



Run timing and morphology of steelhead kelts from the Situk River



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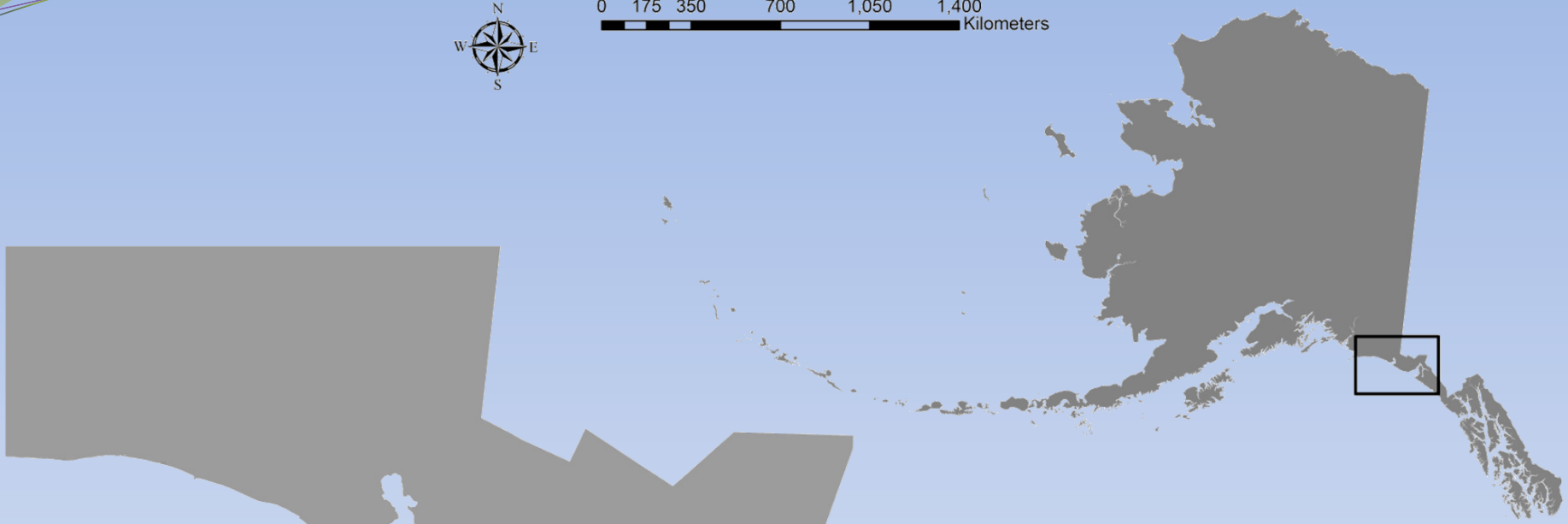
1995 to 2013 Weir Counts of Kelt Steelhead from the Situk River

- Abundance
- Angler catch data
- Run timing and Temperature
- Samples
 - Kelt Size Trends
 - Color/Condition trends
 - Wounding trends





0 175 350 700 1,050 1,400 Kilometers

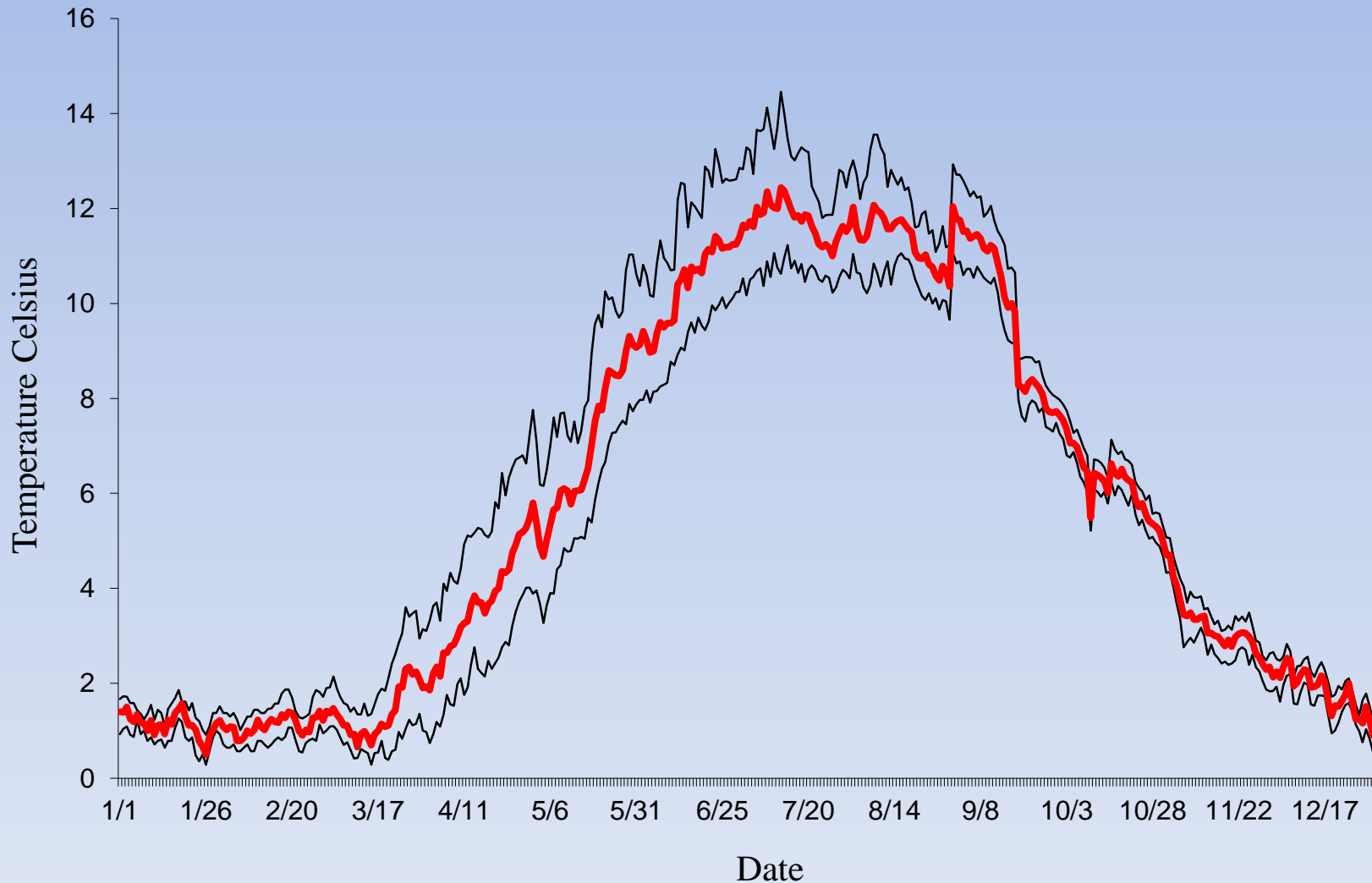


0 15 30 60 90 120 Kilometers





Situk River Thermograph from 9 Mile Bridge

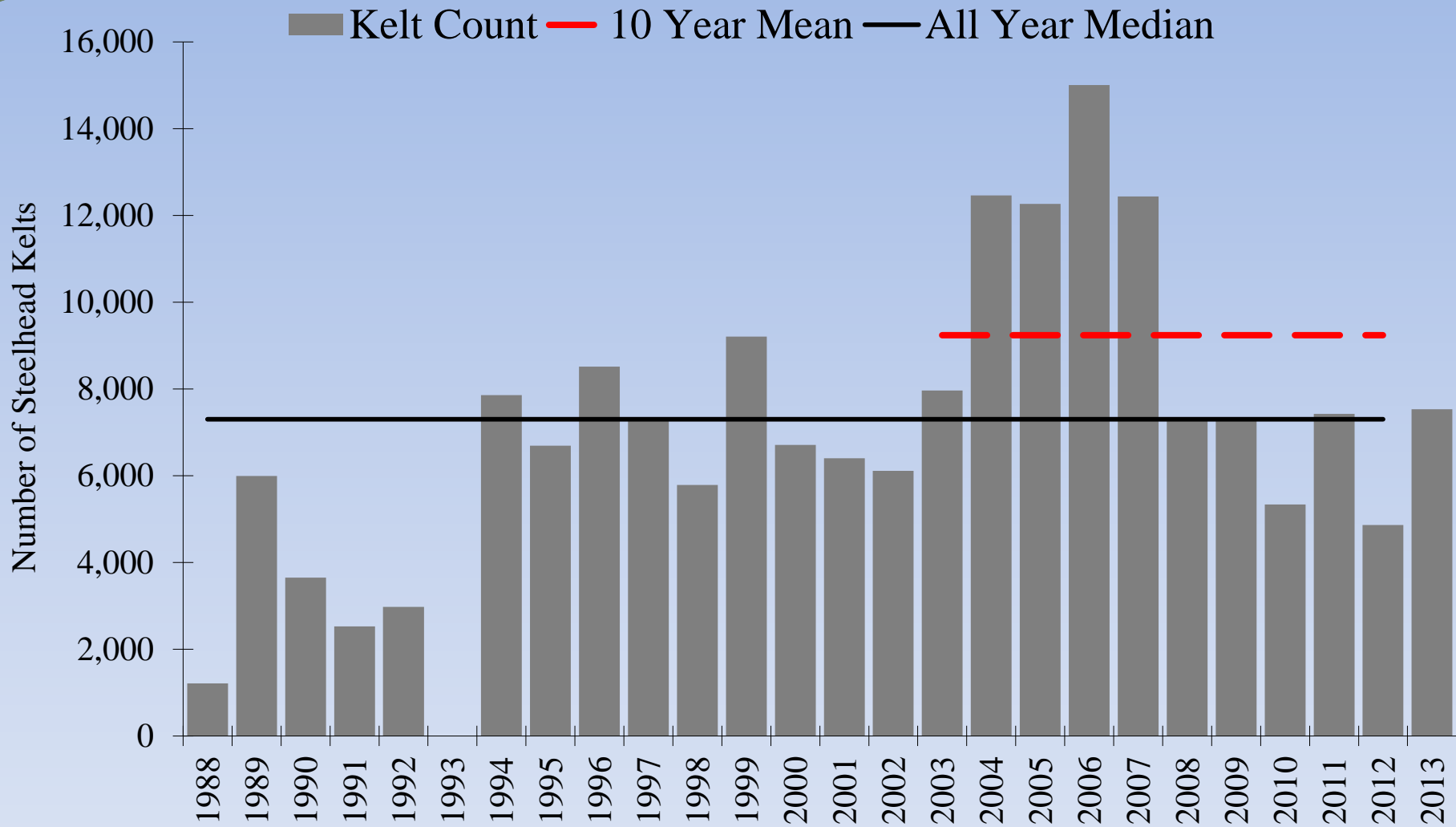




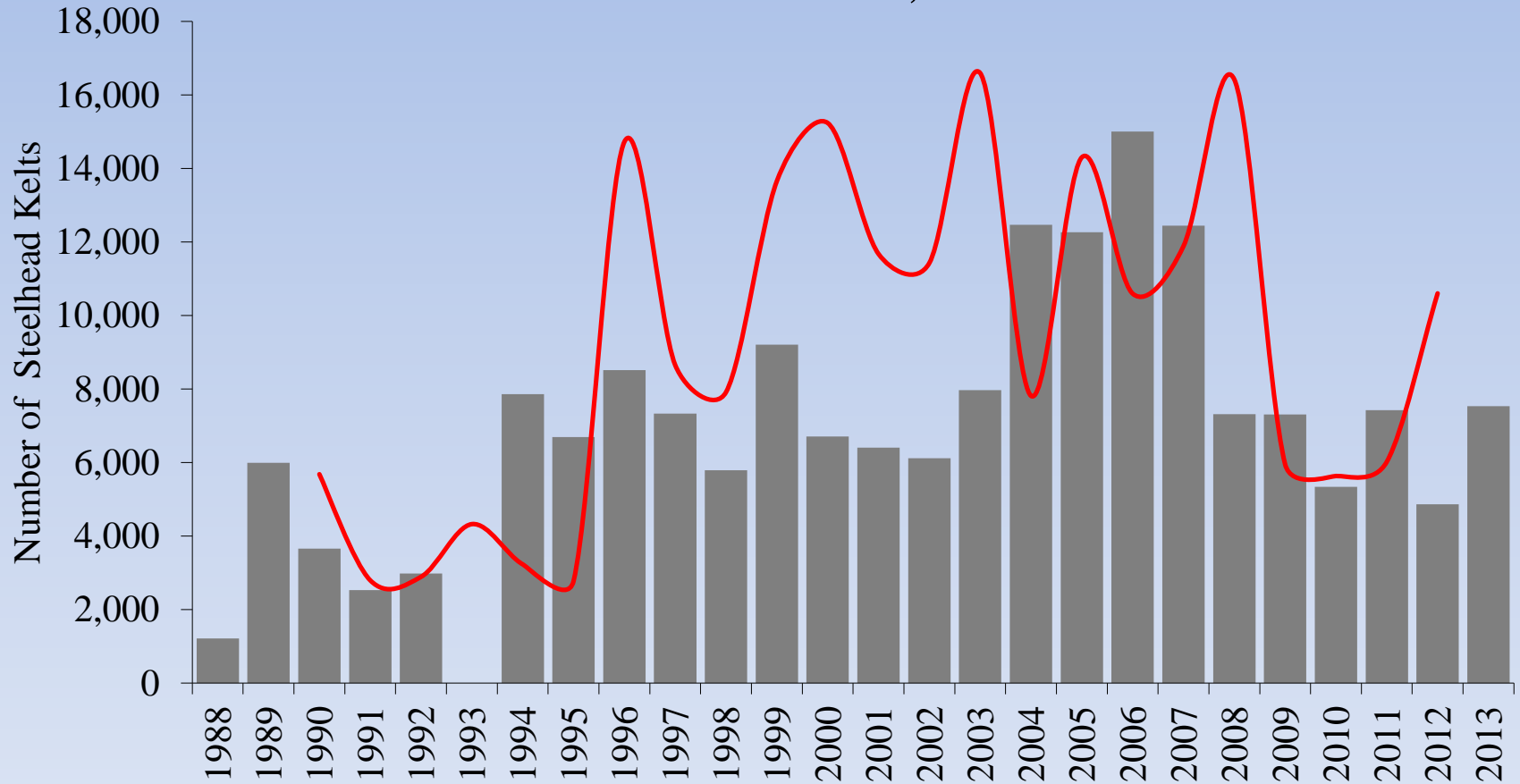


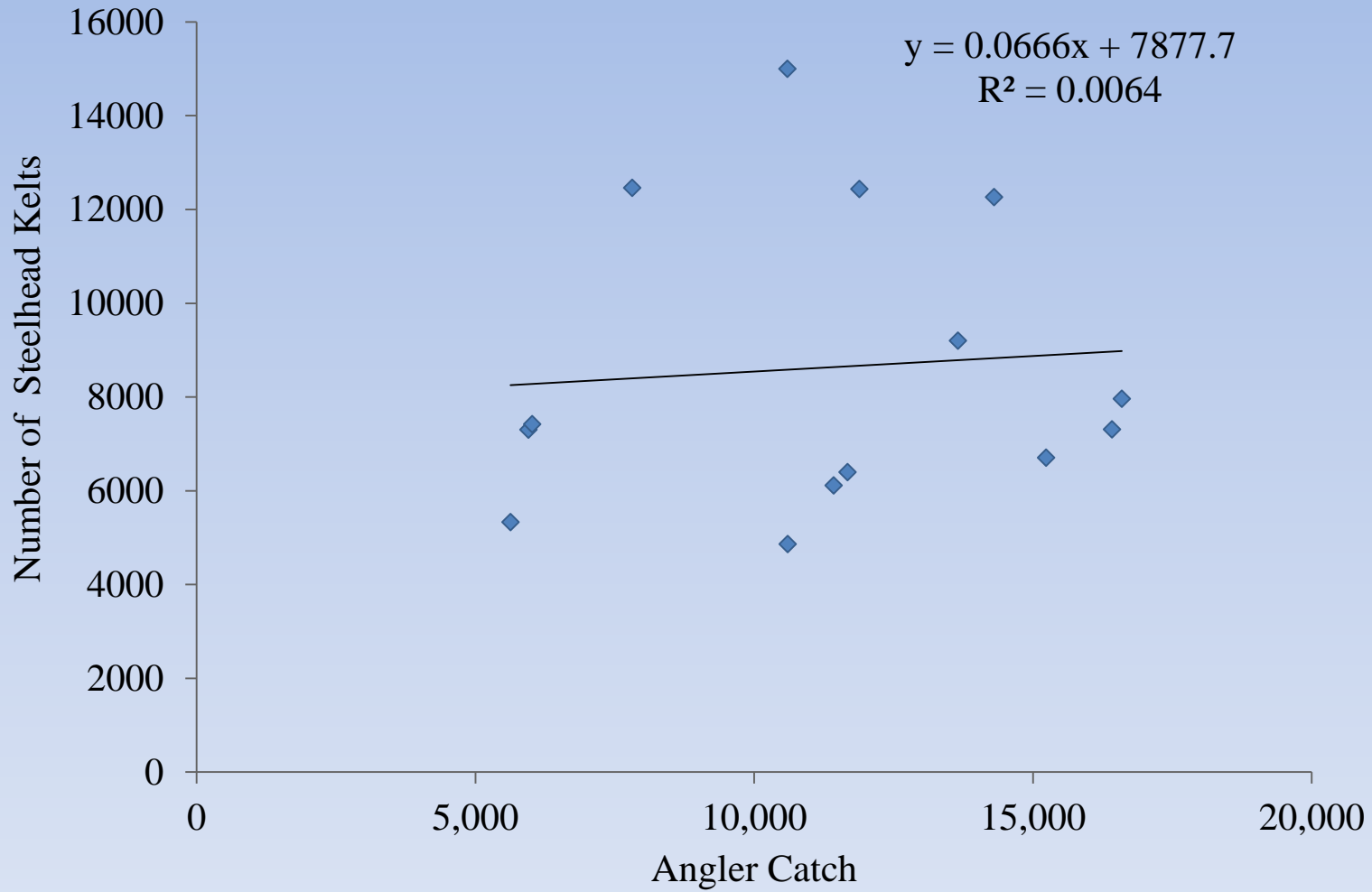






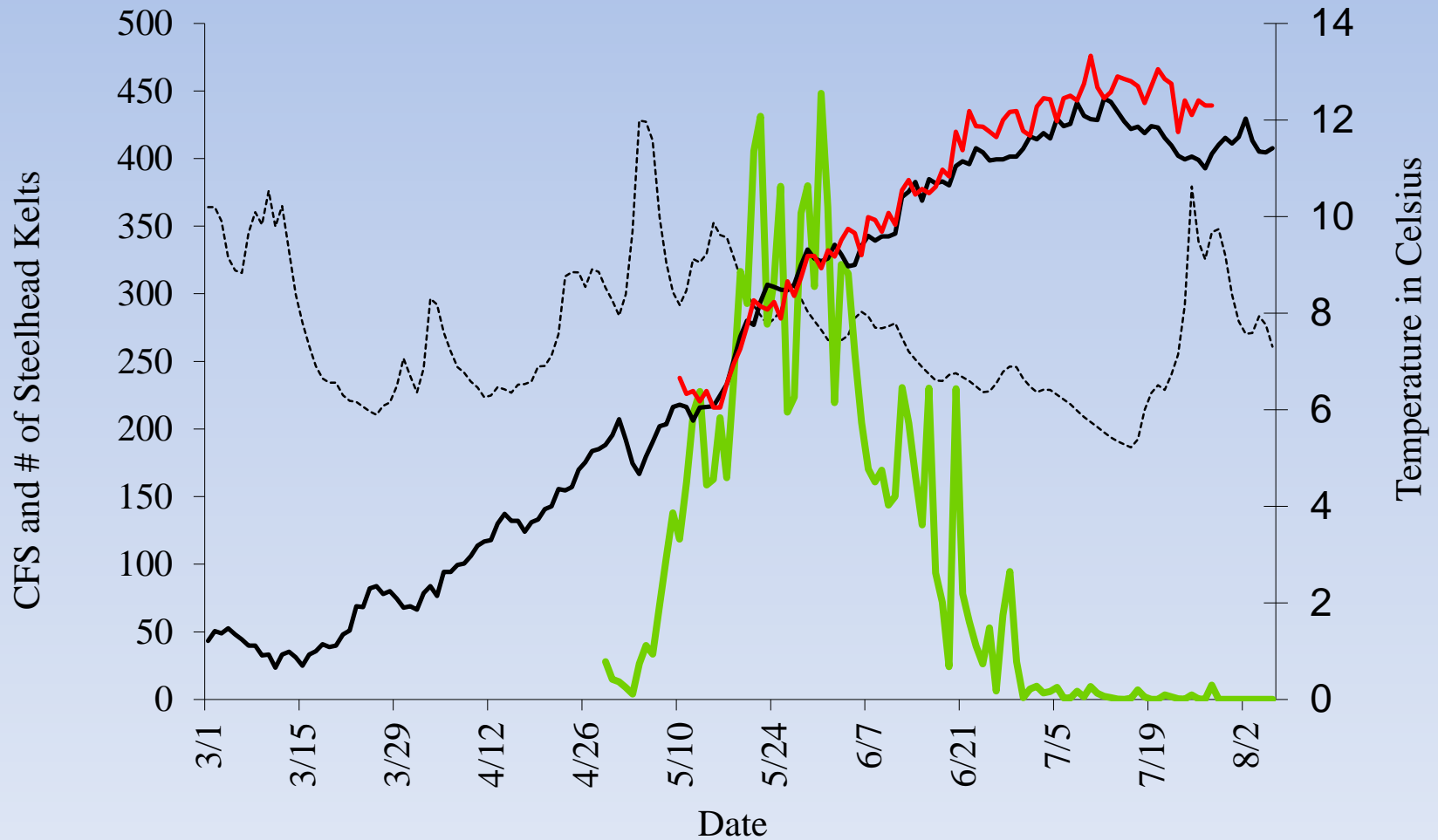
Yearly Steelhead Kelt Count (bars)
and Sport Catch (line)
from Situk River Weir; 1988 - 2013.



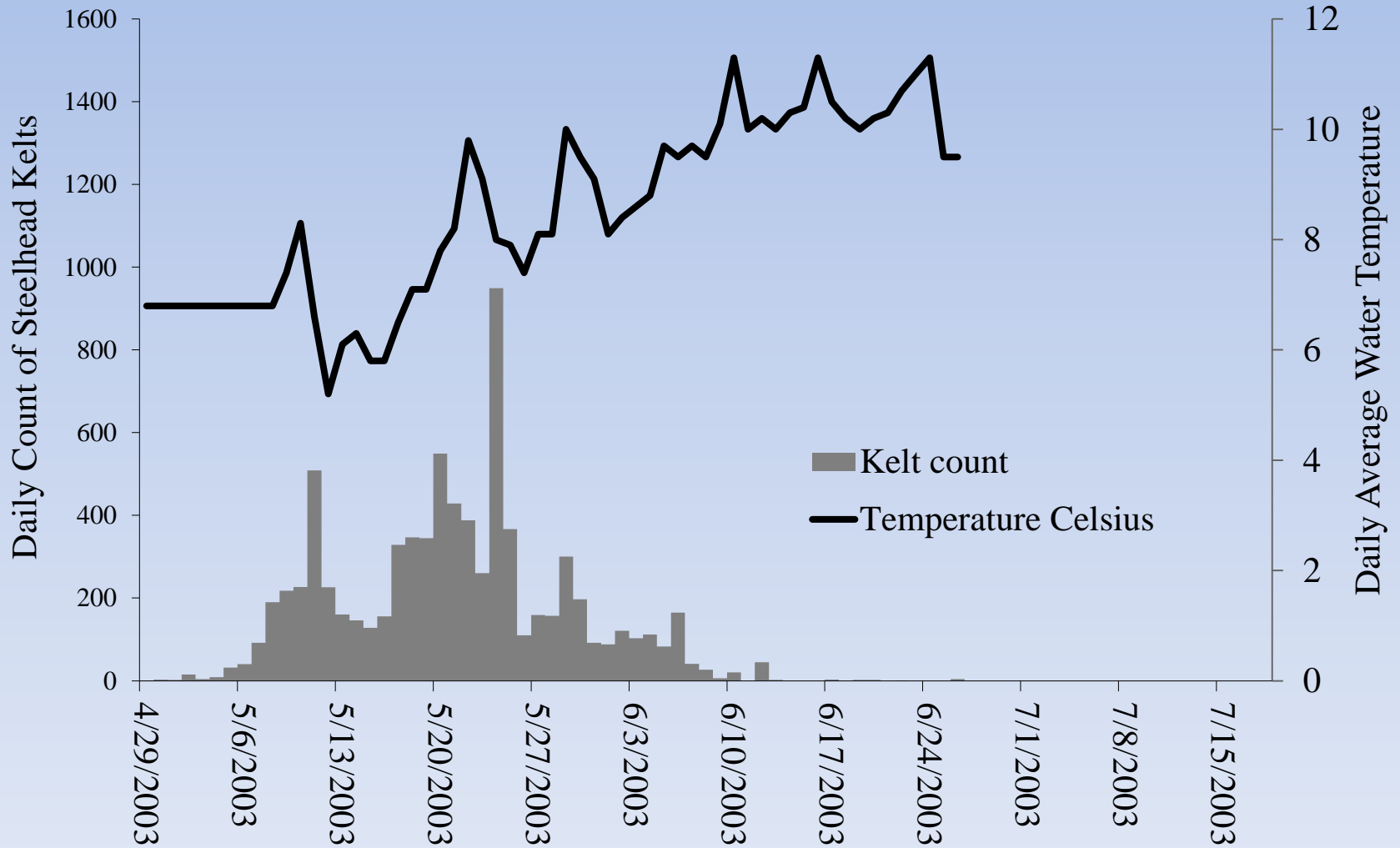


Average Kelt Emigration Timing for Situk River

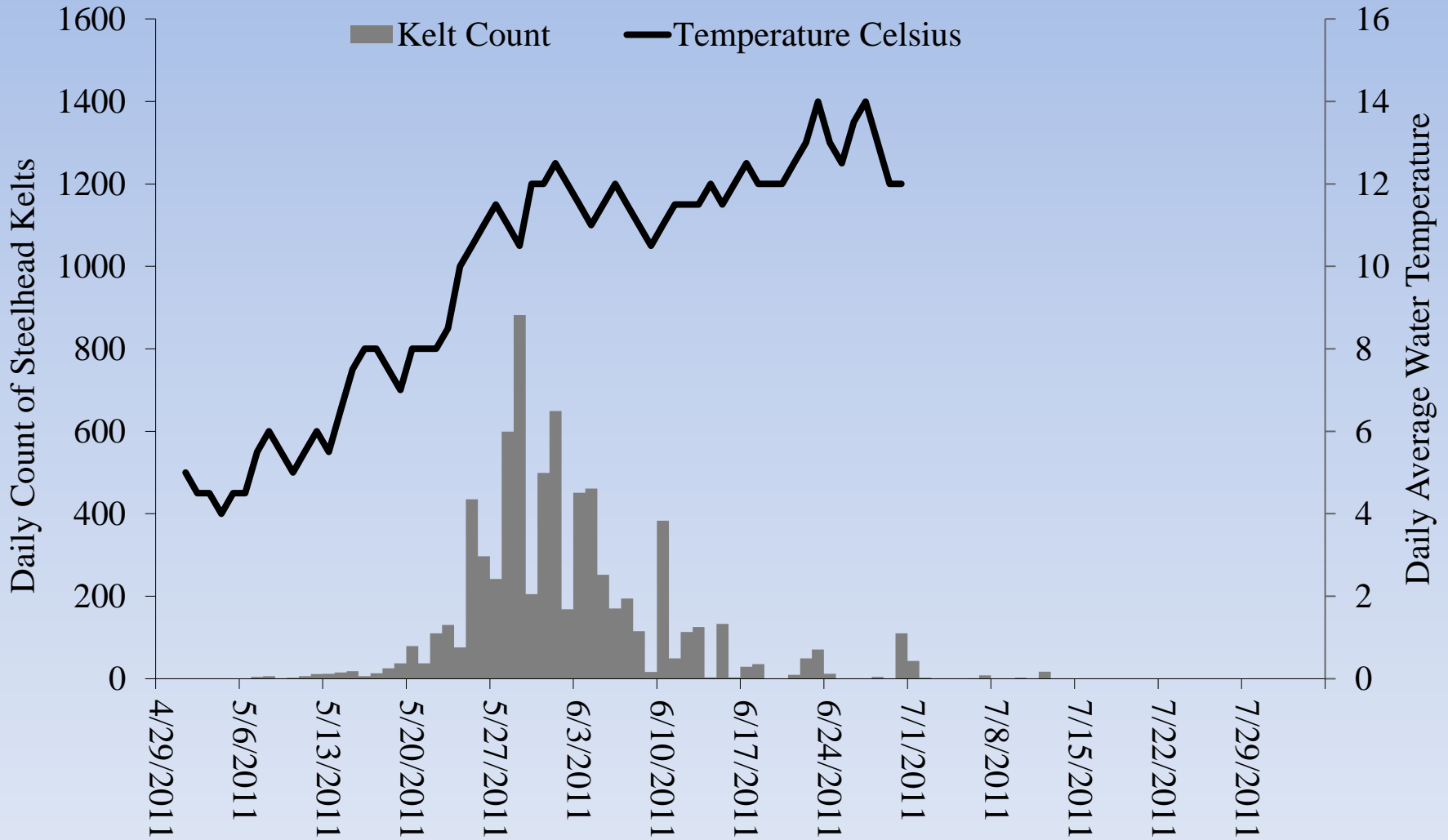
----- Mean CFS
— Mean daily temperature at bridge
— Mean # Steelhead kelts
— Mean daily weir temperature



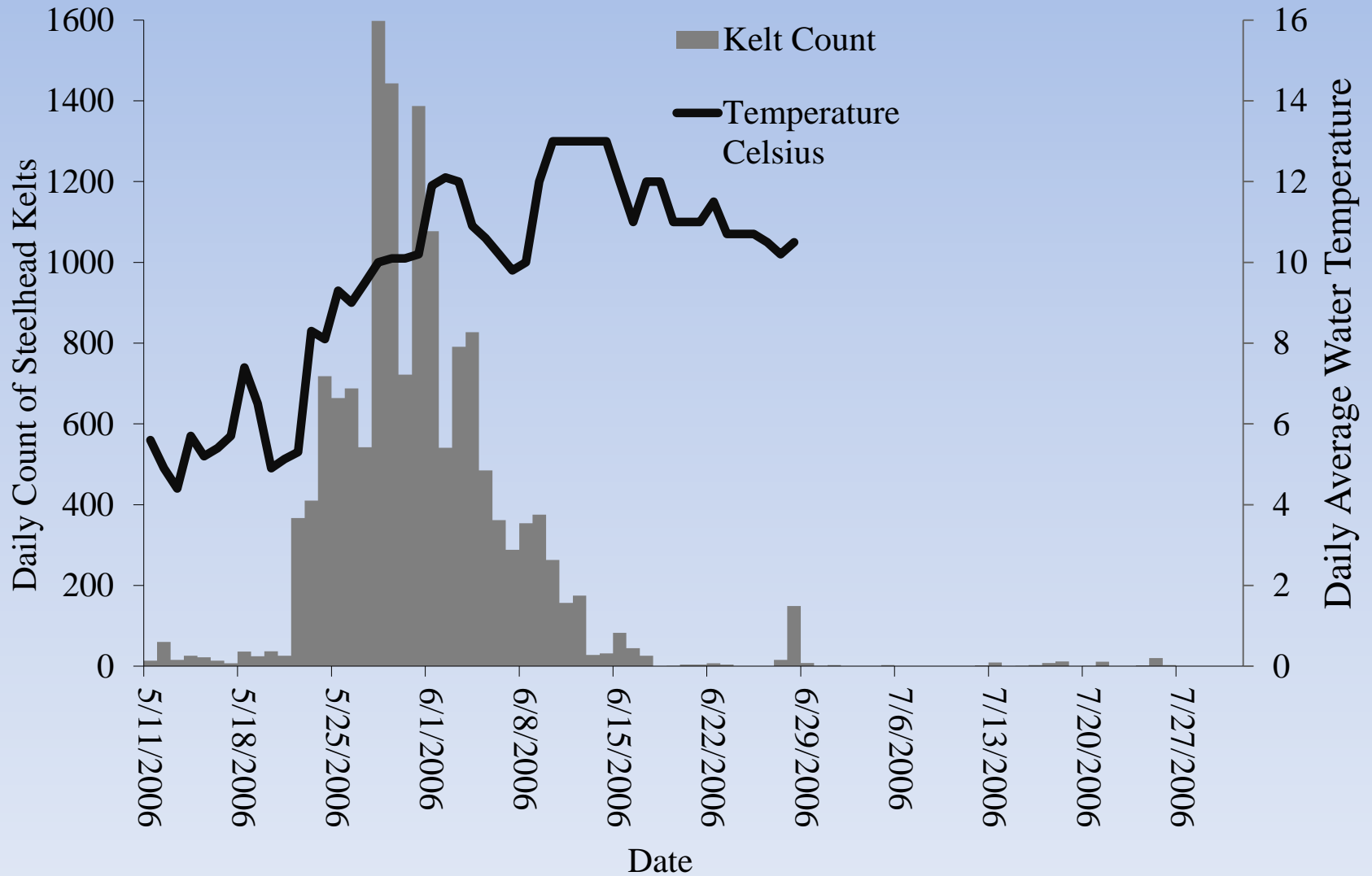
Steelhead Kelt Count from Situk River Weir; 2003



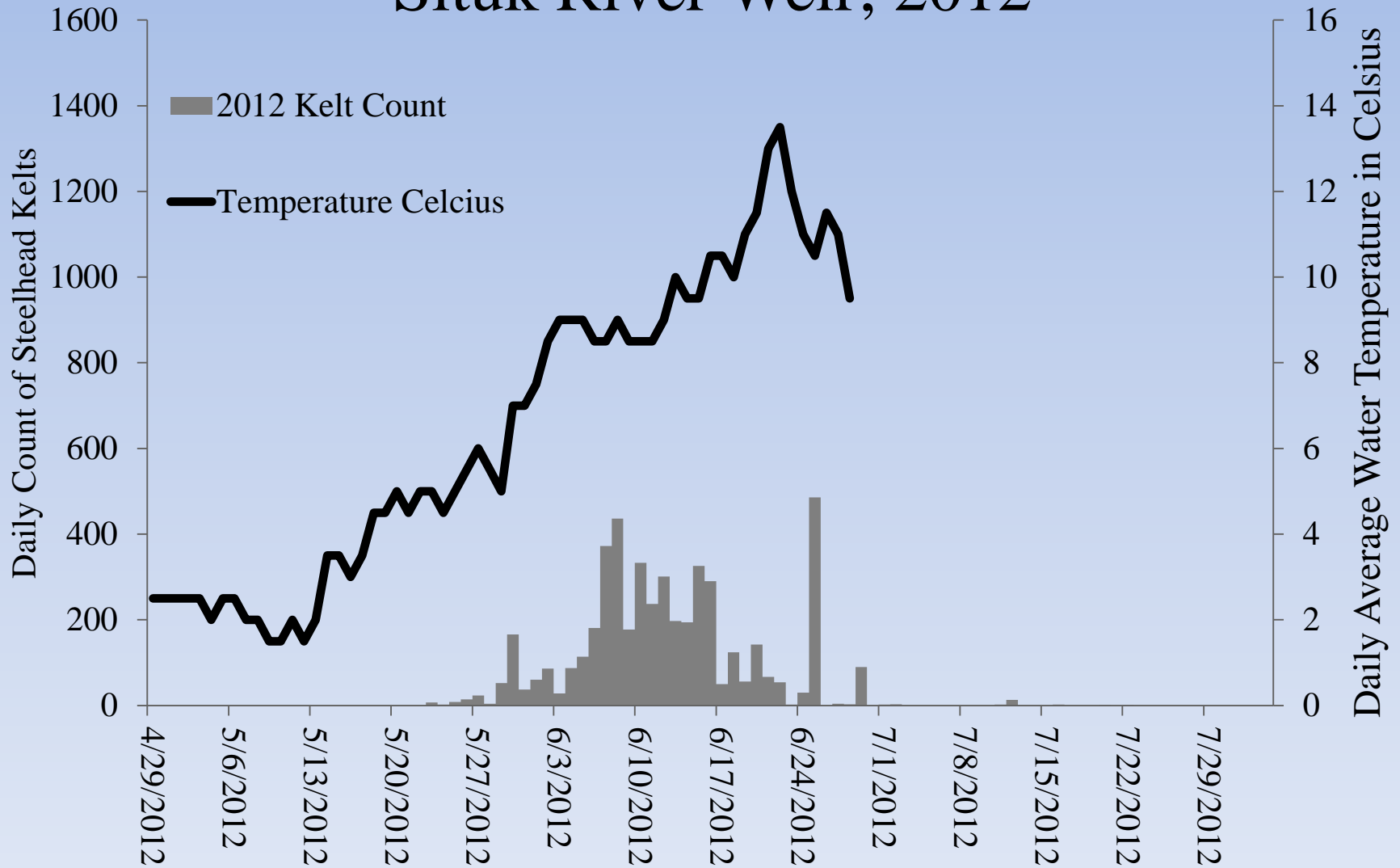
Steelhead Kelt Count from Situk River Weir; 2011



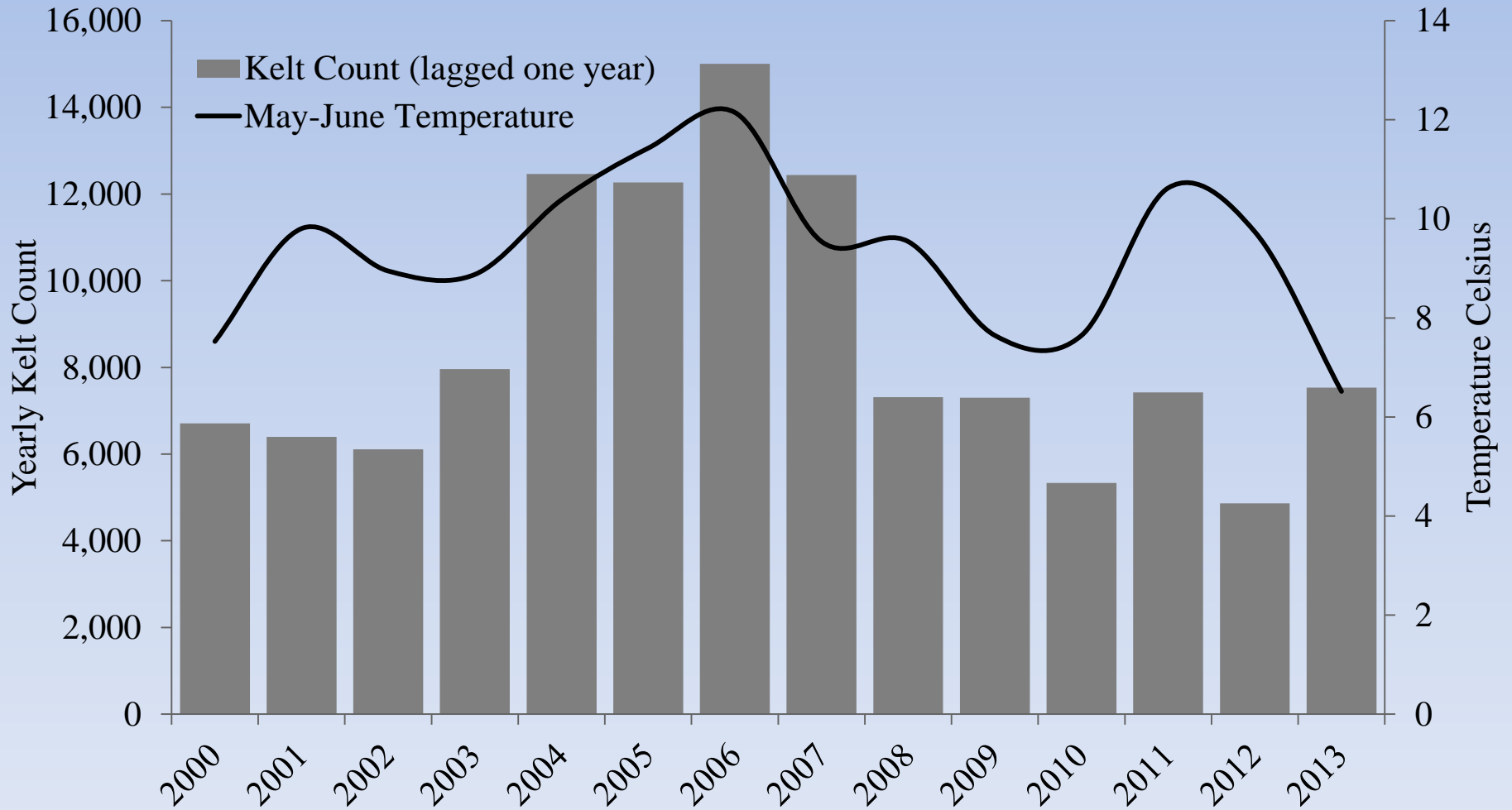
Steelhead Kelt Count from Situk River Weir; 2006

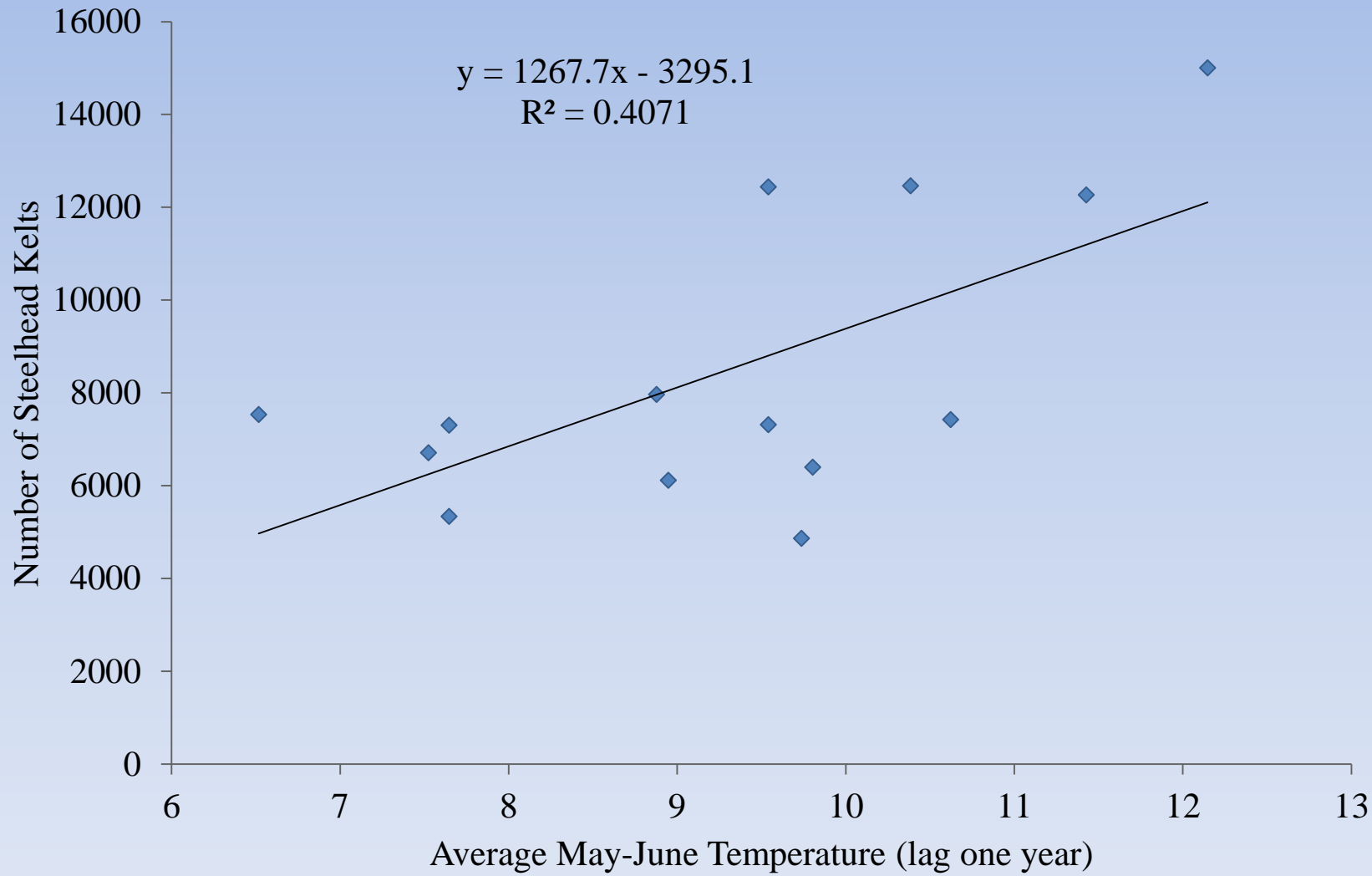


Steelhead Kelt Count from Situk River Weir; 2012



May to June Yearly Average Temperature and Yearly Kelt Count from The Situk River; 2000-2013





SAMPLING



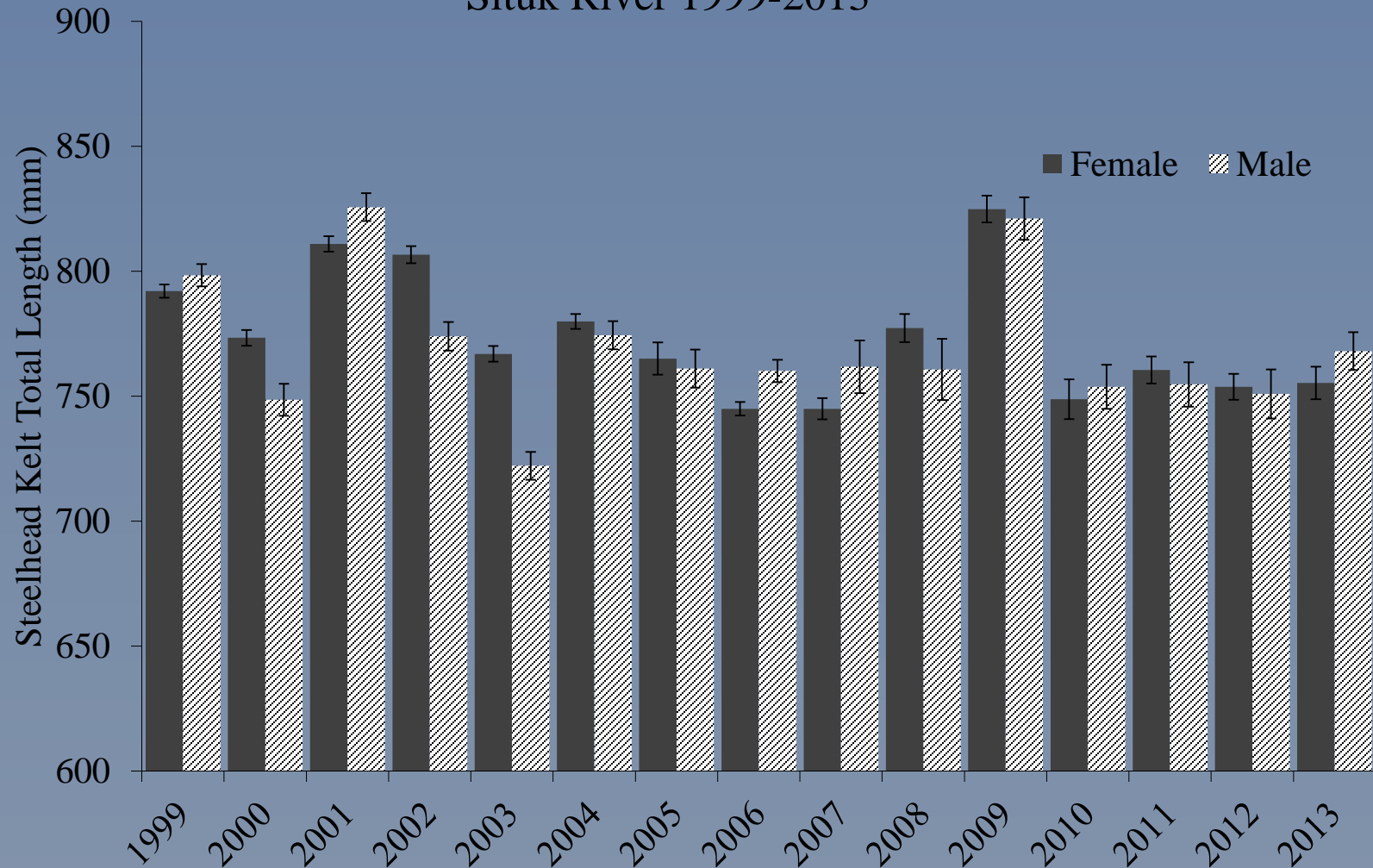
SAMPLING GOALS

Sample 3-5 % across run based on target of 223 fish
Tue and Thurs
Tues early ; Thursday late
Use previous 2 days count to anticipate sample size

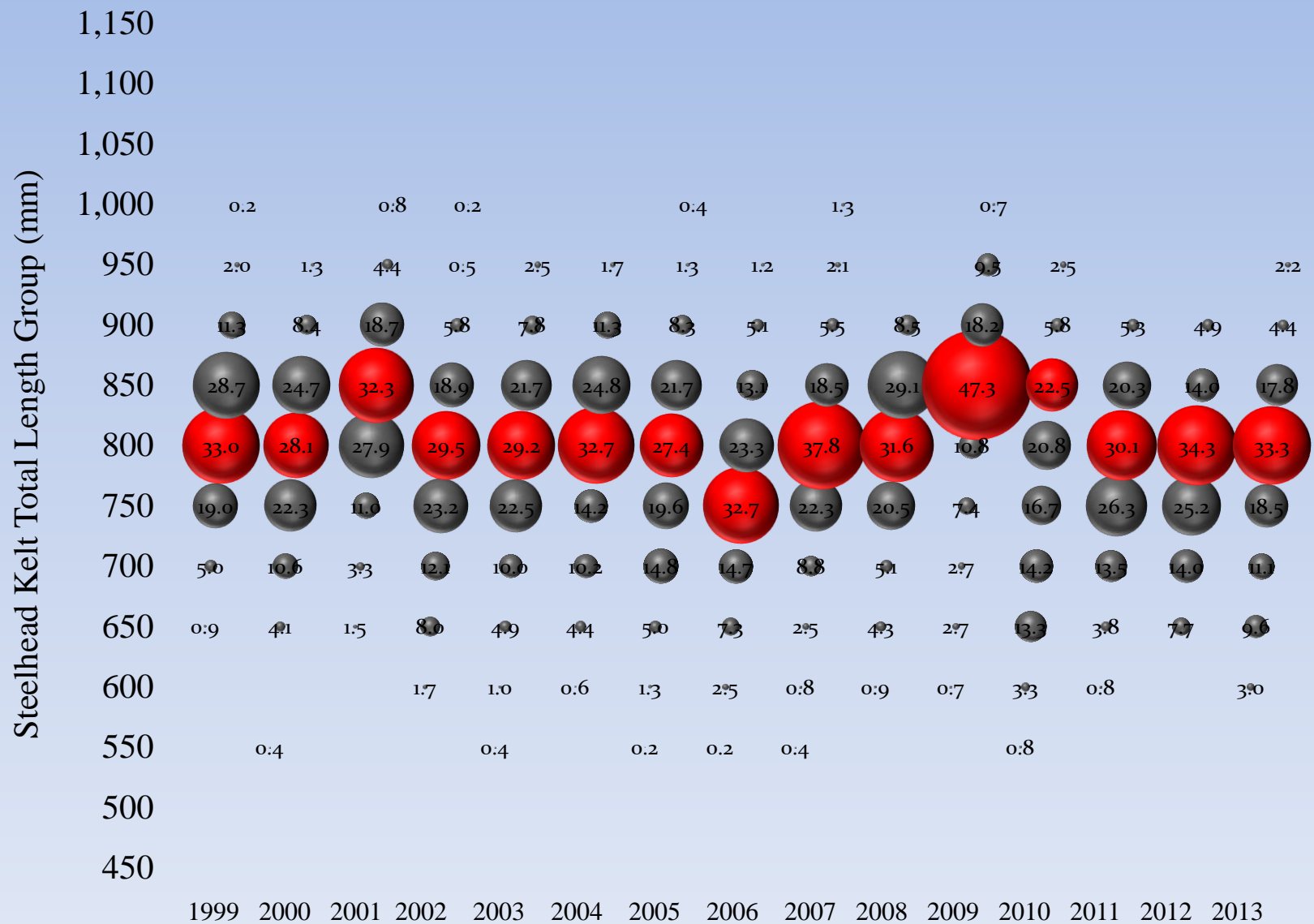
Data obtained

- Length
- Sex
- Wounding codes.... 1-12
- Color/condition codes.... 1-3
- *Saprolegnia*....yes or no
- PIT tag

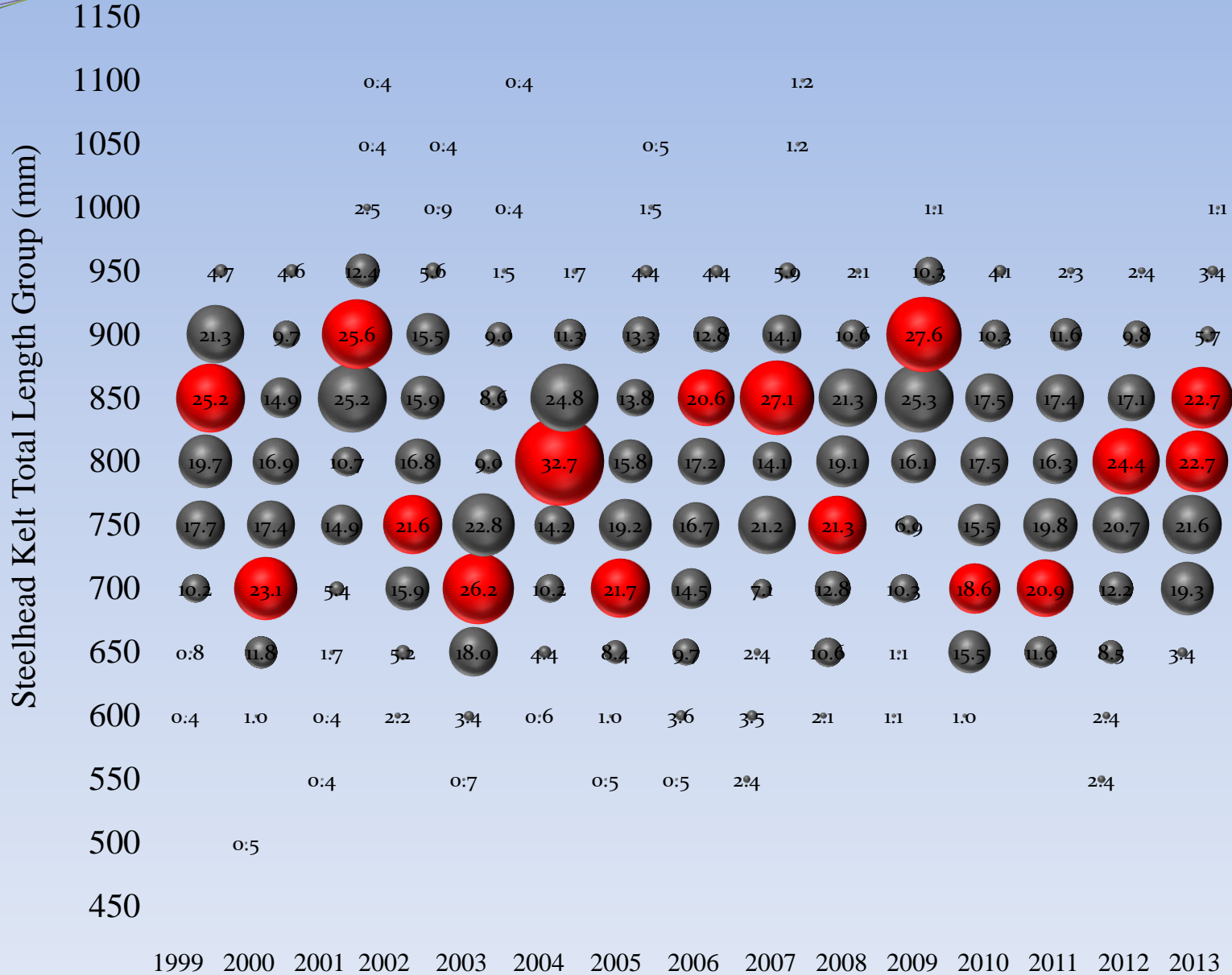
Average total length (mm) of steelhead from the Situk River 1999-2013



Length Distributions Per Year For Female Kelt Steelhead Sampled From The Situk River; 1999- 2013



Length Distributions Per Year For Male Kelt Steelhead Sampled From The Situk River; 1999- 2013





Color 1



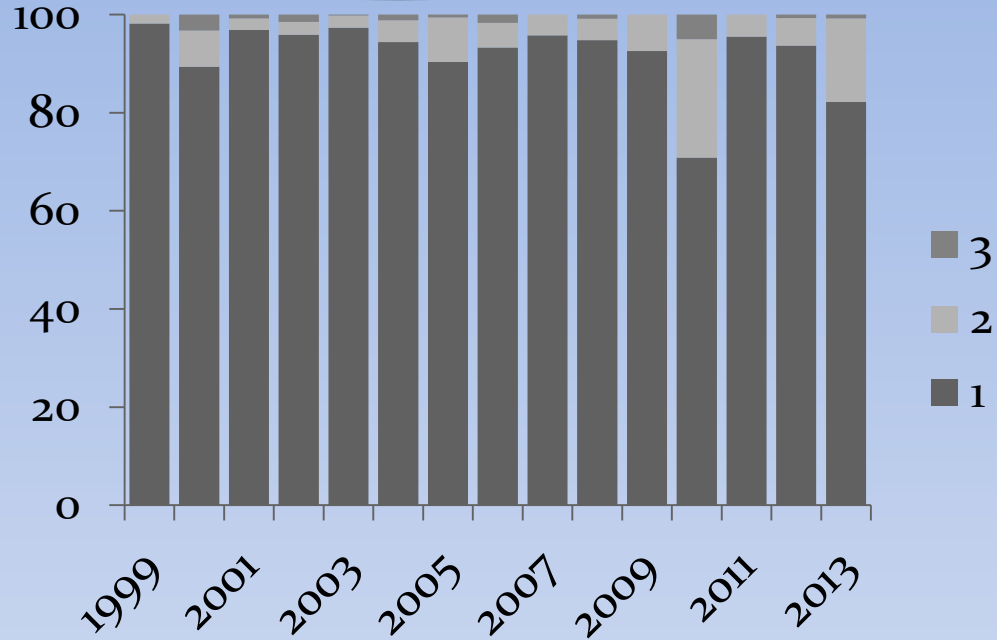
Color 2



Color 3

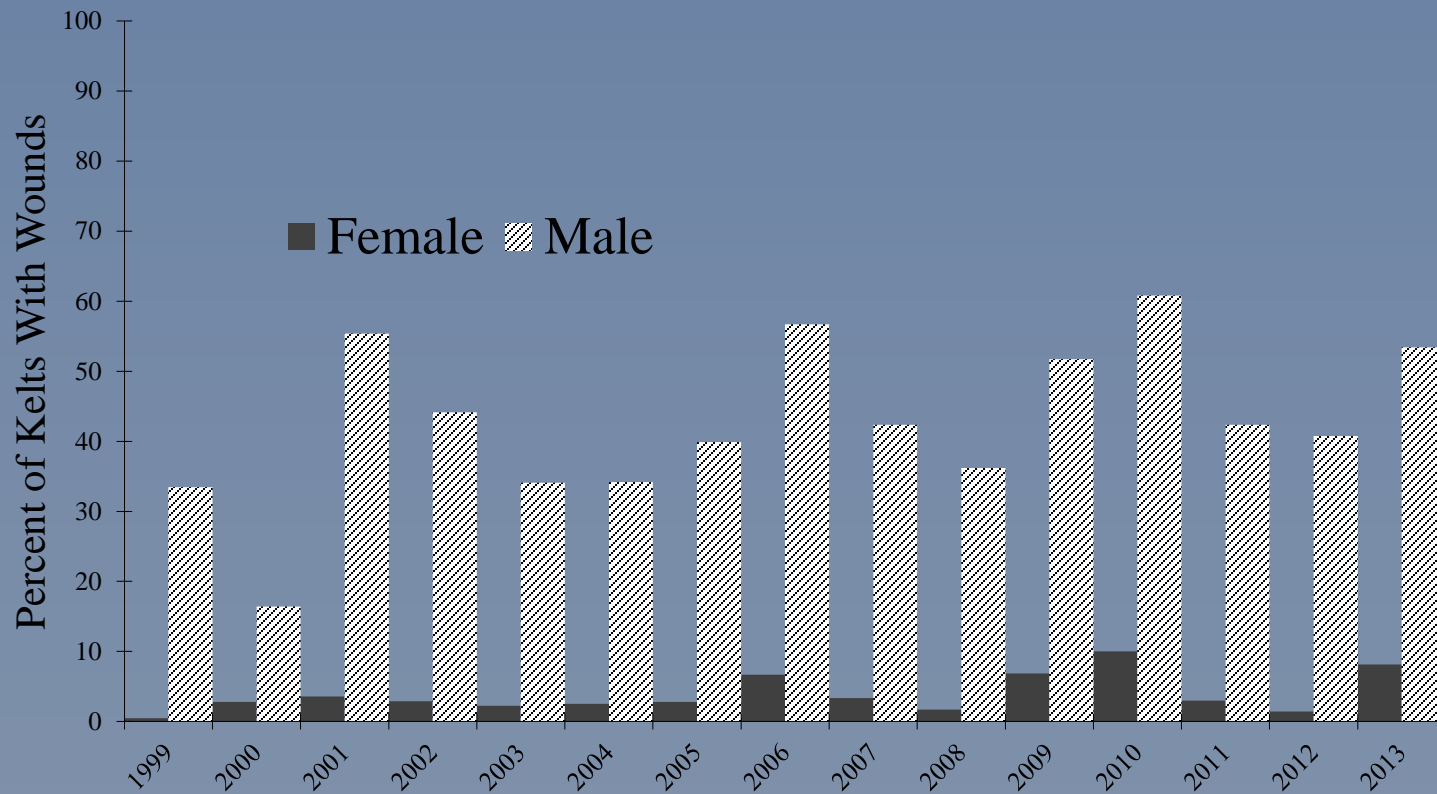


Yearly Proportions Per Color/Condition Class In Samples of Female Kelt Steelhead from the Situk River 1999-2013

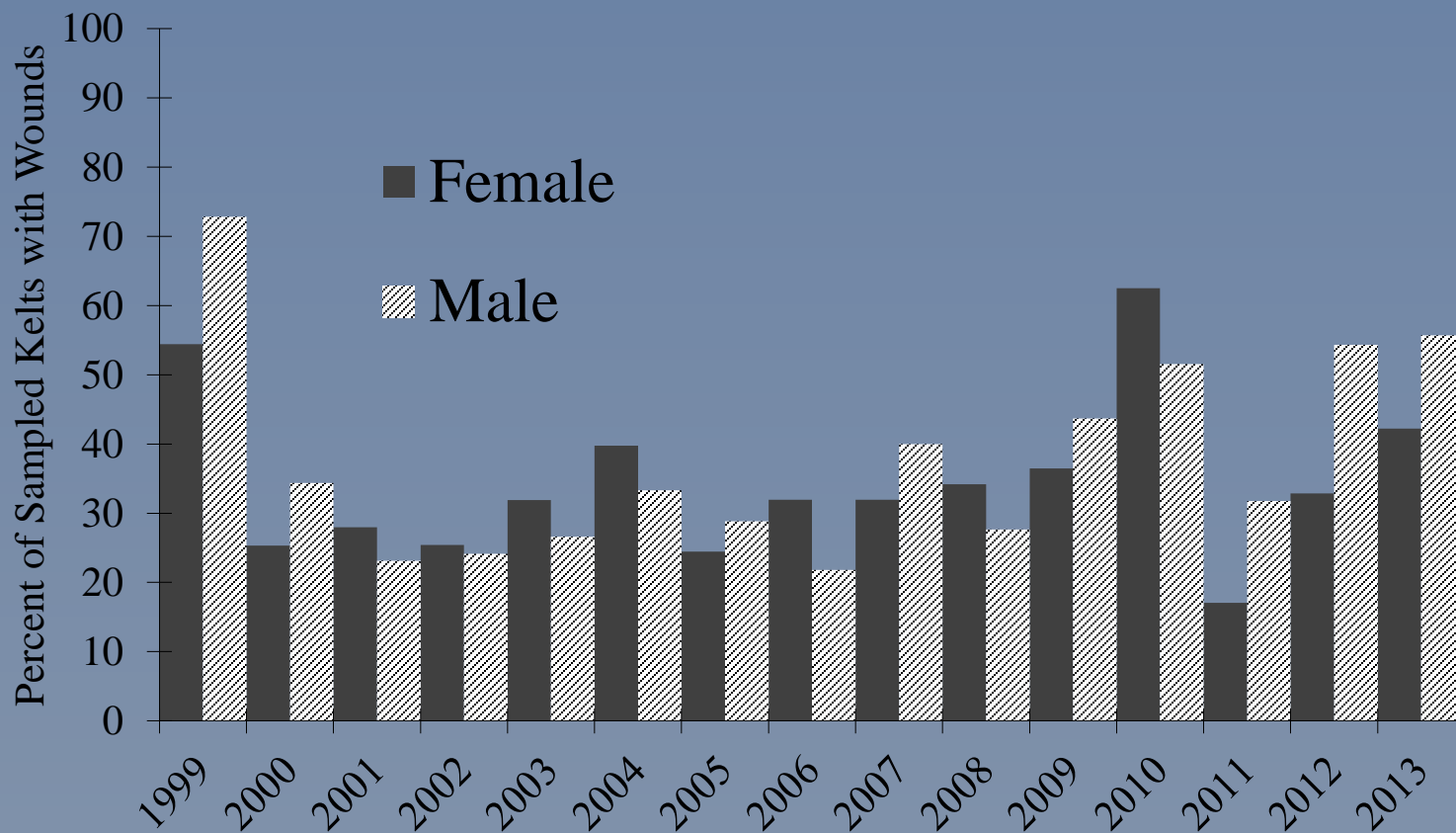


Yearly Proportions Per Color/Condition Class In Samples of Male Kelt Steelhead from the Situk River 1999-2013

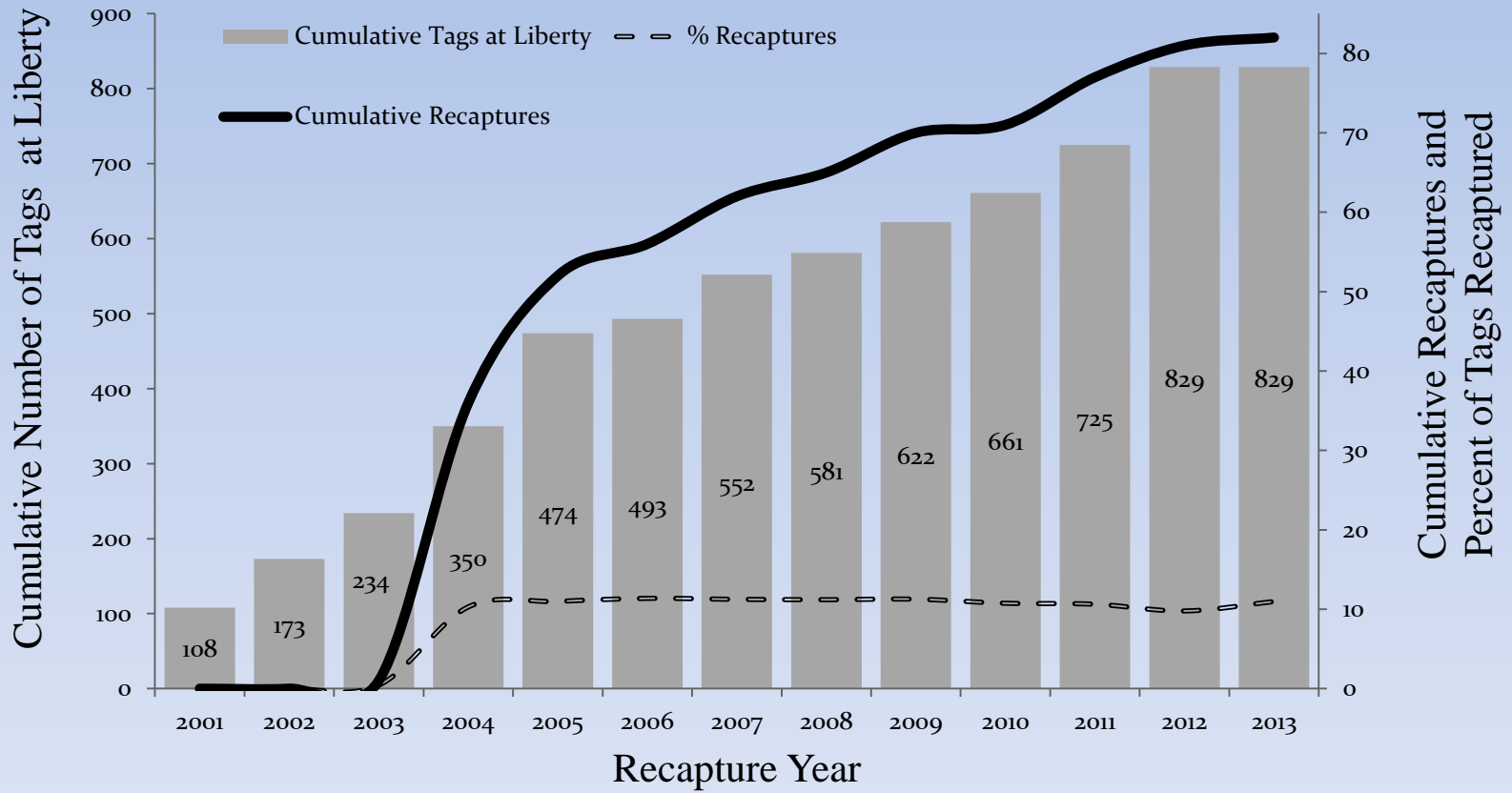
Percent of Kelts With *Saprolegnia* per sex from The Situk River; 1999-2013



Percent of Fish With Wounds per sex from The Situk River; 1999-2013



PIT Tagging Statistics from Situk River Steelhead Kelts; 2001-2013



Summary

- Temperatures were associated with emigration timing
- Temperatures were associated with kelt numbers
- Kelt size differences per sex were not consistent among years
- Kelt abundance was negatively associated with kelt size
- Male kelt size distributions were more variable among years
 - More male fish fell within trophy fish class (> 36 inches)
- No association of kelt abundance with angler catch
- PIT tagged fish return rate of 10%
- More males had *Saprolegnia*
- Males were classed lower in color condition
- No significant difference in male vs female wounding rates



THE END

