



Length Frequency Analysis of Discards



Data

- ▶ ASM and NEFOP data from 2008 to 2012
- ▶ Regulated discards
- ▶ Focused on
 - ▶ Depth
 - ▶ Gear
 - ▶ Mesh Shape
 - ▶ Mesh Size
 - ▶ Statistical Area
 - ▶ Quarter



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- ▶ Contribution by newly mature fish
 - ▶ Changes in fecundity and egg viability
 - ▶ Full retention
 - ▶ Increases number of immature fish landed
 - ▶ Impacts depend on fishing behavior
 - ▶ Lifetime fecundity



Results

- ▶ Large number of sub-legal fish are discarded
- ▶ A reduction in minimum size may have a significant effect for some species
- ▶ No effect on other species
- ▶ Changes to trawl gear mesh size or configuration
 - ▶ Reduce discards



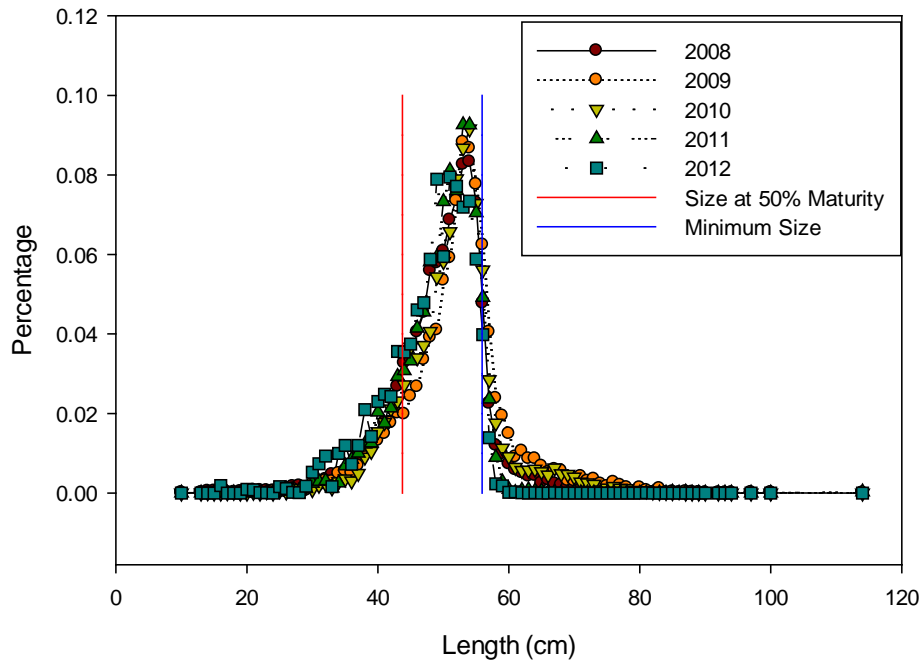
Potential Reductions

Species	Discards affected by 1 inch reduction	Size (inches)	Minimum Size to reduce most discards
Cod	Yes	22 (55.9 cm)	48 cm
Haddock	Yes	18 (45.7 cm)	40 cm
Pollock	No	19 (48.3 cm)	36 cm
Witch Flounder (gray sole)	Yes	14 (35.6 cm)	27 cm
Yellowtail Flounder	Yes	13 (33.0 cm)	30 cm
American Plaice (dab)	Yes	14 (35.6 cm)	25 cm
Atlantic Halibut	No	41 (104.1 cm)	
Winter Flounder (blackback)	Yes	12 (30.5 cm)	19 cm
Redfish	No	9 (22.9 cm)	18 cm

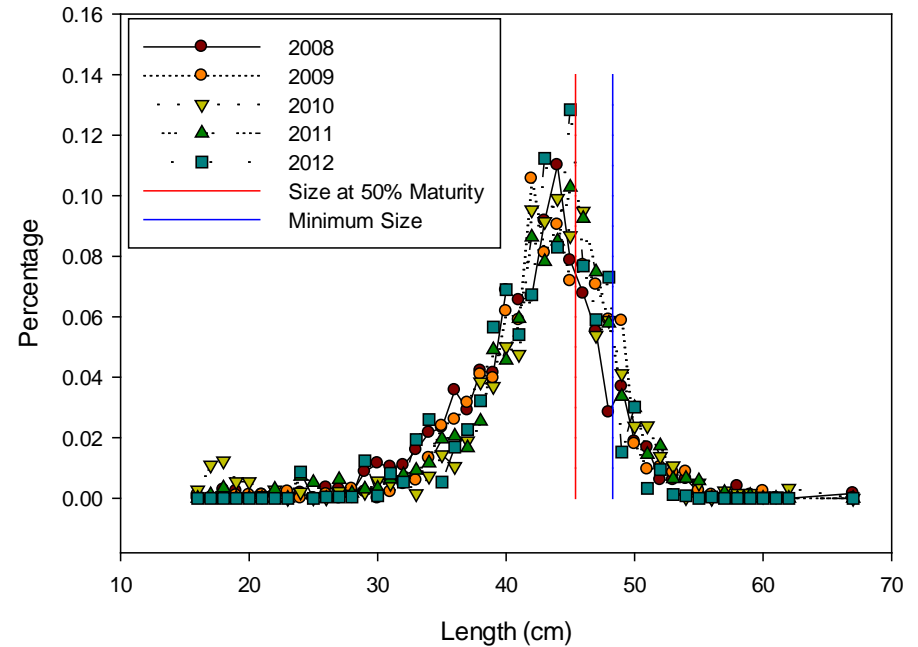


Total Annual Discards

▶ Cod

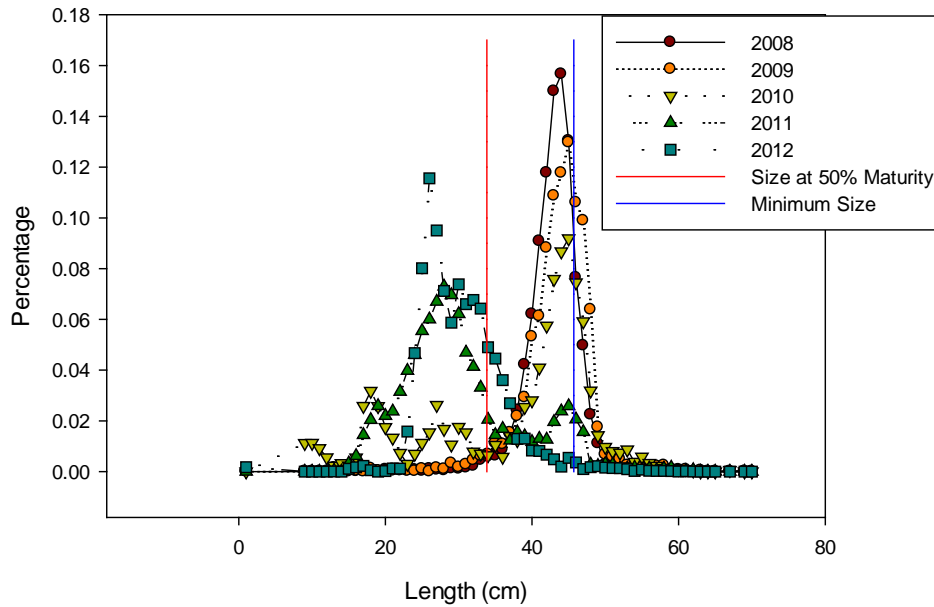


Pollock

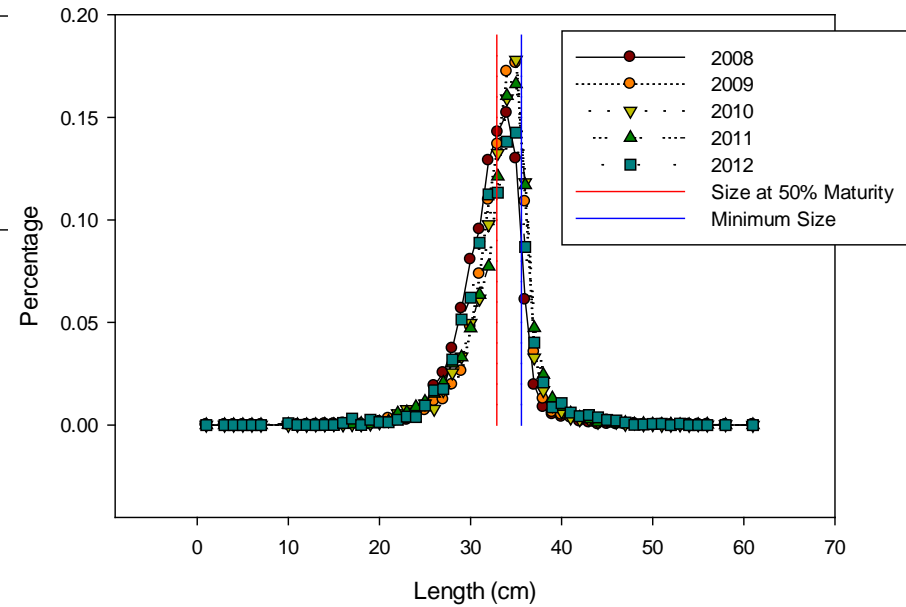


Total Annual Discards

▶ Haddock



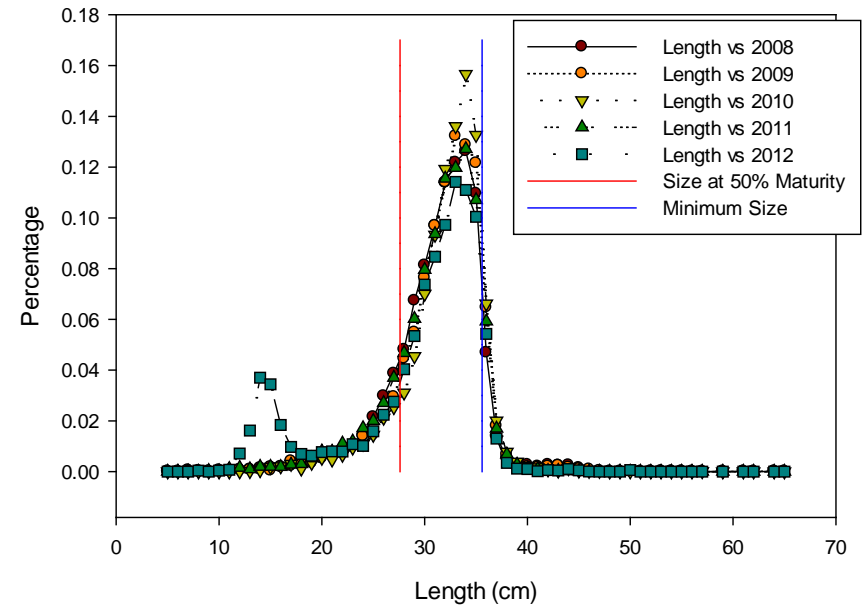
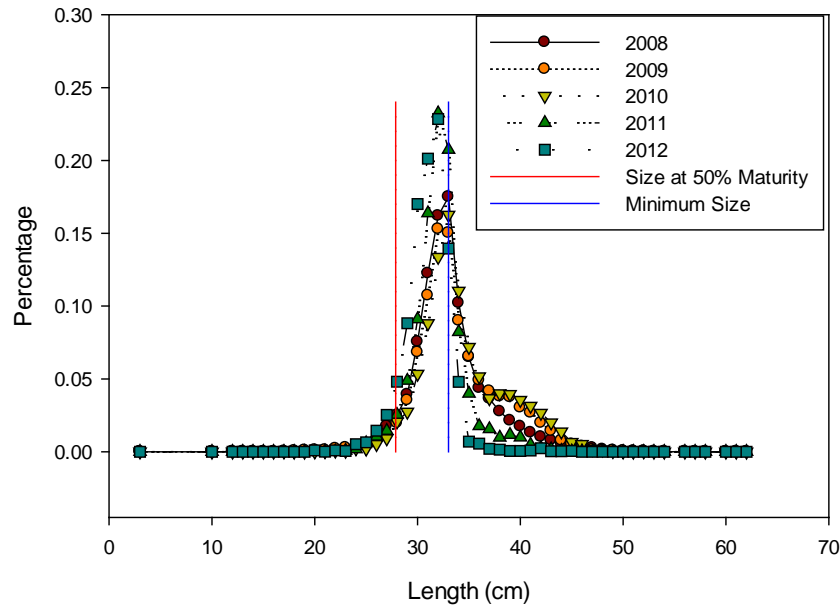
Witch Flounder



Total Annual Discards

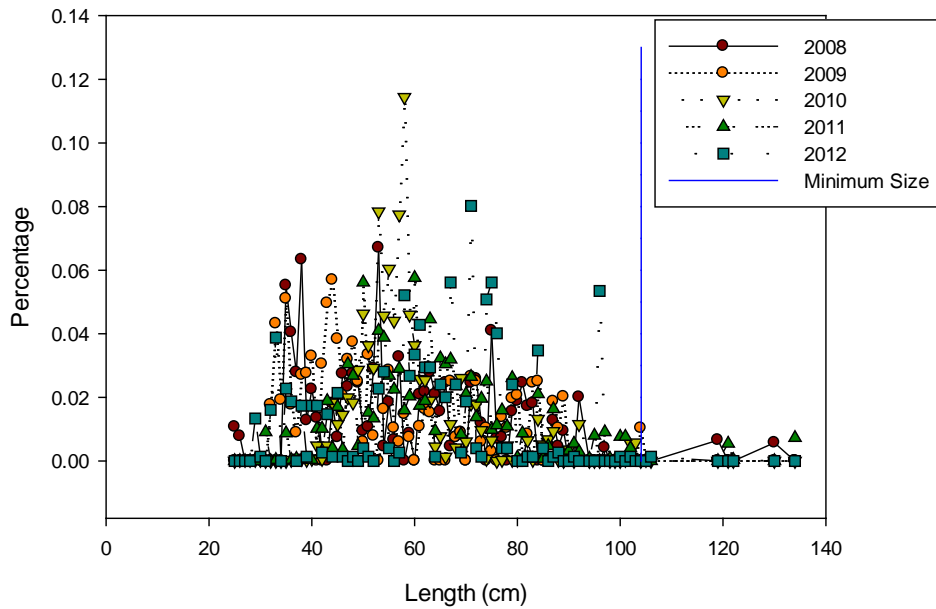
▶ Yellowtail Flounder

Plaice

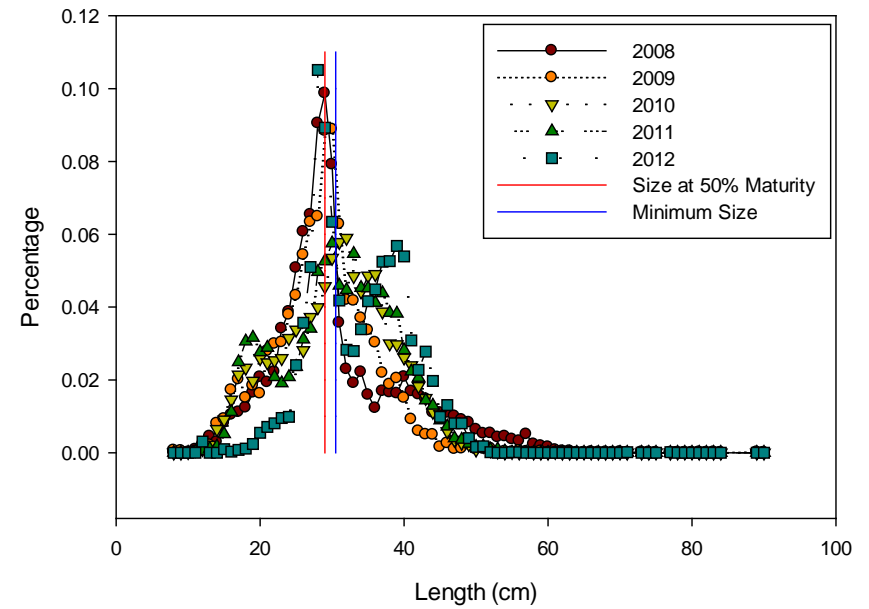


Total Annual Discards

▶ Halibut

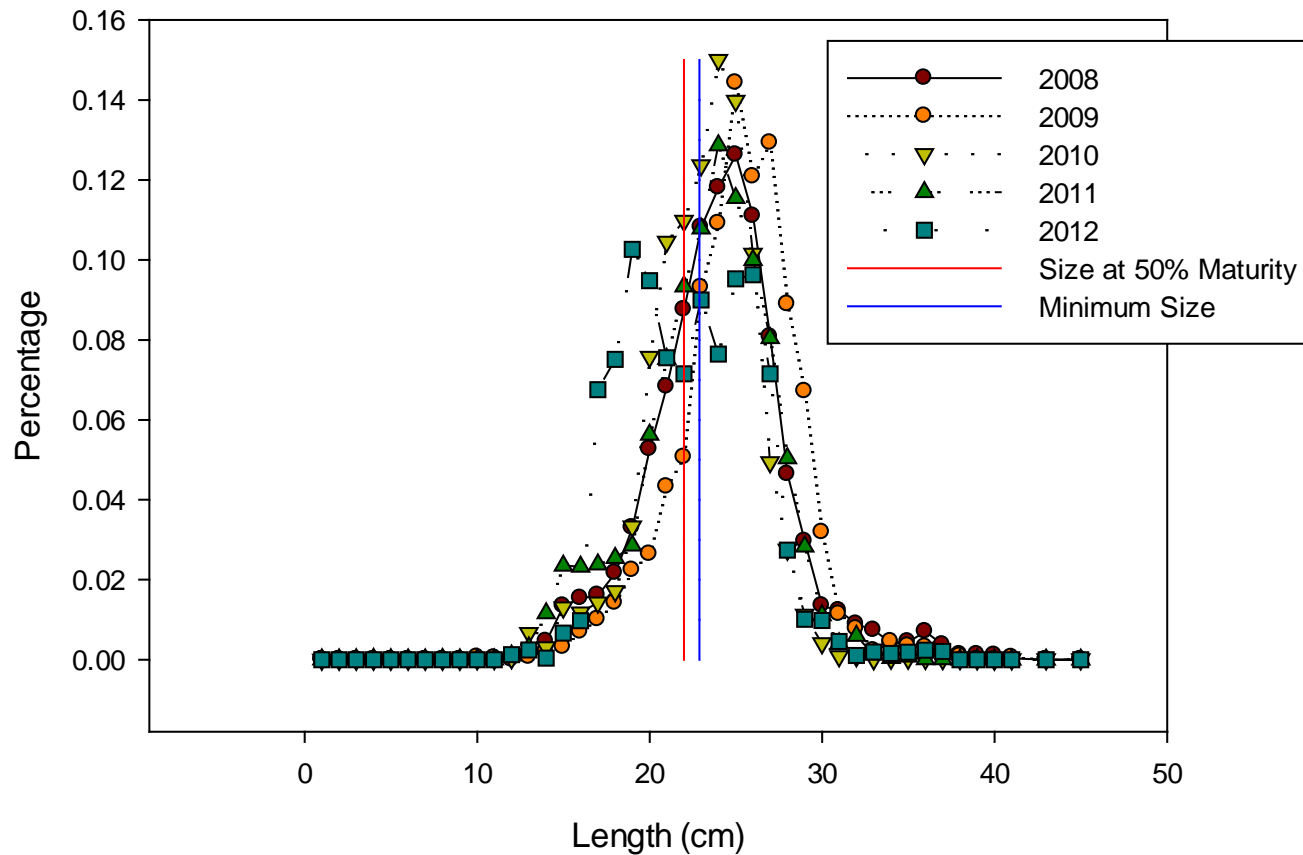


Winter Flounder

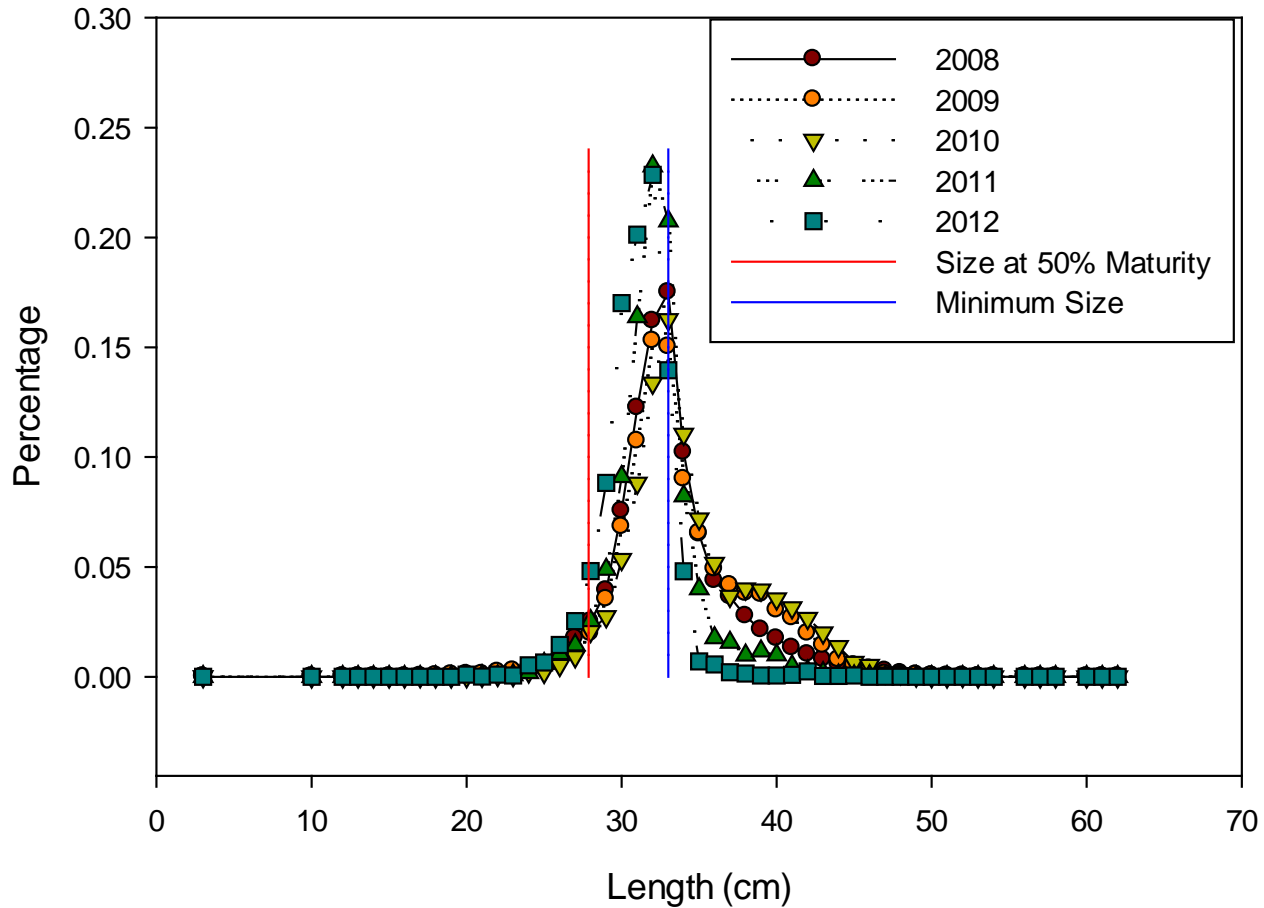


Total Annual Discards

► Redfish

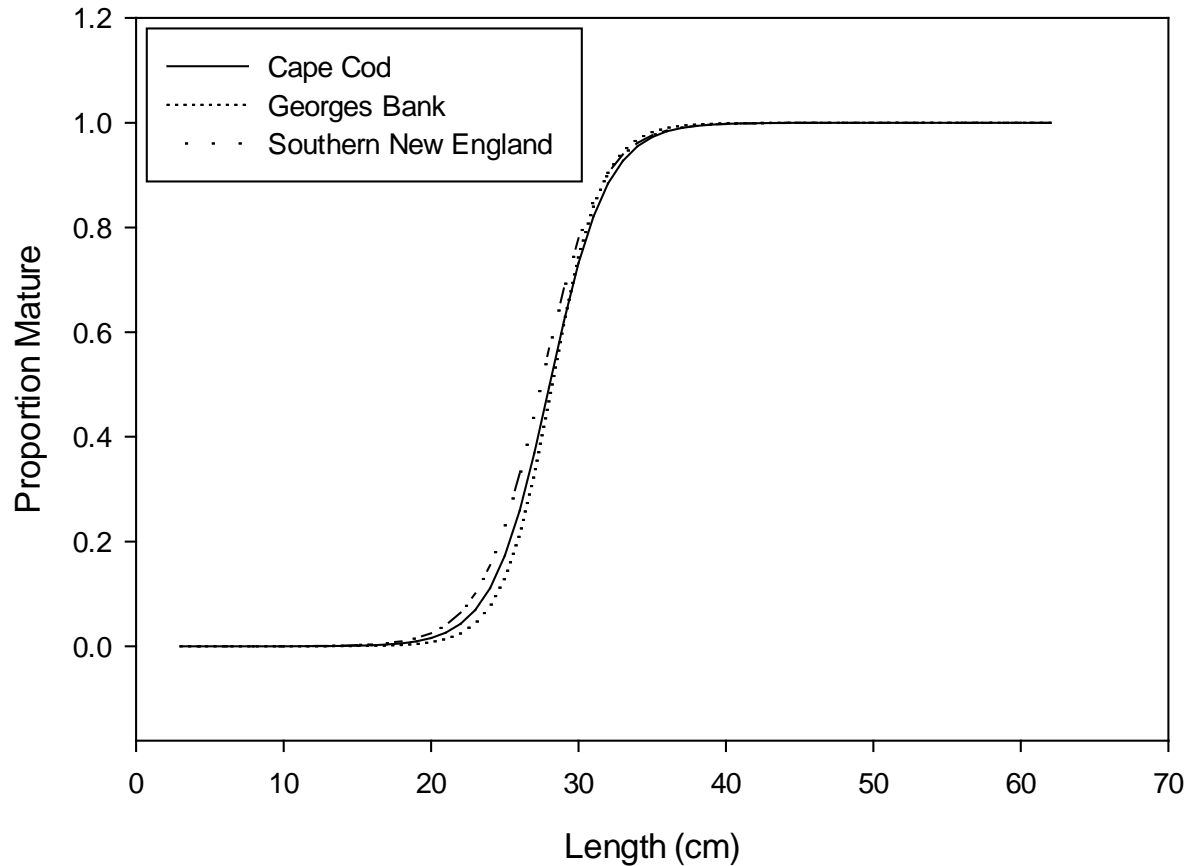


Yellowtail Flounder Total Discards

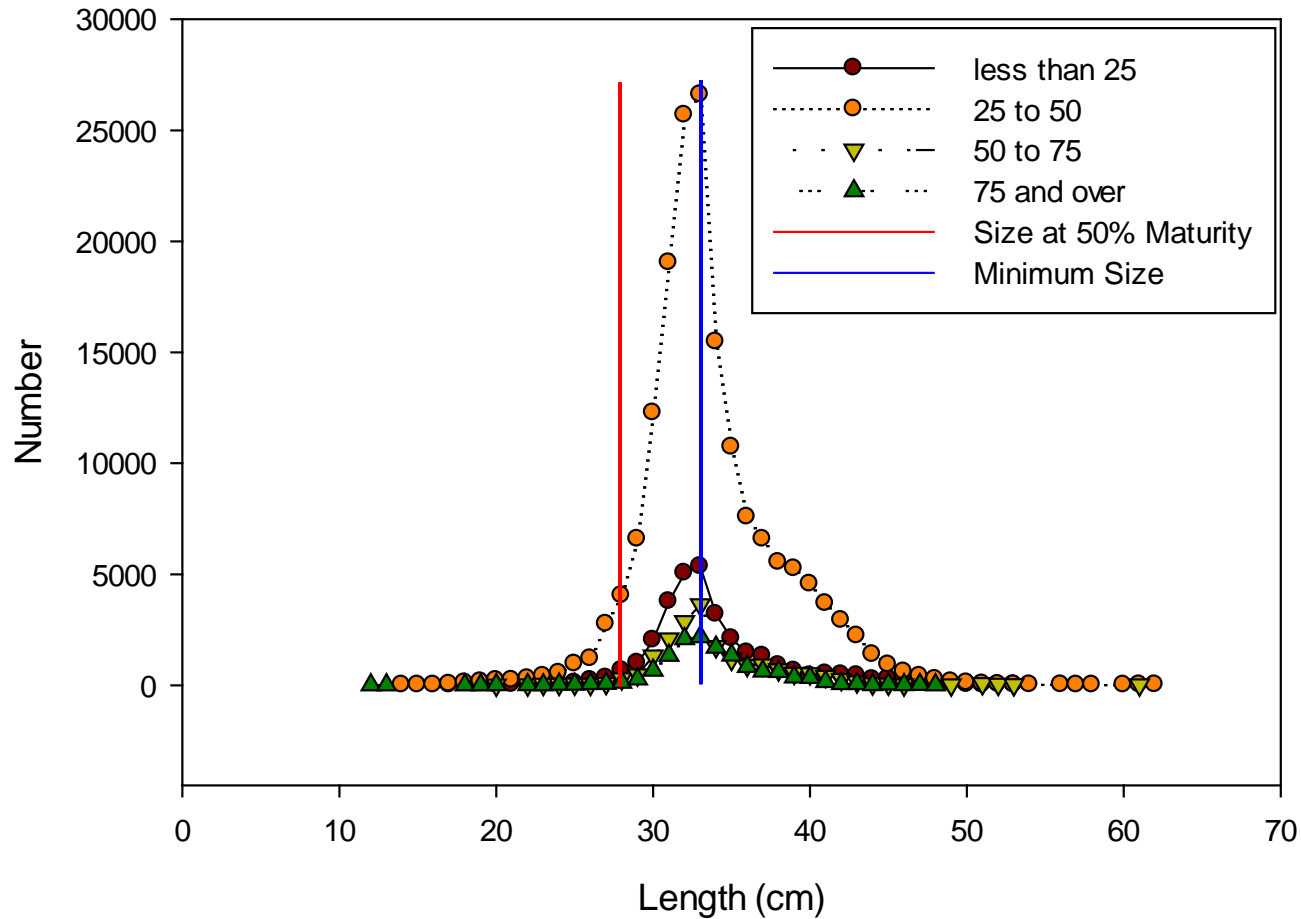


Yellowtail Flounder Maturity Ogive

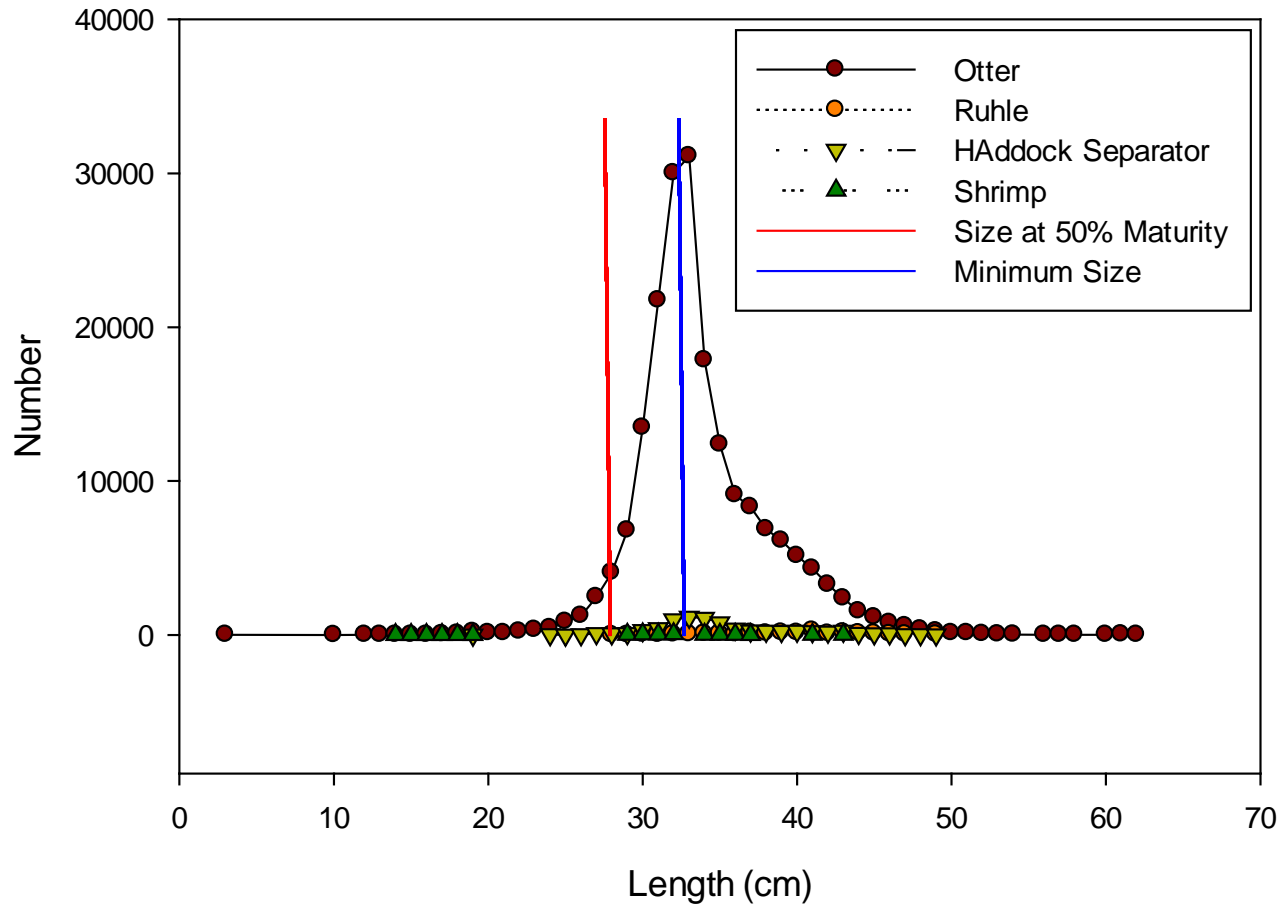
Maturity Ogive for Yellowtail Flounder



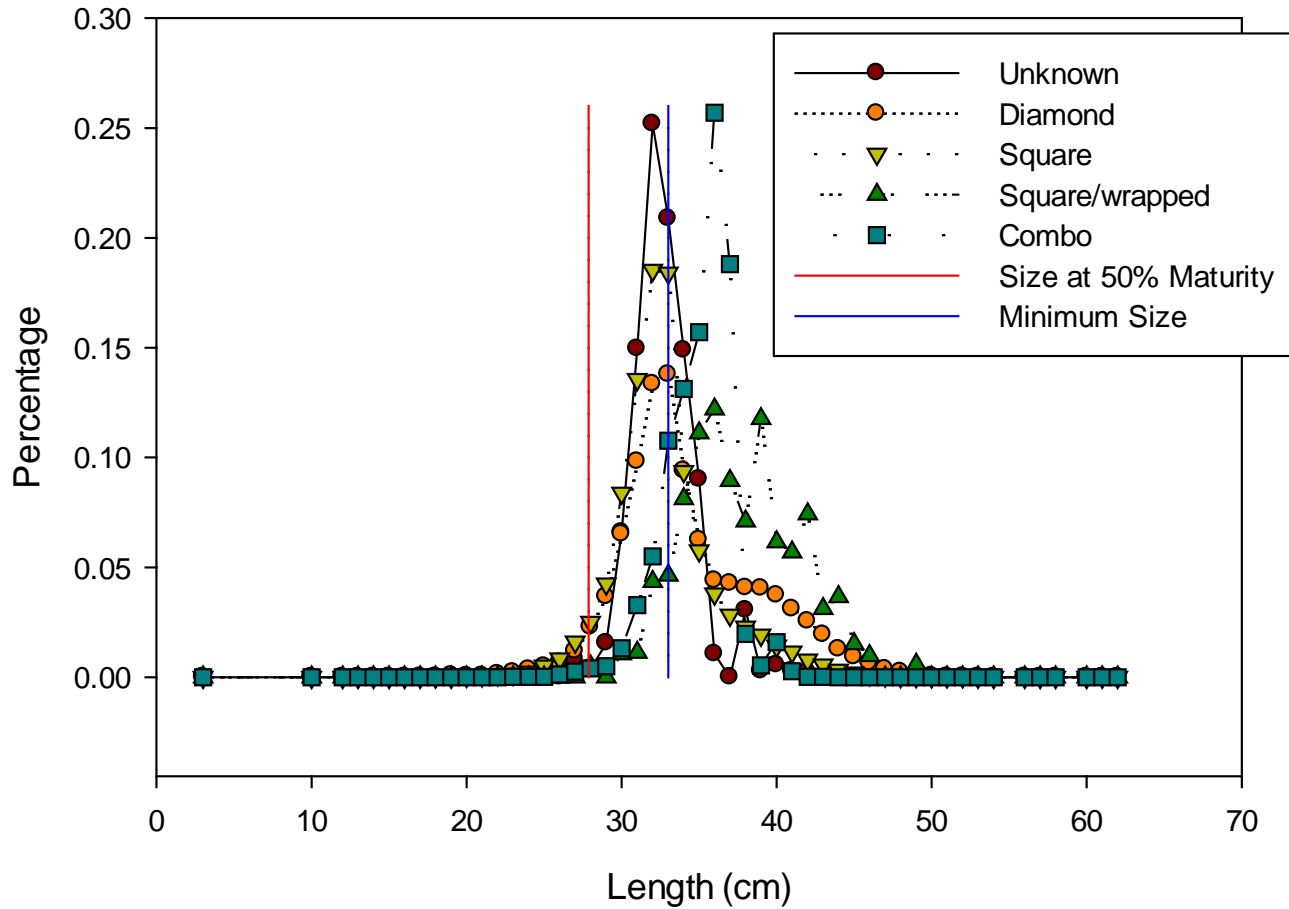
Yellowtail Flounder Depth



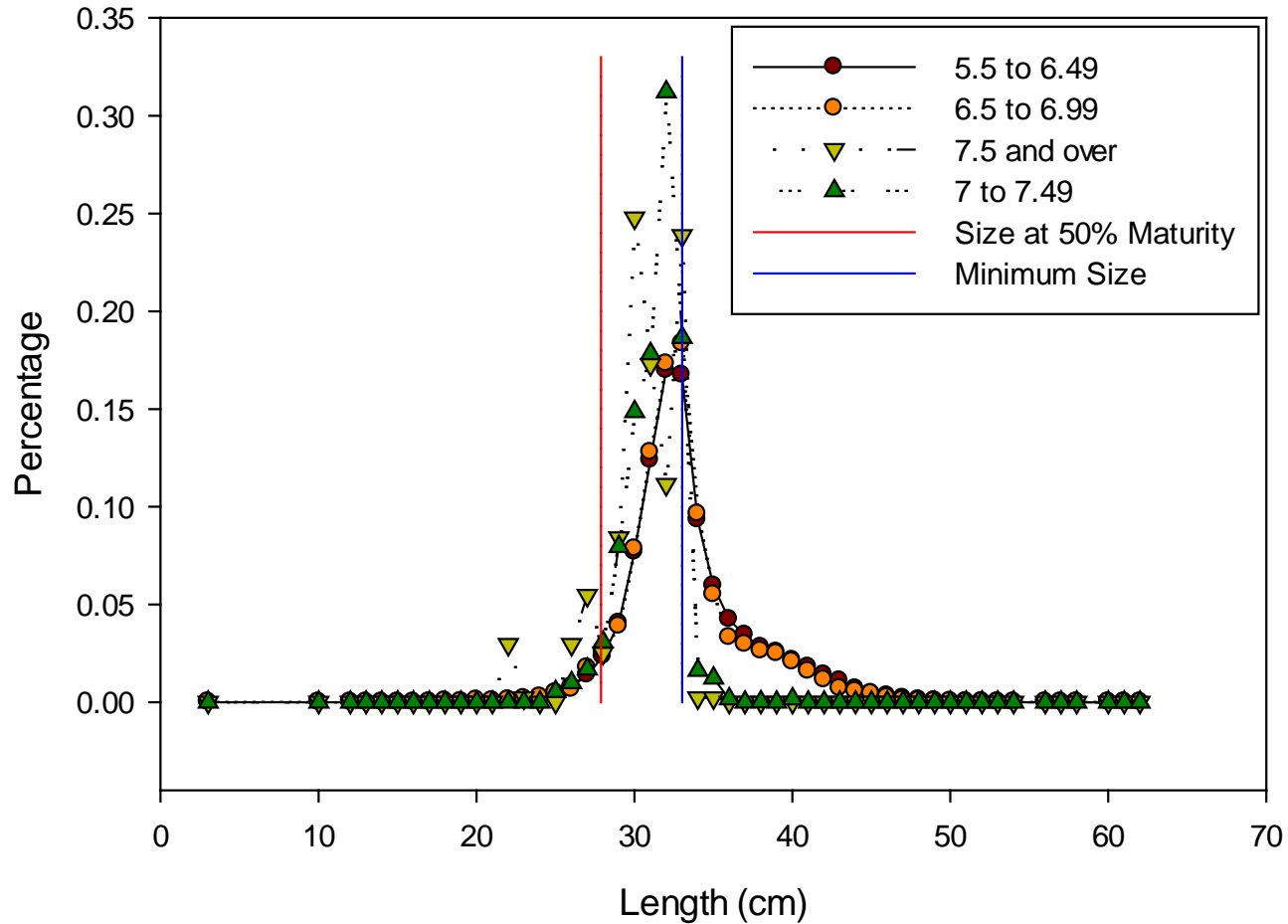
Yellowtail Flounder Gear Type



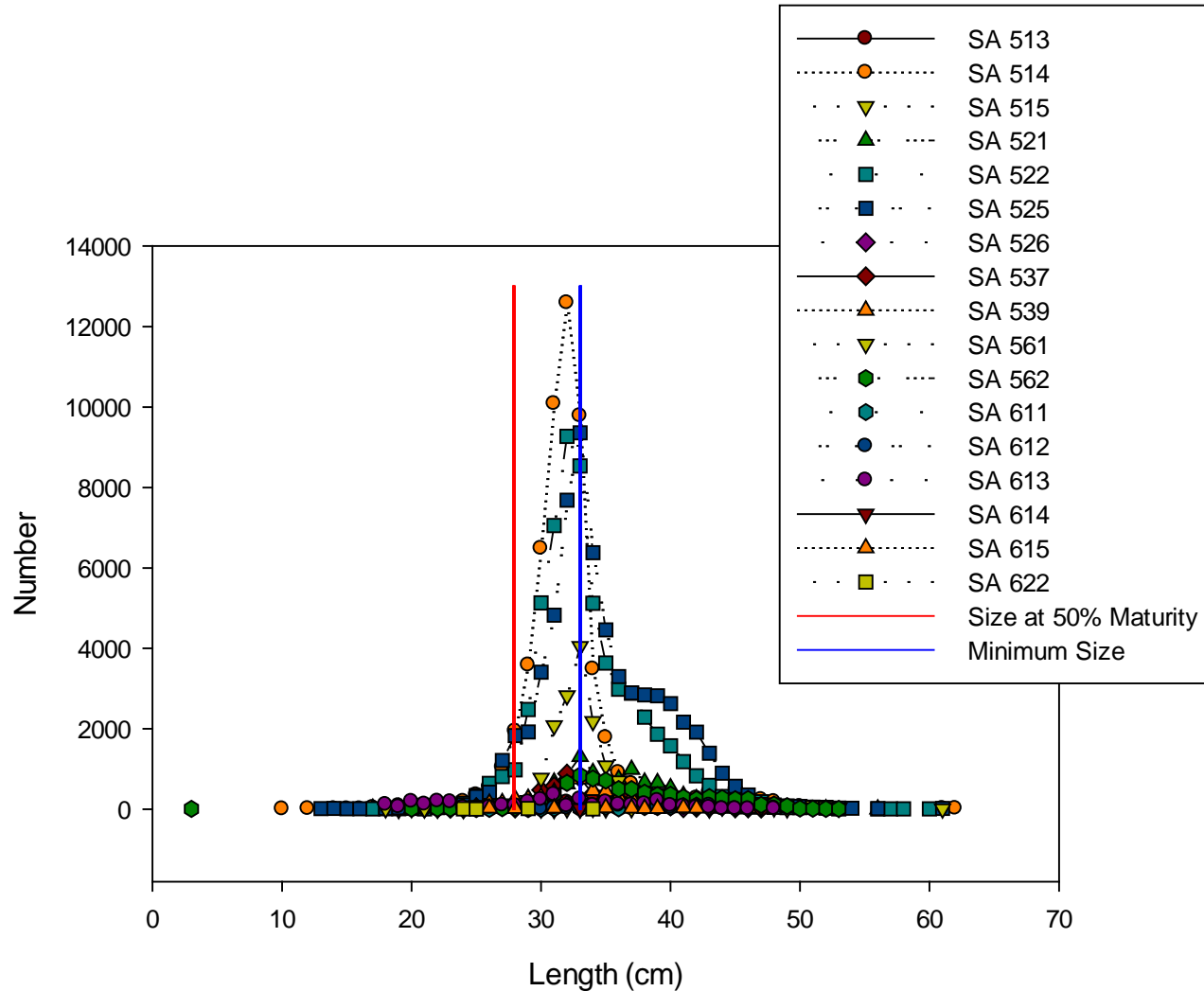
Yellowtail Flounder Mesh Shape



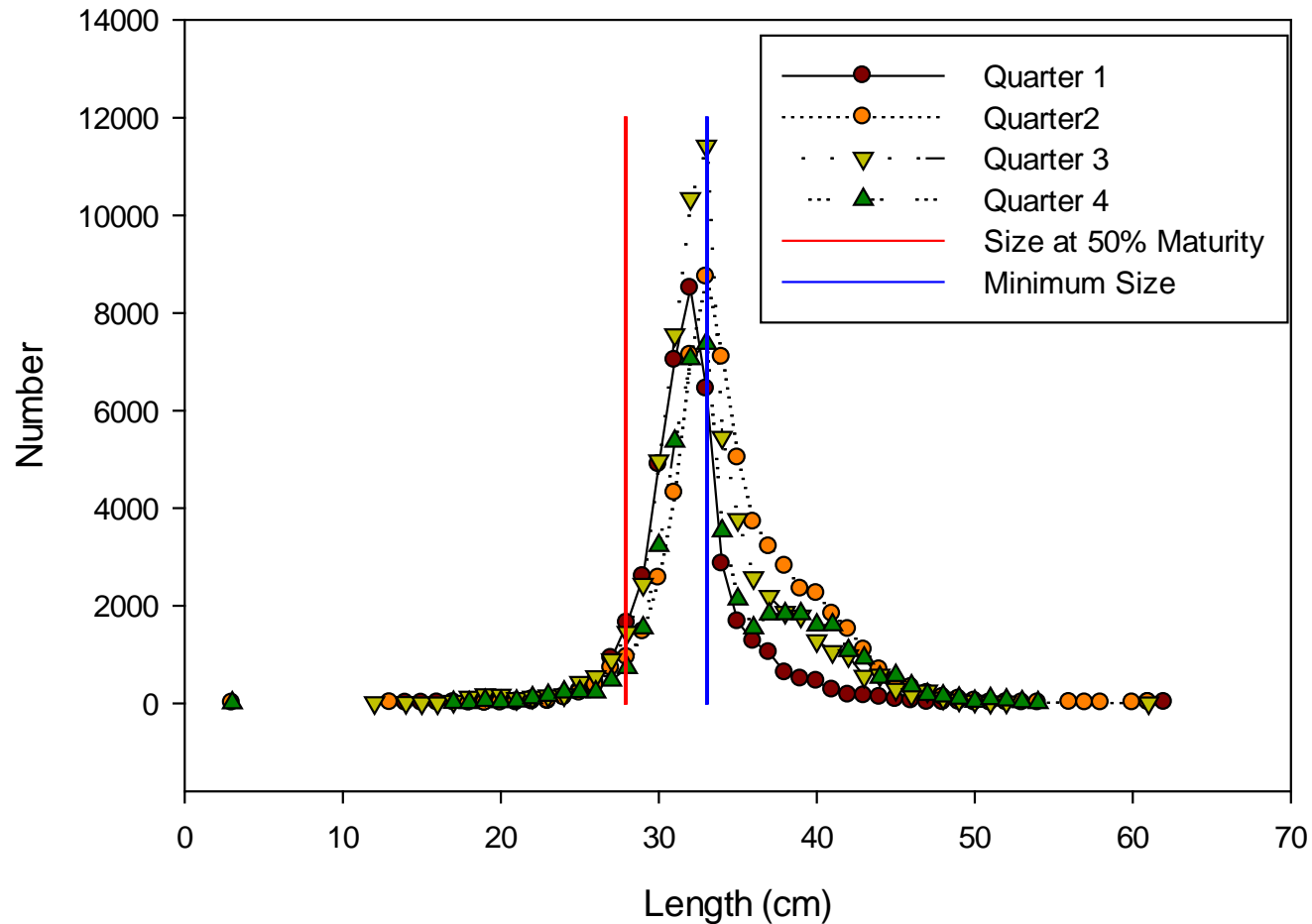
Yellowtail Flounder Mesh Size



Yellowtail Flounder Statistical Area



Yellowtail Flounder Quarters



Summary

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