

California Scorpionfish 2017 Stock Assessment

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Background

Removals

Index Data

Composition Data

2017 assessment

Uncertainty and Sensitivities

Additional slides



Background

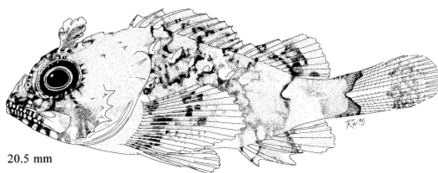
California scorpionfish (*Scorpaena guttata*)

- Most common species of *Scorpaena* on the U.S. West Coast, more species in Mexico
- Venomous dorsal, anal and pelvic spines
- Demersal, found over both hard and soft bottom (prefer *new* structure)
- Exhibit aggregating behavior (spawning and non-spawning aggregations)



Early Life History

- Migration to spawning grounds, exhibit explosive breeding behavior just before dawn
- External fertilization, females produce hollow gelatinous single-layer floating egg matrix
- Eggs hatch after about 5 days
- Juveniles settle at less than 2cm



Distribution

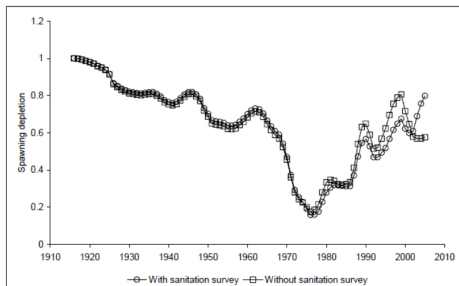
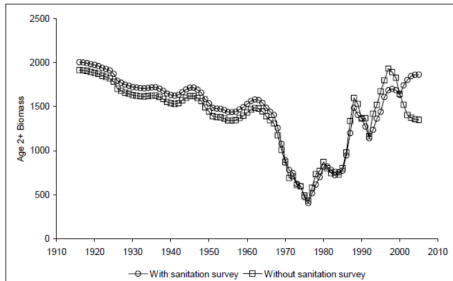
- Distributed from central California to Punta Eugenia, Baja California Sur, Mexico
- Rarely observed north of Pt. Conception
- Observed from the intertidal to 600 ft, prefer 20-450 ft
- Proportion of the stock in Mexican waters unknown

Distribution



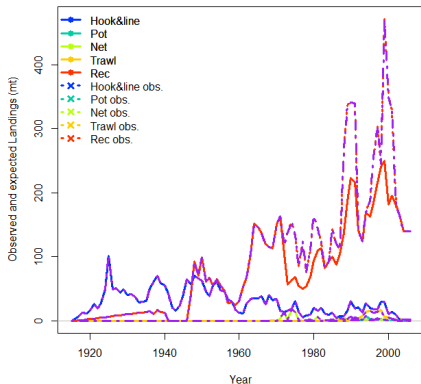
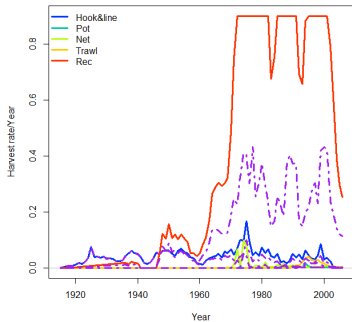
2005 Stock Assessment

- Stock first assessed in 2005
- South of Pt. Conception
- M fixed at 0.25
- h 0.7



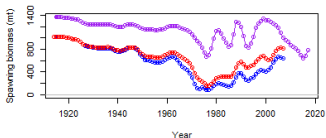
2005 Stock Assessment

- Transitioning from the 2005 assessment, an error was found
- Harvest rate hit the bounds for the recreational fleet
- Not all of the recreational catch was removed
- Input vs. estimated catch was not standard output in SS v.1.8

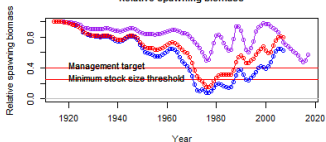


2005 Stock Assessment

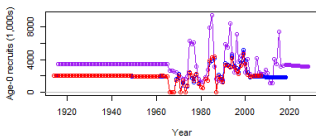
Spawning biomass (mt)



Relative spawning biomass



Age-0 recruits (1,000s) with forecast



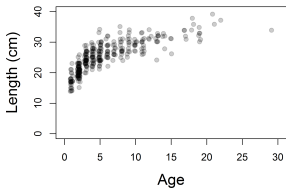
2017 Stock Assessment

- One area south of Pt. Conception (all catches from Mexican waters excluded as in 2005)

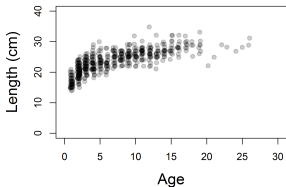
Length-at-age

Length-at-age

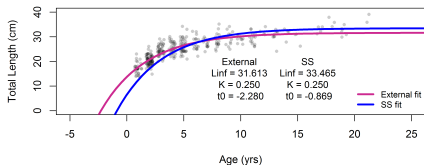
Female



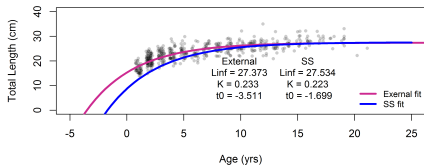
Male



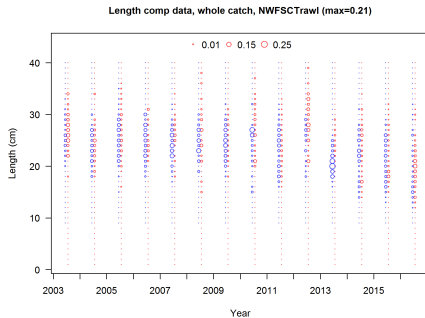
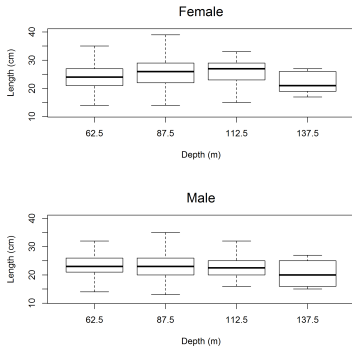
Female



Male



Length-at-age



Maturity and Fecundity

Weight-at-length

Natural mortality

Steepness: Density-Dependent Recruitment Compensation

Removals

Total Removals

Total Removals

Total Removals

Commercial Landings by Fleet

Recreational Landings by Fleet

Index Data

Summary of Data Sources

Recreational Private Boat Index

Recreational Party/Charter Boat Index (Logbook)

Recreational Dead Discard Index

Recreational Party/Charter Retained Catch Index

Sanitation Districts Survey Index

Sanitation Districts Survey Index

Sanitation Districts Survey Index

NWFSC Trawl Survey Index

Gillnet Survey Index

Southern California Bight Trawl Survey Index

Composition Data

Dat1

Summary of Data used in the 2017 Assessment

2017 assessment

Uncertainty and Sensitivities

Additional slides

Appendix A. Detailed fits to length composition data