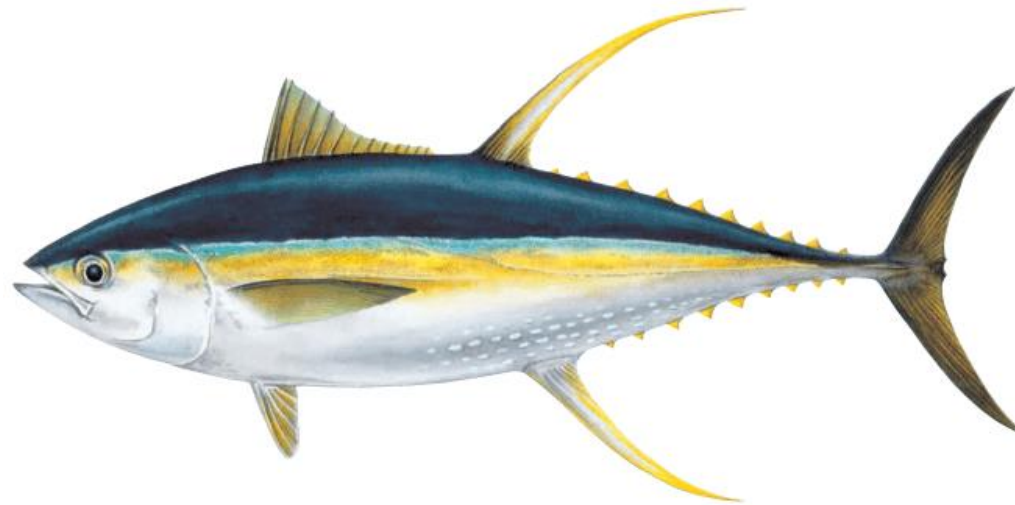


# Conditional Age-at-Length Data Summary for Yellowfin Tuna

P10 – Arni Magnusson



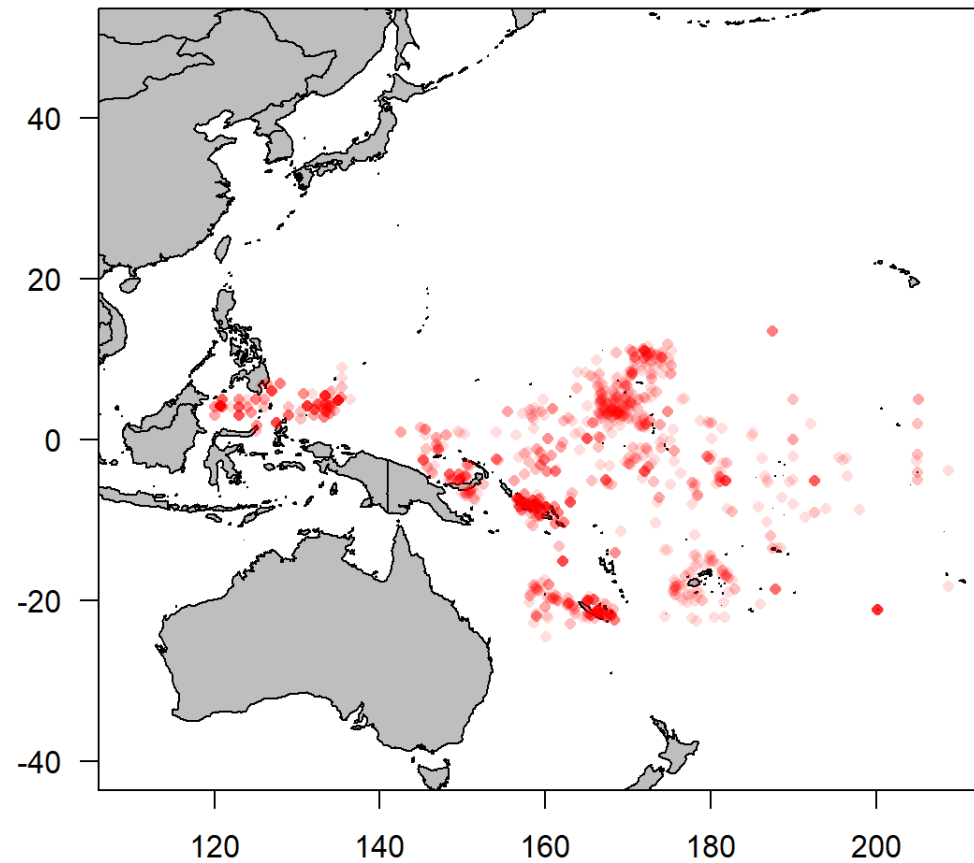
# Background

Conditional age-at-length otolith data were used in the YFT 2020 assessment

Otoliths provide information useful for estimating a growth curve, internal or external of the stock assessment model

# Otolith Samples

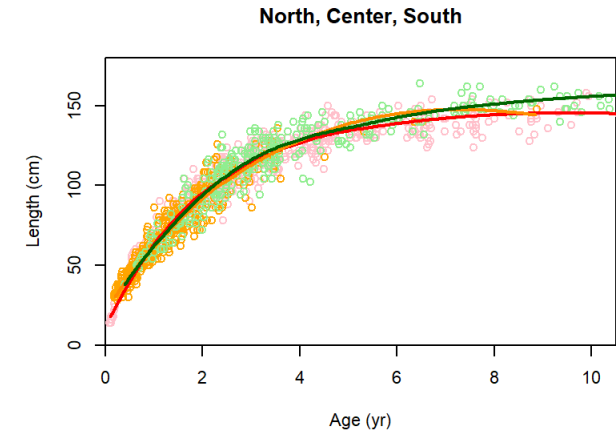
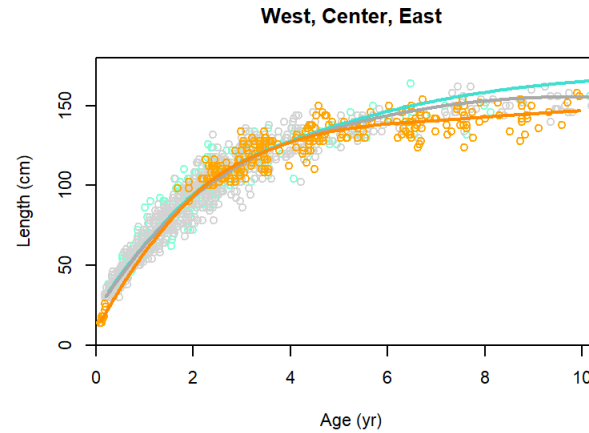
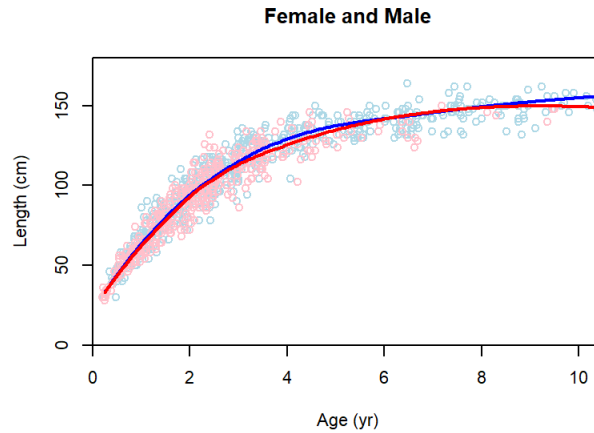
YFT otolith locations (n=1471)



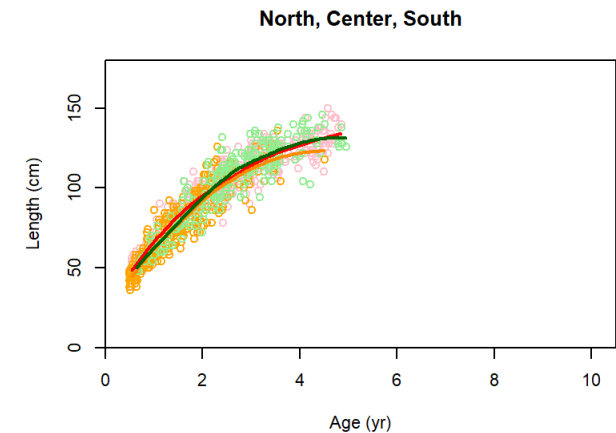
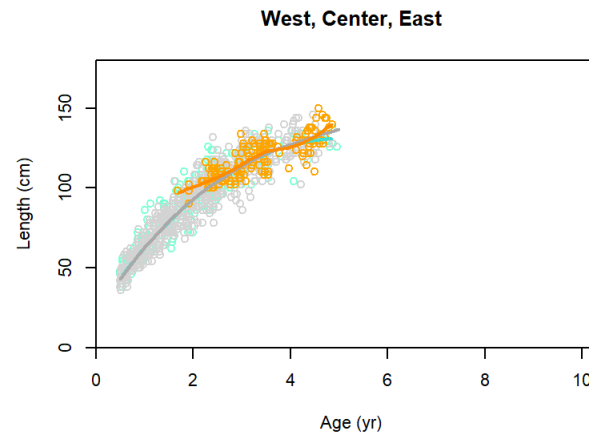
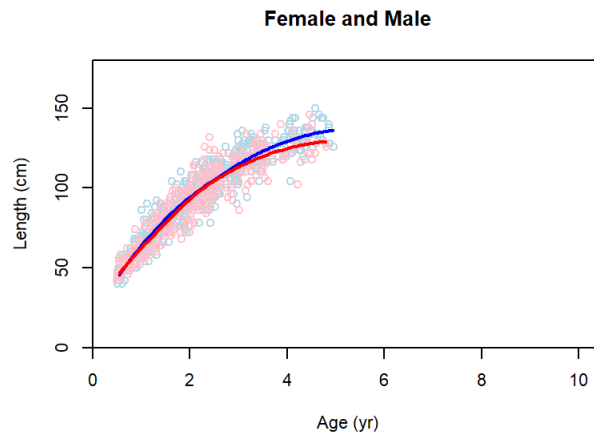
Year	Count
2009	29
2010	155
2011	59
2012	1
2013	117
2014	364
2015	298
2016	168
2017	133
2018	147

# Exploratory Data Analysis

Simple loess  
smooth lines



Ages 0.5 - 5 yrs  
constitute >90% of  
the current biomass

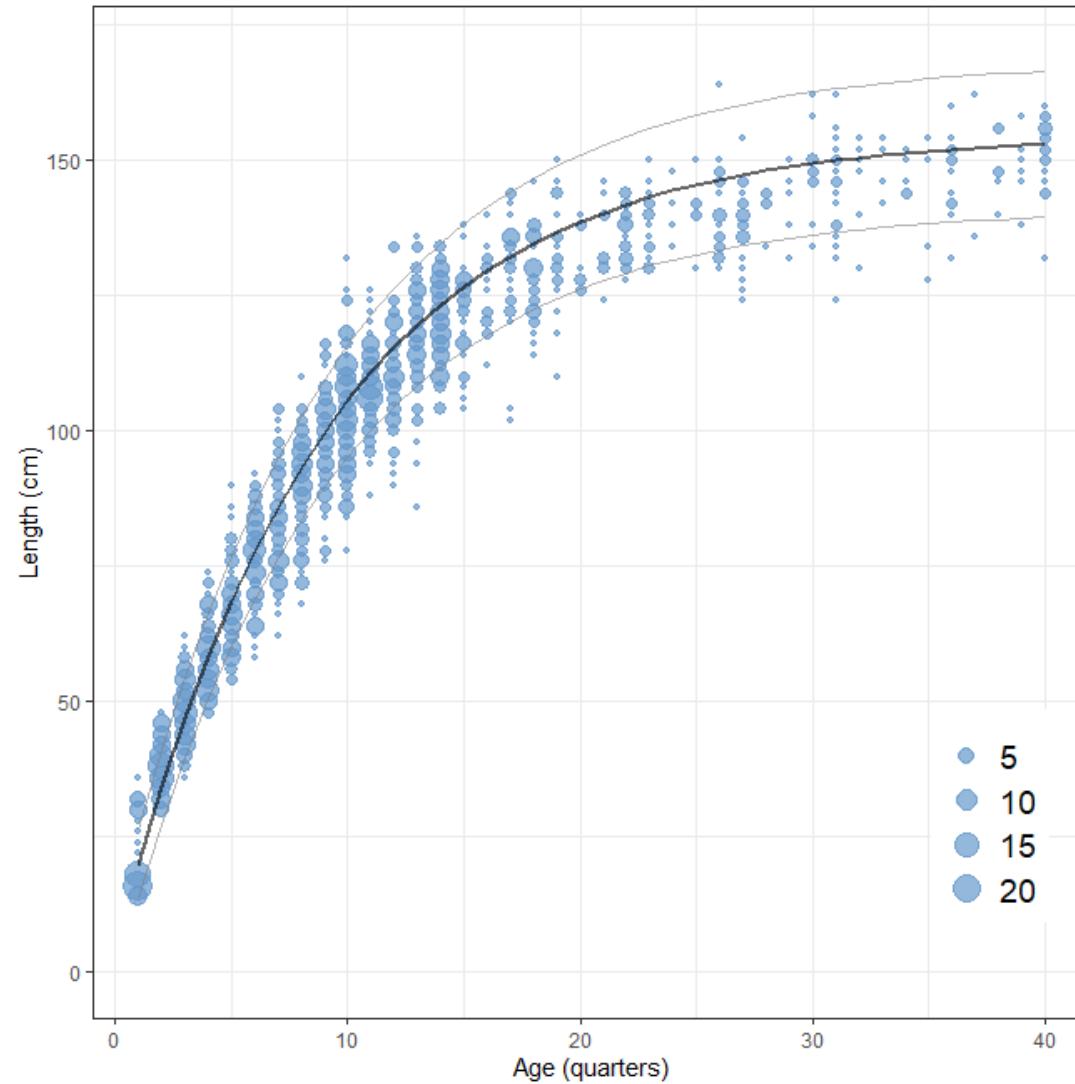


Male (blue)  
Female (red)

West of 140°E (orange)  
Center (gray)  
East of 170°E (turquoise)

North of 0° (red)  
Center (orange)  
South of 10°S (green)

# Growth Curve



Von Bertalanffy curve  
internally estimated in  
the YFT 2020 assessment