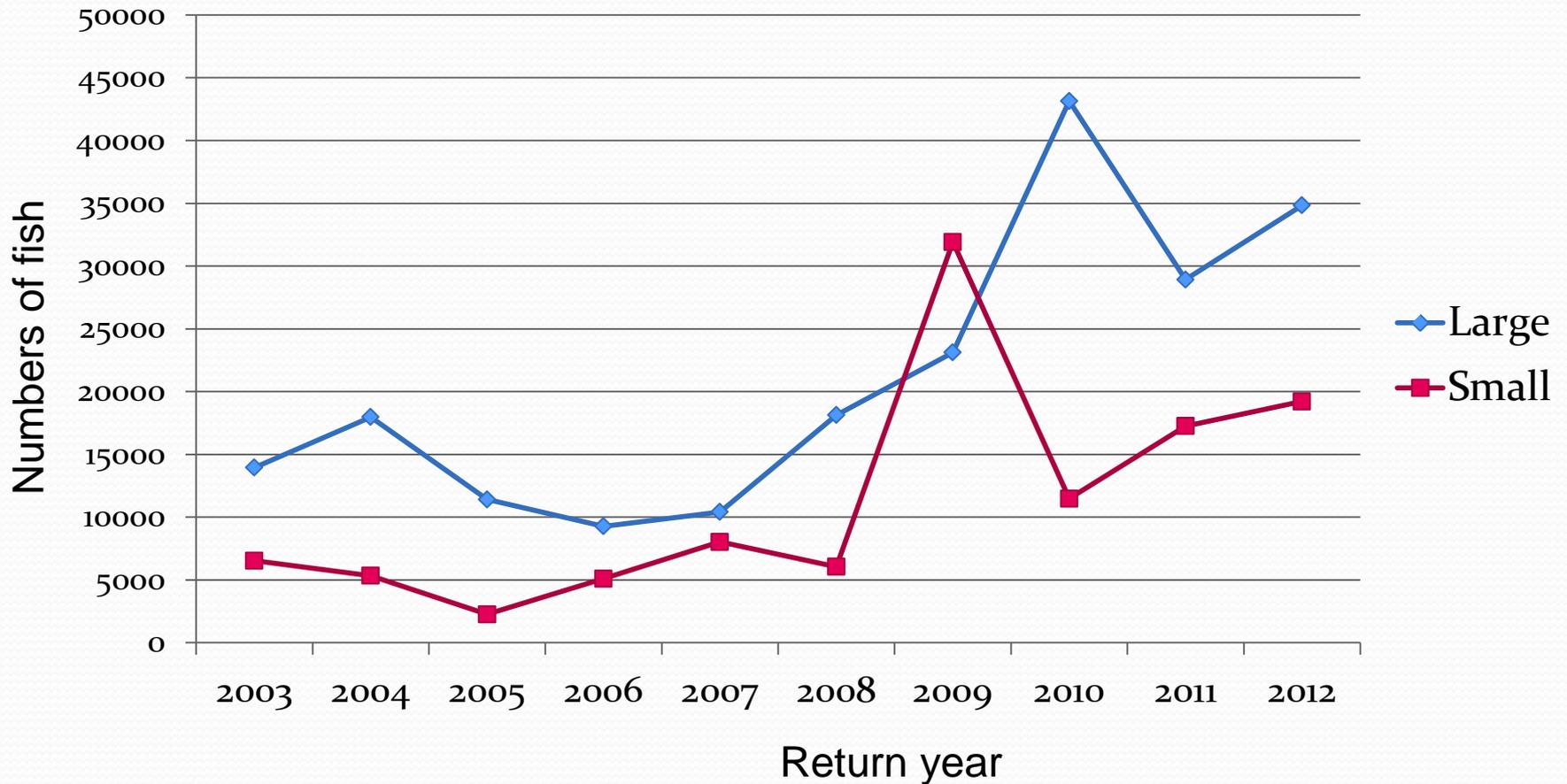
- What did the runs look like prior to supplementation?
- What do the natural fish look like today?
- What did the hatchery fish look like when supplementation began?
- What do the hatchery fish look like today?
- Any trends?

Historical counts at LGO Dam

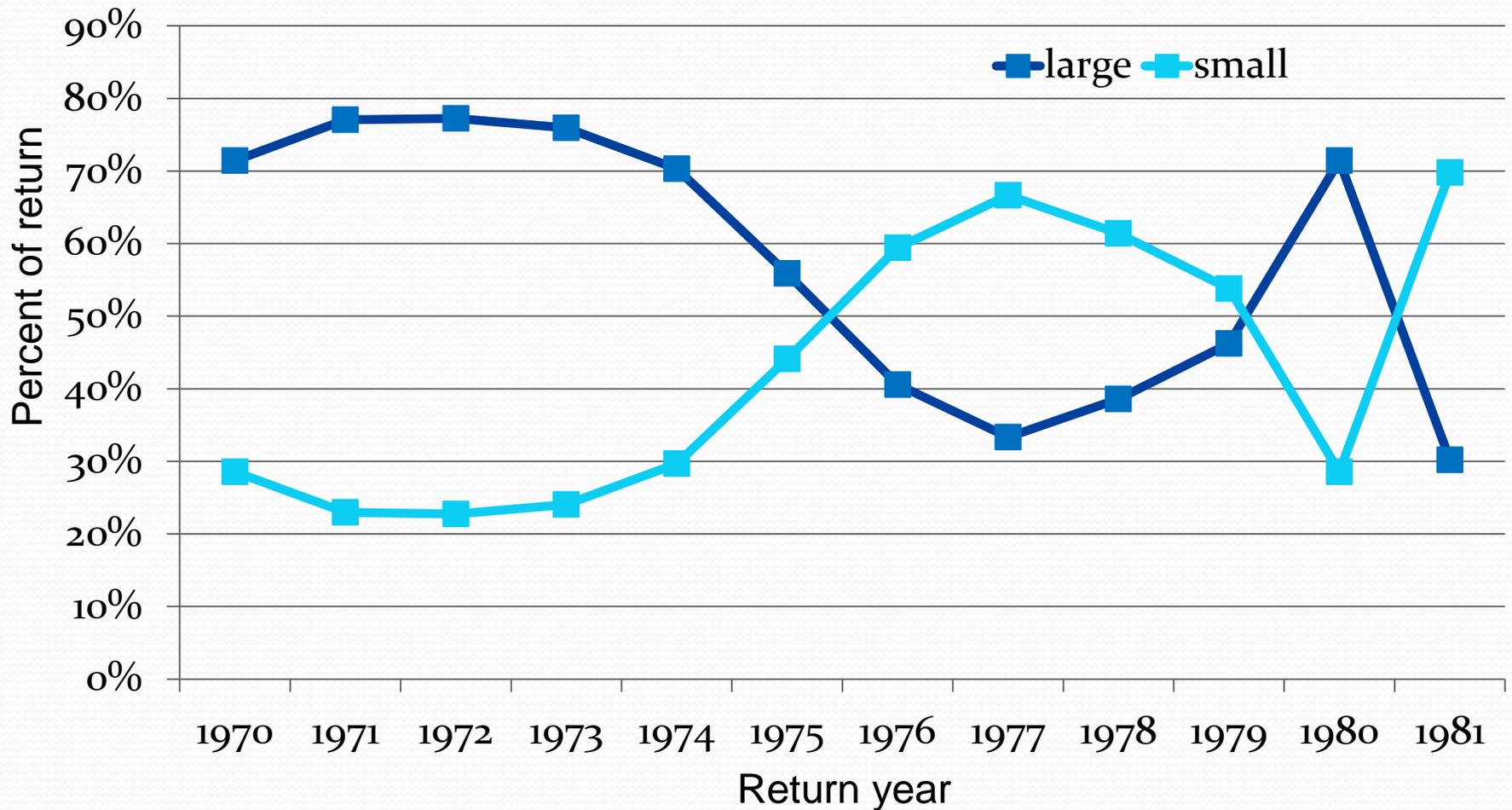
- Prior to supplementation
 - During first 5 years of counts 74% of run was $\geq 57\text{cm}$



Contemporary counts at LGO Dam



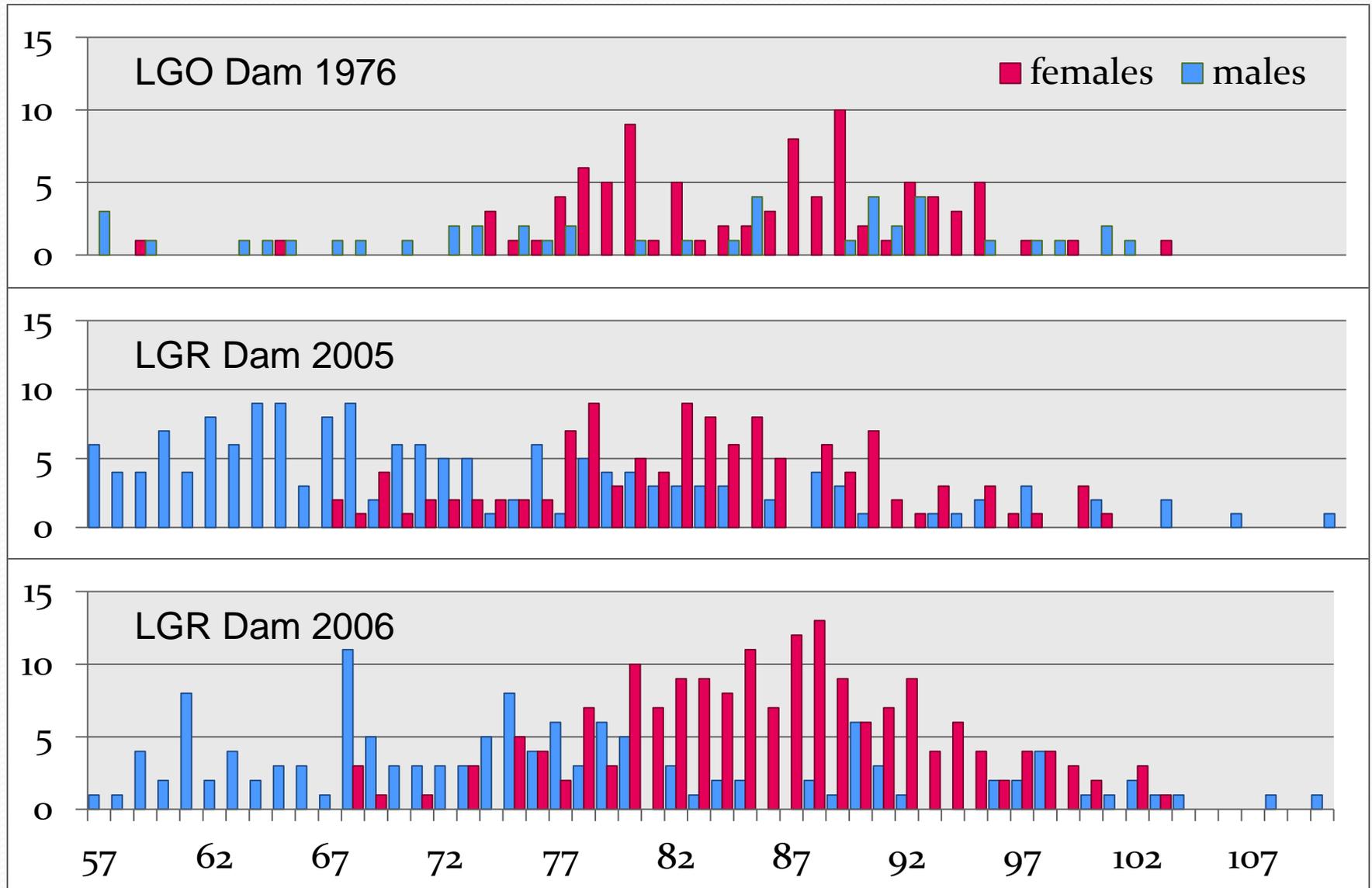
Size variations of run to LGO Dam



Natural-origin Fork lengths

- Early:
 - 1976 return collected at LGO
 - Pre-supplementation
 - 30.9% of the adult run was measured
 - No age data available
- Current:
 - Natural-origin fish determined by scales (?)
 - Post-supplementation

Natural origin ≥ 57 cm



Length at age of return

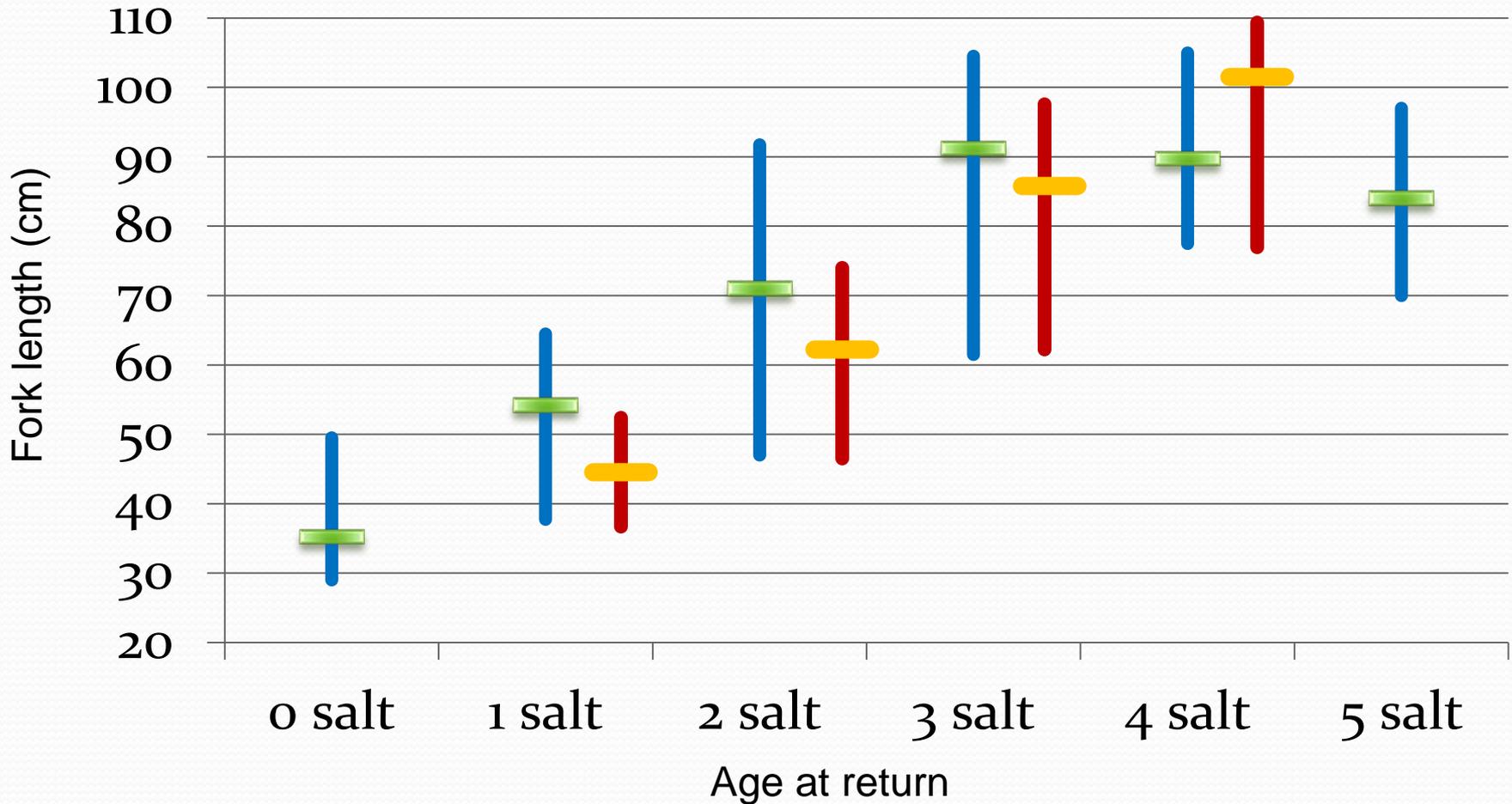
(1984-1987)

- Two release strategies
 - Yearling
 - Subyearling
- To compare subyearling size and yearling size at return we will be using salt water age
- Males and females were evaluated separately because differences in ages at return

Hatchery Males 1984-1987 broodyears

Subyearling 

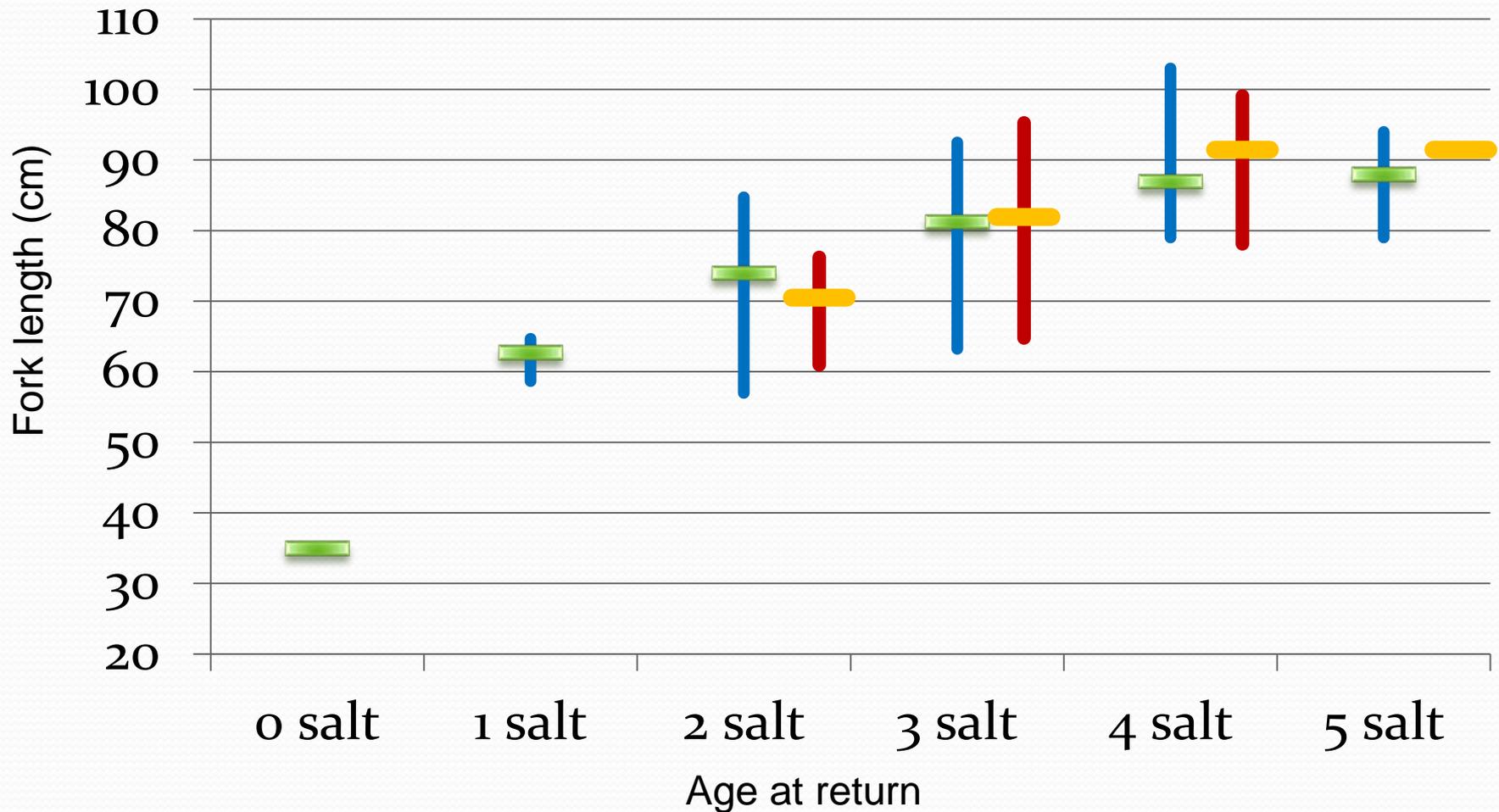
Yearling 



Hatchery Females 1984-1987 broodyears

Subyearling 

Yearling 

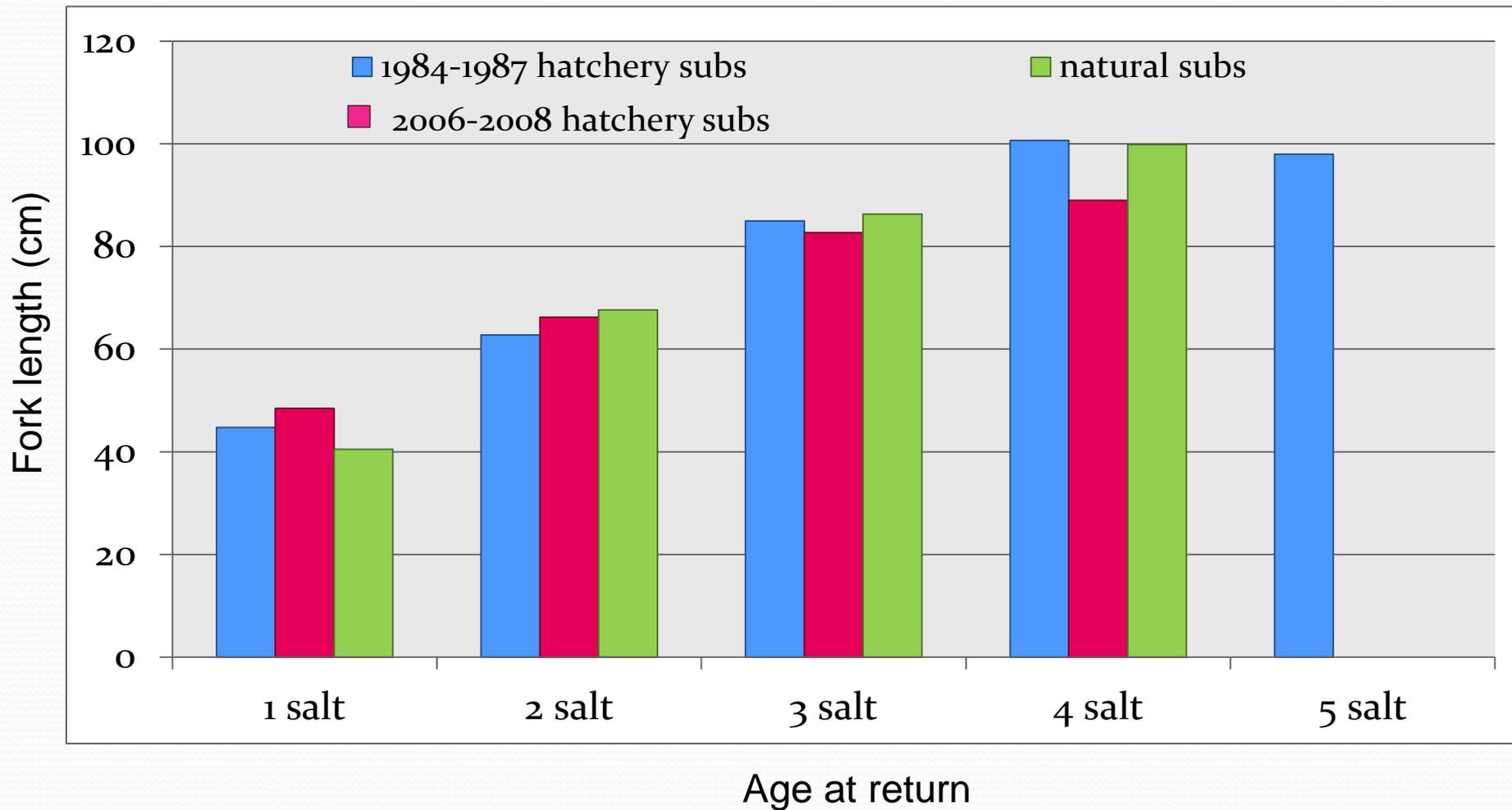




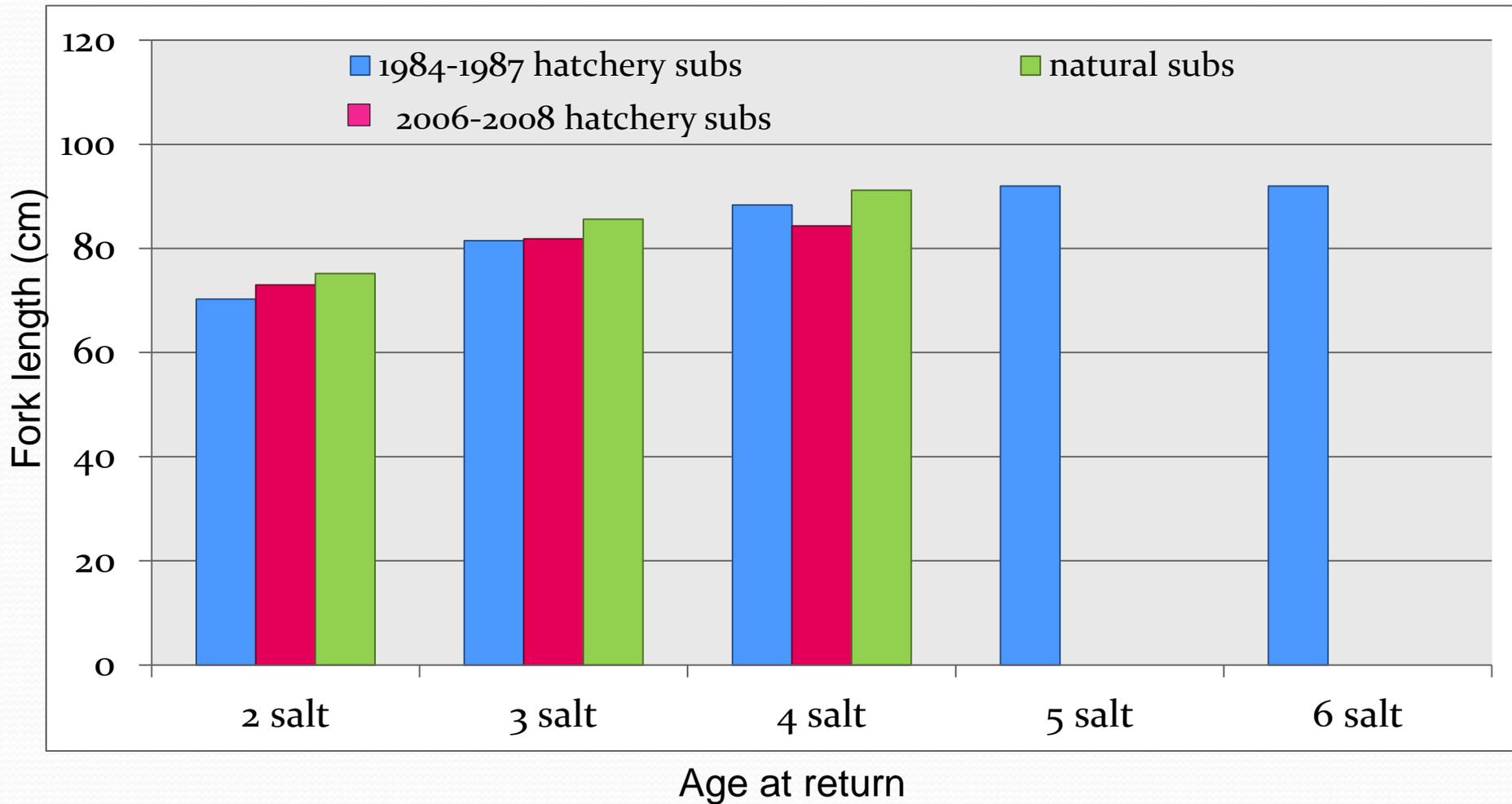
Has length at age changed and how does that compare to Natural origin fish?

- Full brood year data from 1984-1987 broods (hatchery)
- Returns of CWT hatchery fish from 2004-2006
- Fork length data from 2004-2006 returns (natural)

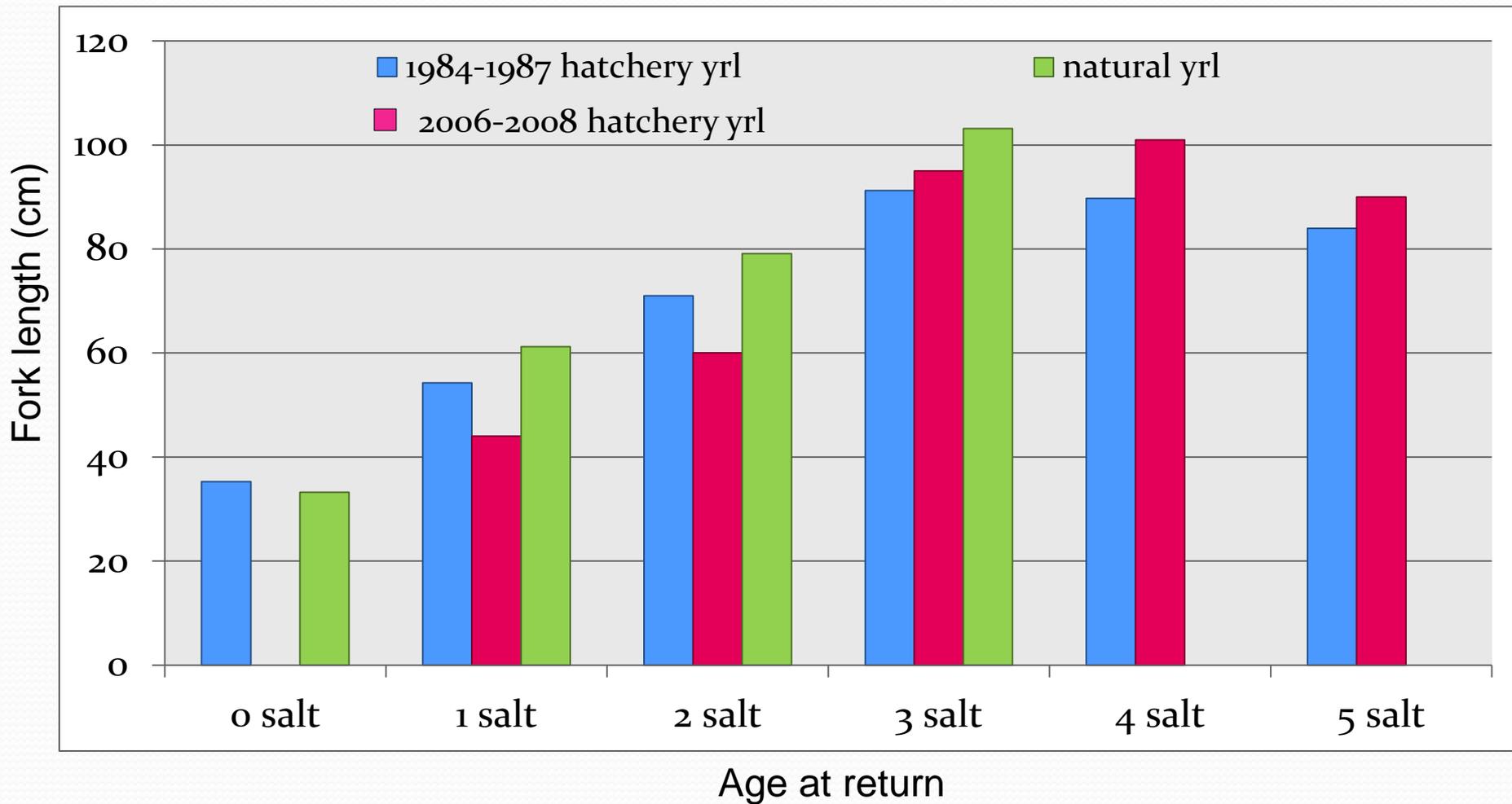
Subyearling Males



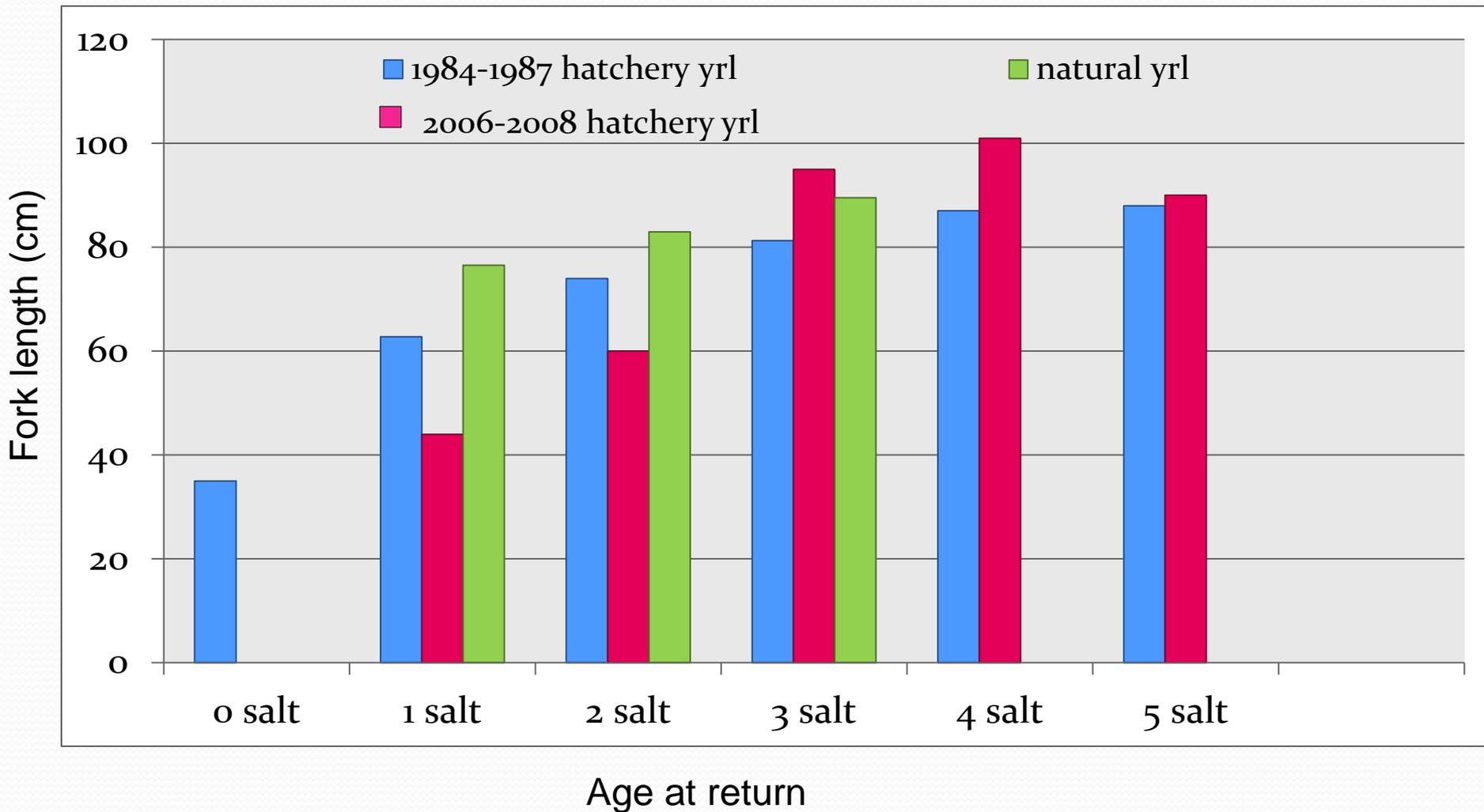
Subyearling Females



Yearling Males



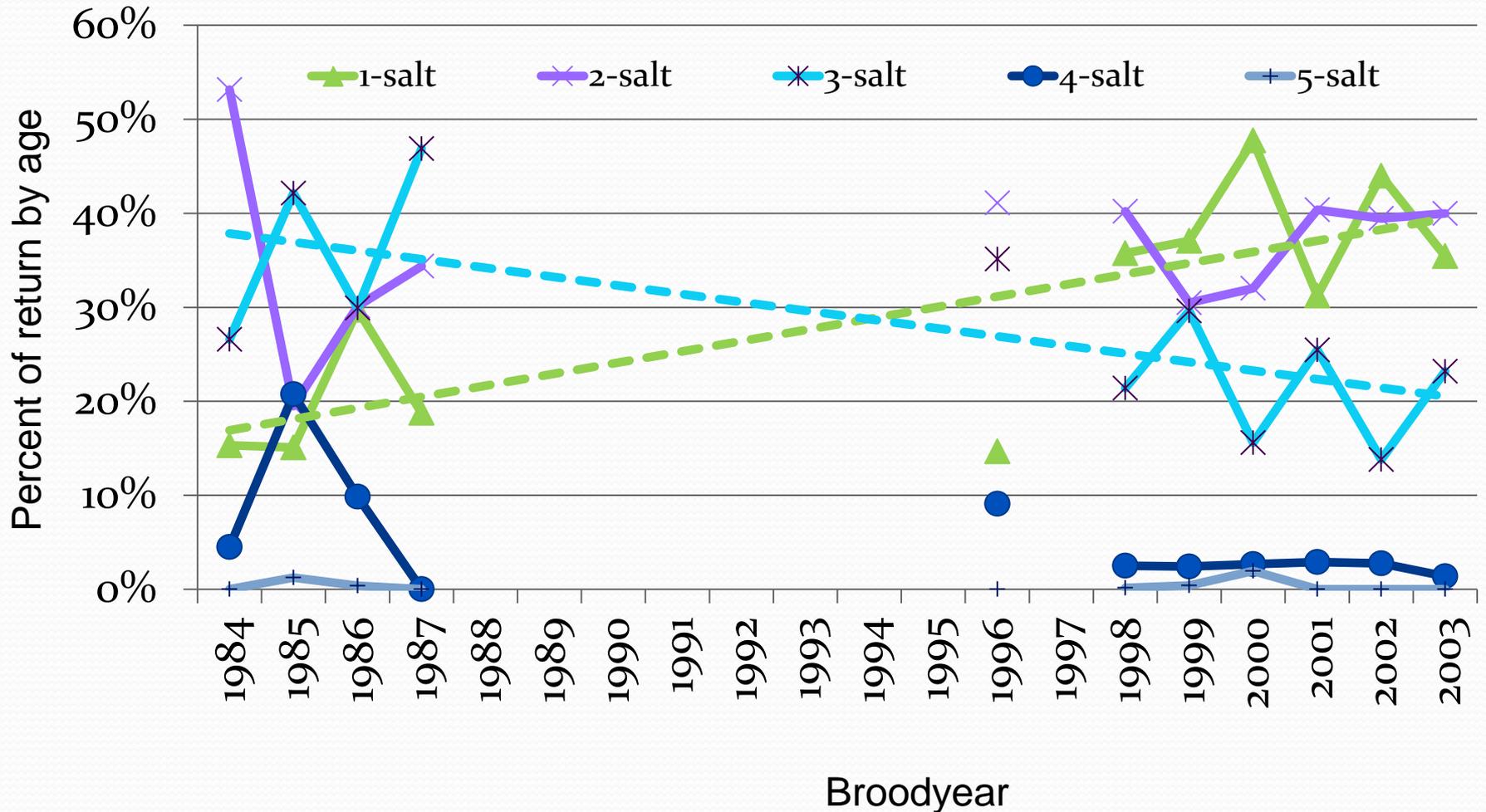
Yearling Females



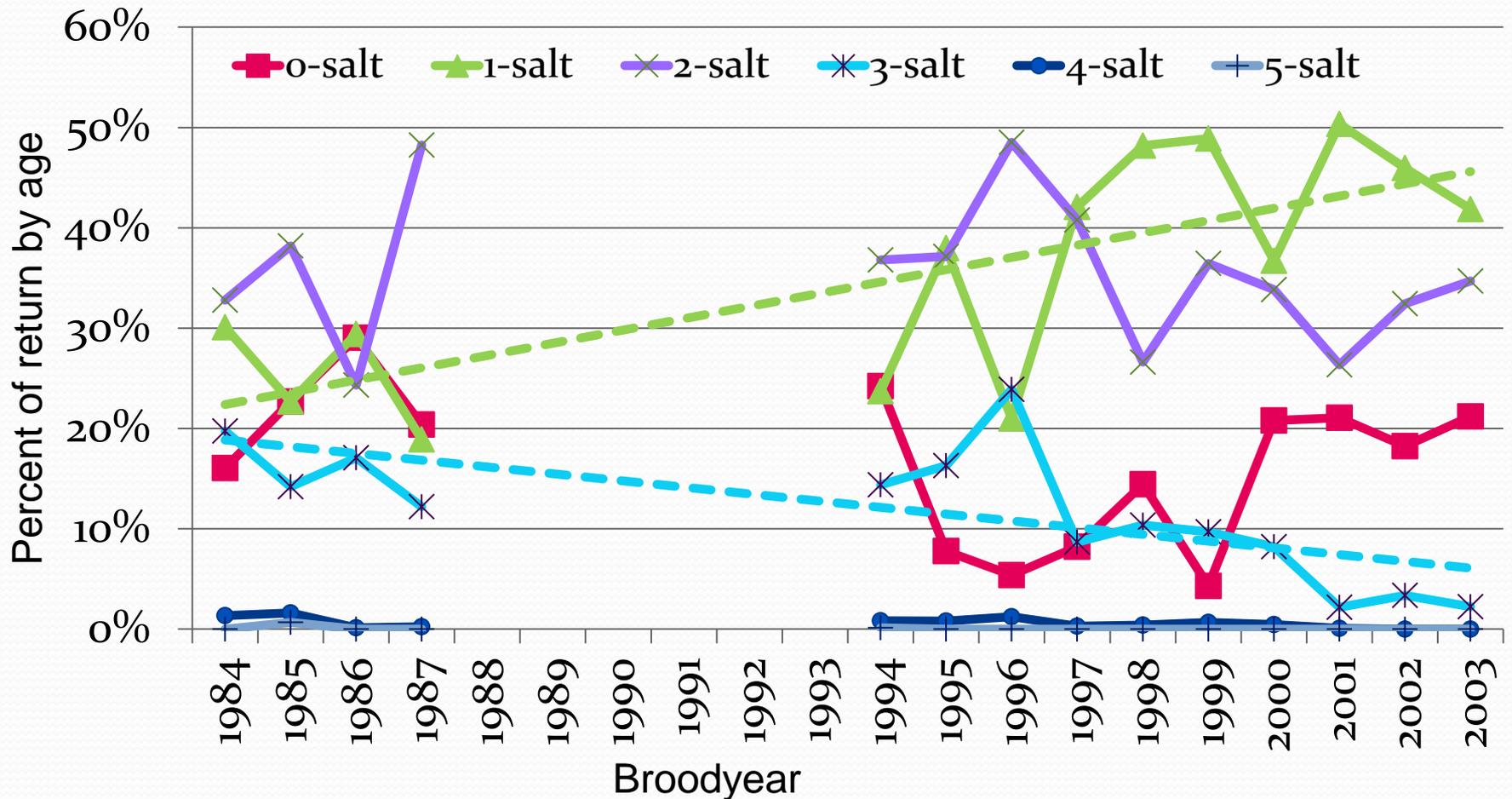
Trends in Age at return data

- We can only estimate for hatchery fish
 - Early supplementation (1984-1987 broods)
 - Late supplementation (1994-2003 broods)

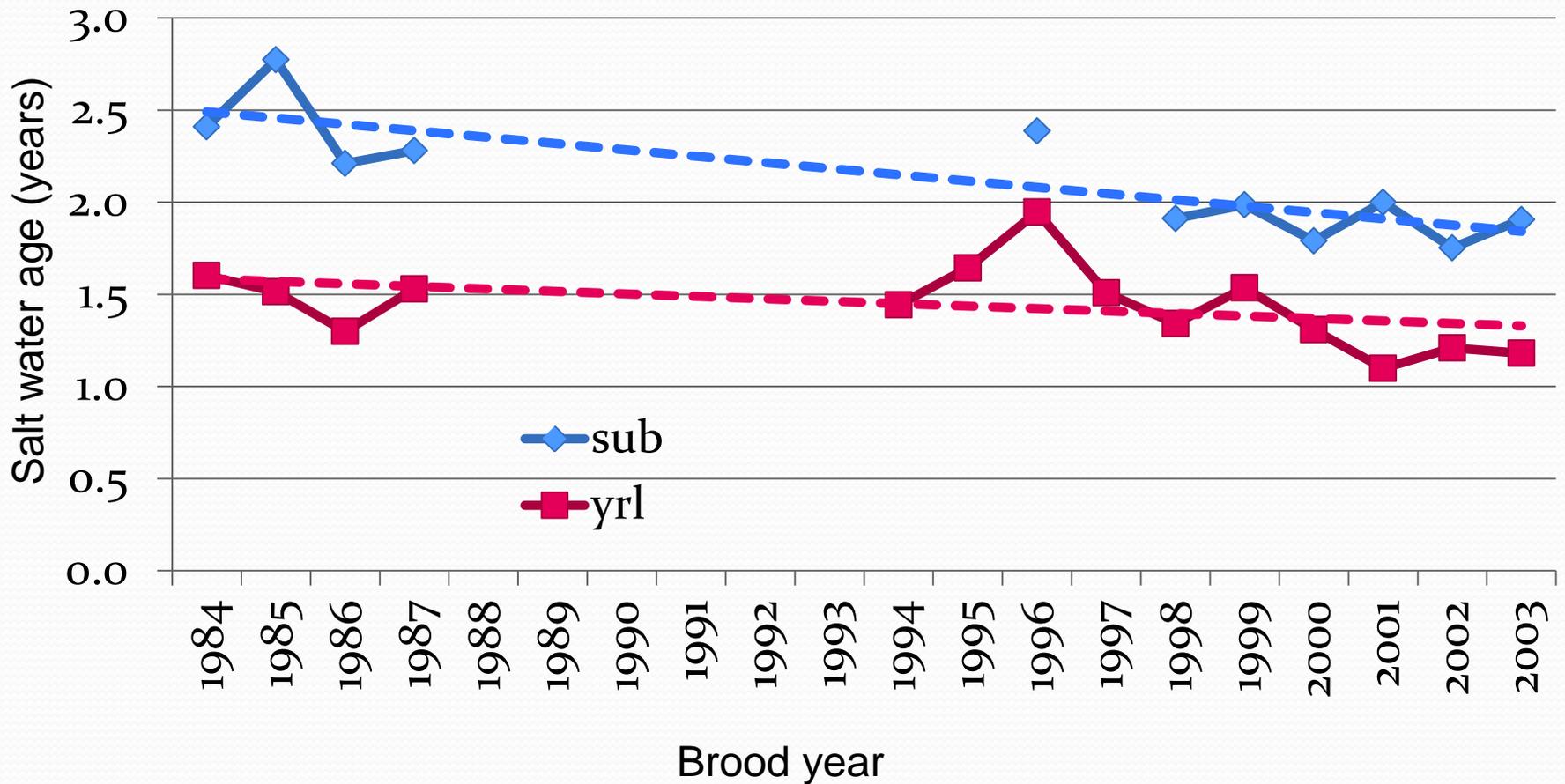
Subyearling (M+F) age at return trends



Yearling (M+F) returns at age trends



Weighted saltwater age



Natural origin summary

- The sex composition and size of natural origin fish ≥ 57 cm is similar to 1976 run
- Lack scale data for historical benchmark for age
- Reservoir reared fish return at younger saltwater ages than subyearling natural origin fish and were larger at the same ocean=age

Supplementation Summary

- Subyearlings

- Current supplementation hatchery subyearlings were similar in length at salt water return to early supplementation subyearlings
- Return at older saltwater ages than yearlings
- Trending towards a decrease in mean weighted saltwater age at return, with an increase in 1 ocean and a decrease in 3 ocean fish

Supplementation Summary

● Yearlings

- Return at younger ages than subyearlings
- Return at larger sizes than subyearlings by saltwater age
- Late supplementation yearlings return at smaller sizes than early supplementation yearlings
- Trending to younger weighted saltwater age at return and an increase in 1 ocean and a decrease in 3 ocean fish