

*Science, Service, Stewardship*



## Golden Tilefish Data Poor Example

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## Data Poor Tilefish

Big questions surround the stock status determination?

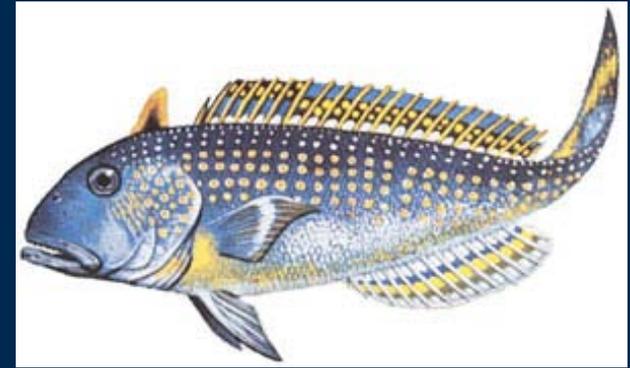
Quota based management has remained relatively constant which has resulted in improvements in the stock and the fishery.

Industry support for a constant quota of 905 mt has contributed to a steady supply of tilefish to the market, higher prices, lower fishing effort & associated fishing costs and resulted in benefits to the stock.





## ITQ Tilefish Fishery



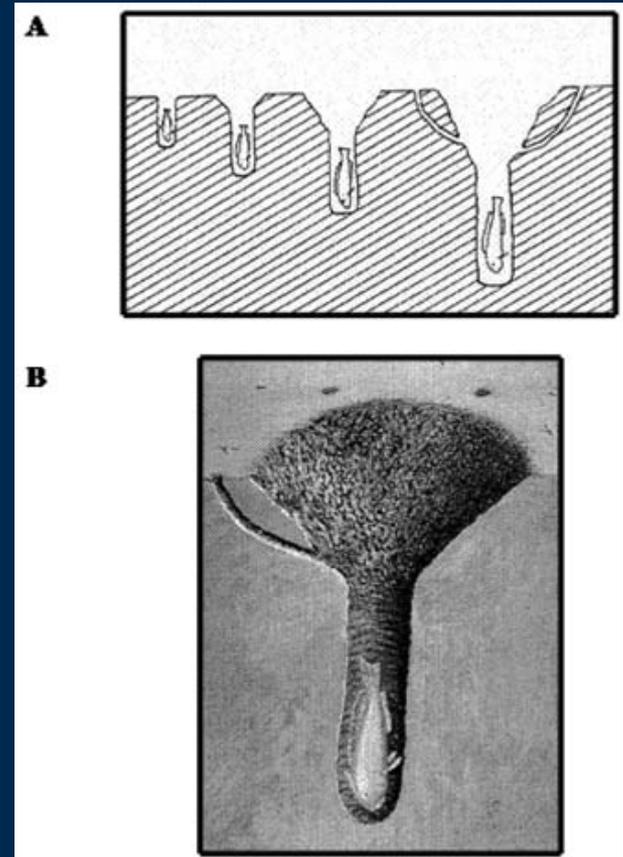
- Small targeted longline fishery
- Fishery developed in Barnegat NJ with most vessels now fishing from Long Island, NY
- Only 4 vessels fish for tilefish exclusively (6-10 part time vessels)
- 5 million dollar fishery





## Golden Tilefish Life History

- Upper slope of continental shelf (80-440 m)
- Temperature range 9-14 C
- Construct burrows (less selectivity to trawl gear)
- Long lived  
males 39 years and 112 cm  
females 46 years and 105 cm



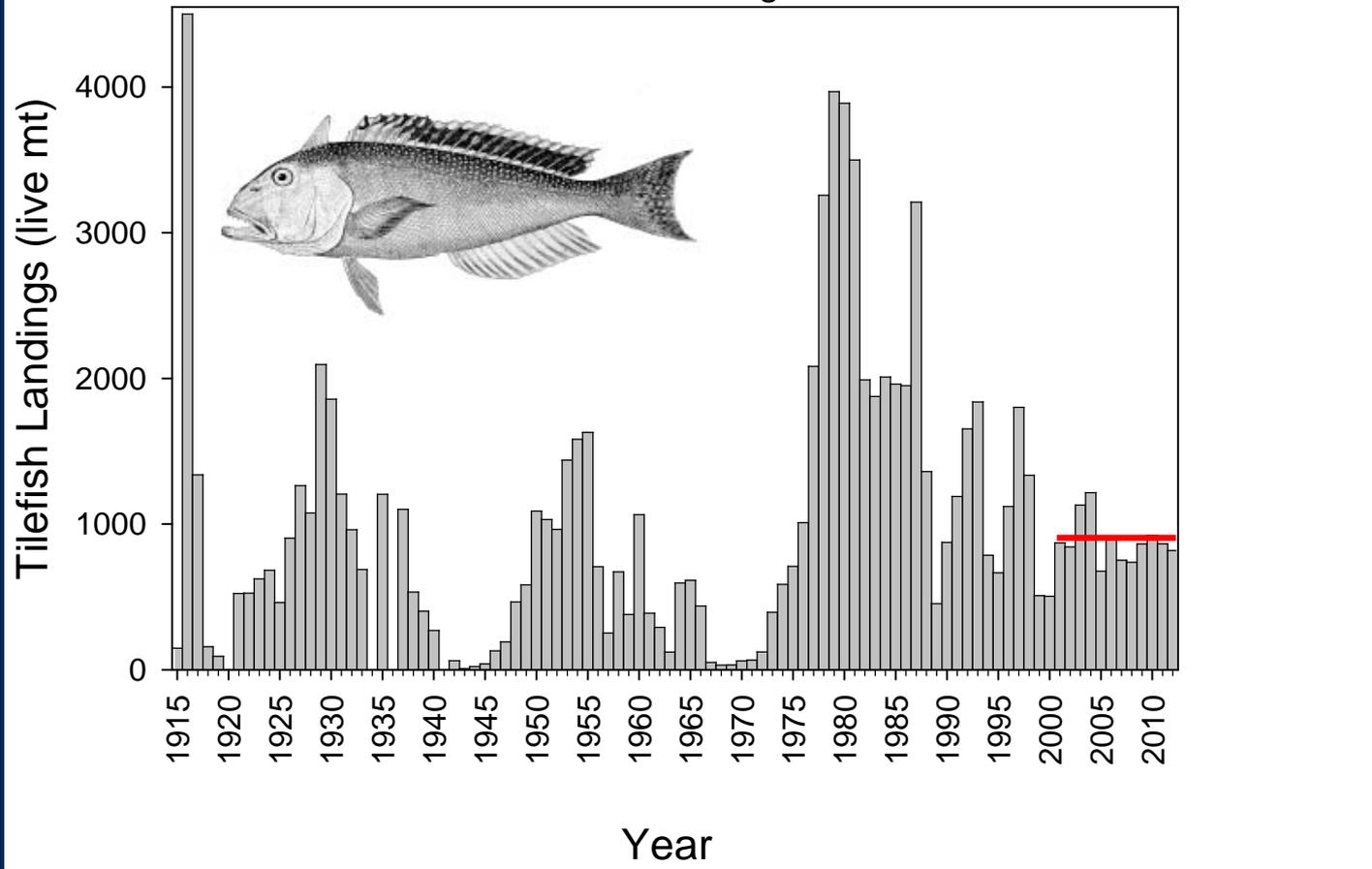


## Data Poor Tilefish

- Landings information (1915-2013)
- Landings by market category after 1985
- Length samplings of the landings (1995-2013)
- Commercial age structures are being collected since 2006
- Limited observer and study fleet data (2008)
- Commercial CPUE data (1973-1982 Turner, 1979-2013 NEFSC)
- Data was collected during the development of the fishery by Steve Turner

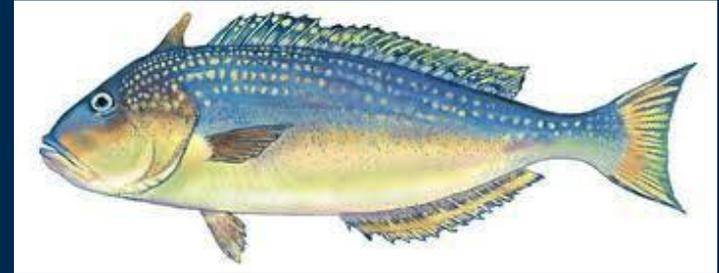


### Total Landings



# CPUE Index of abundance





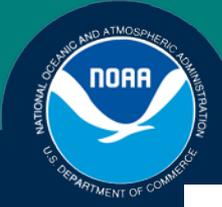
## CPUE DATA from VTRs

Limited to the longline fishery

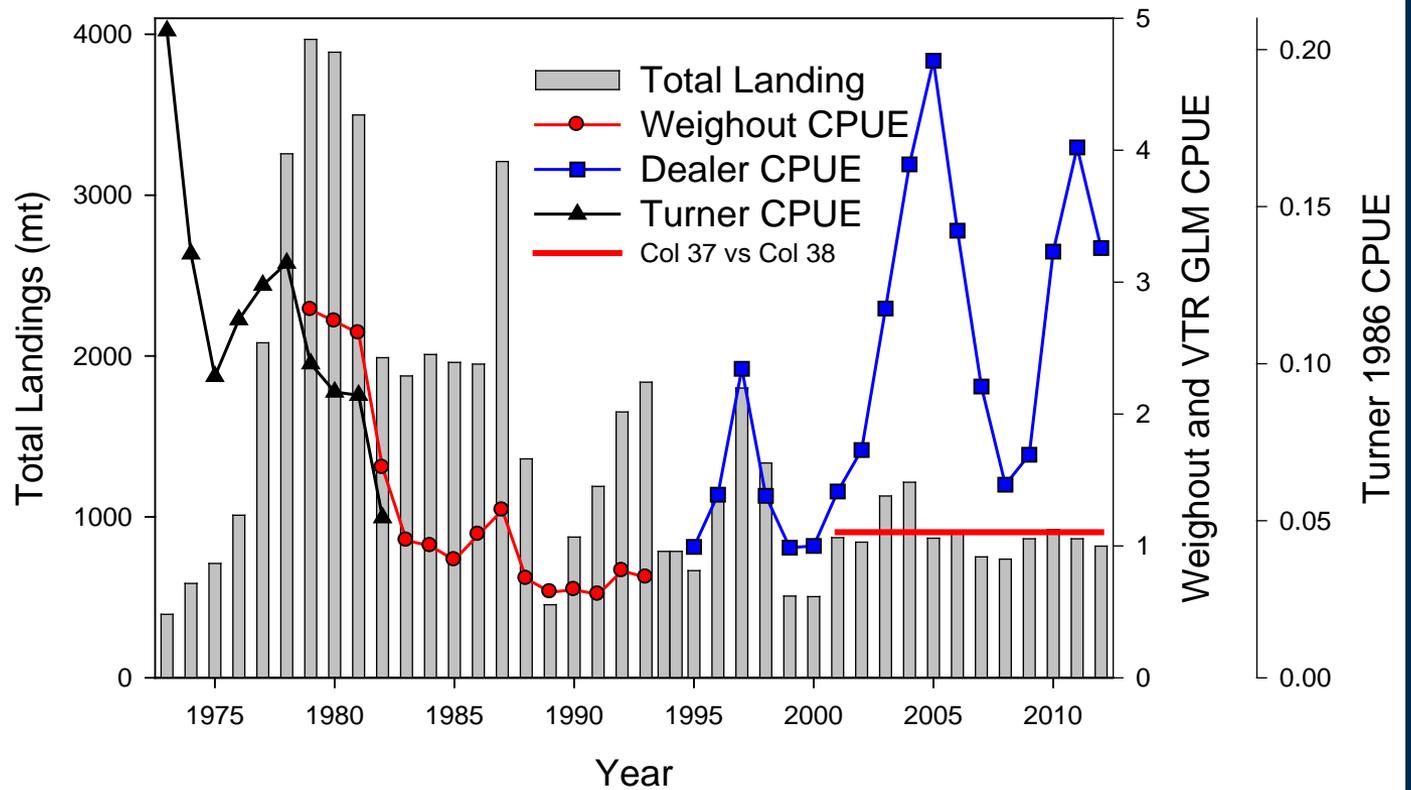
Limited to trips which had > 74 % of the catch as tilefish

Effort = days absent – number of trips (one day steam time per trip)

Study fleet pilot study collected CPUE data on a haul by haul basis (2008)

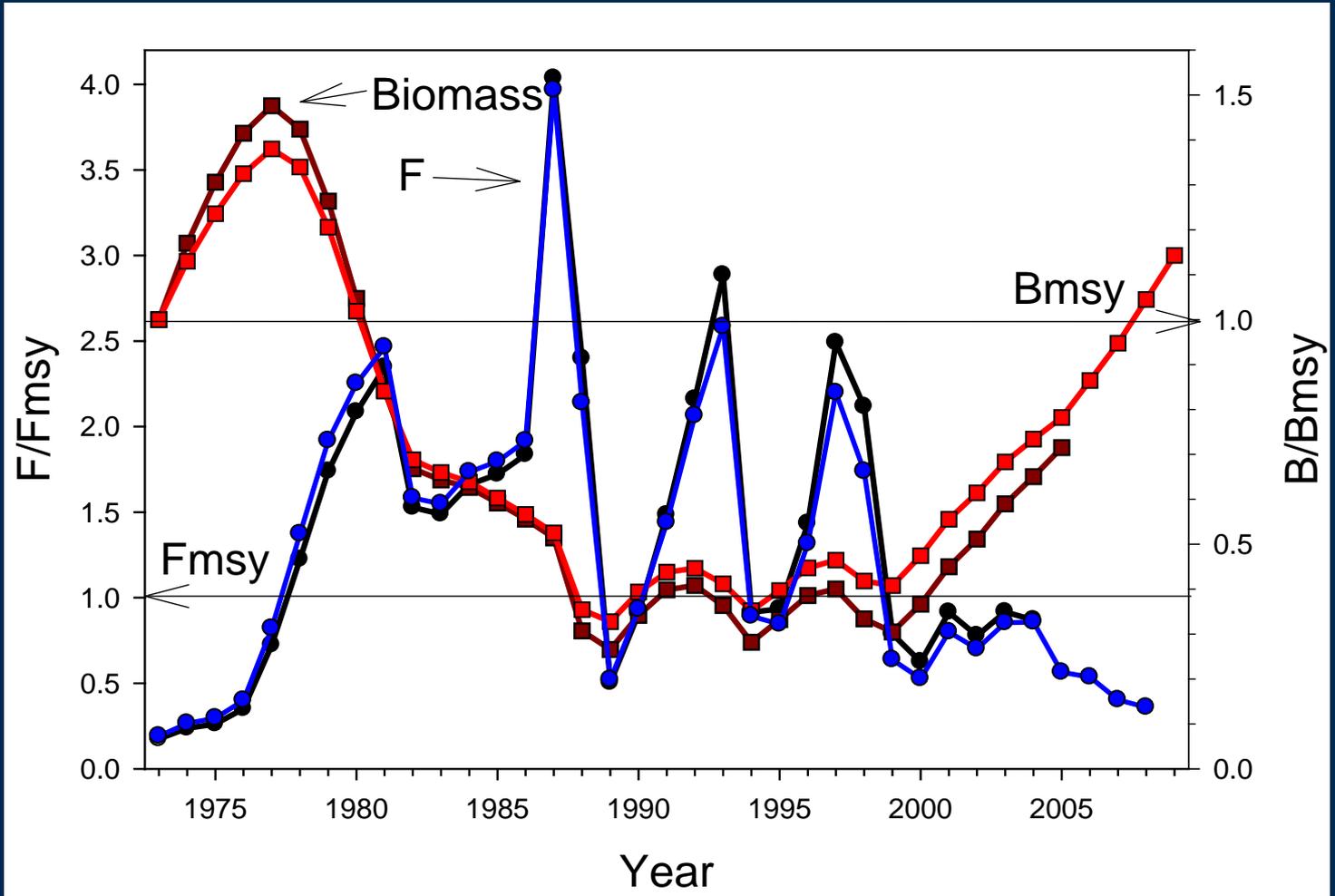


# CPUE Series and Landings

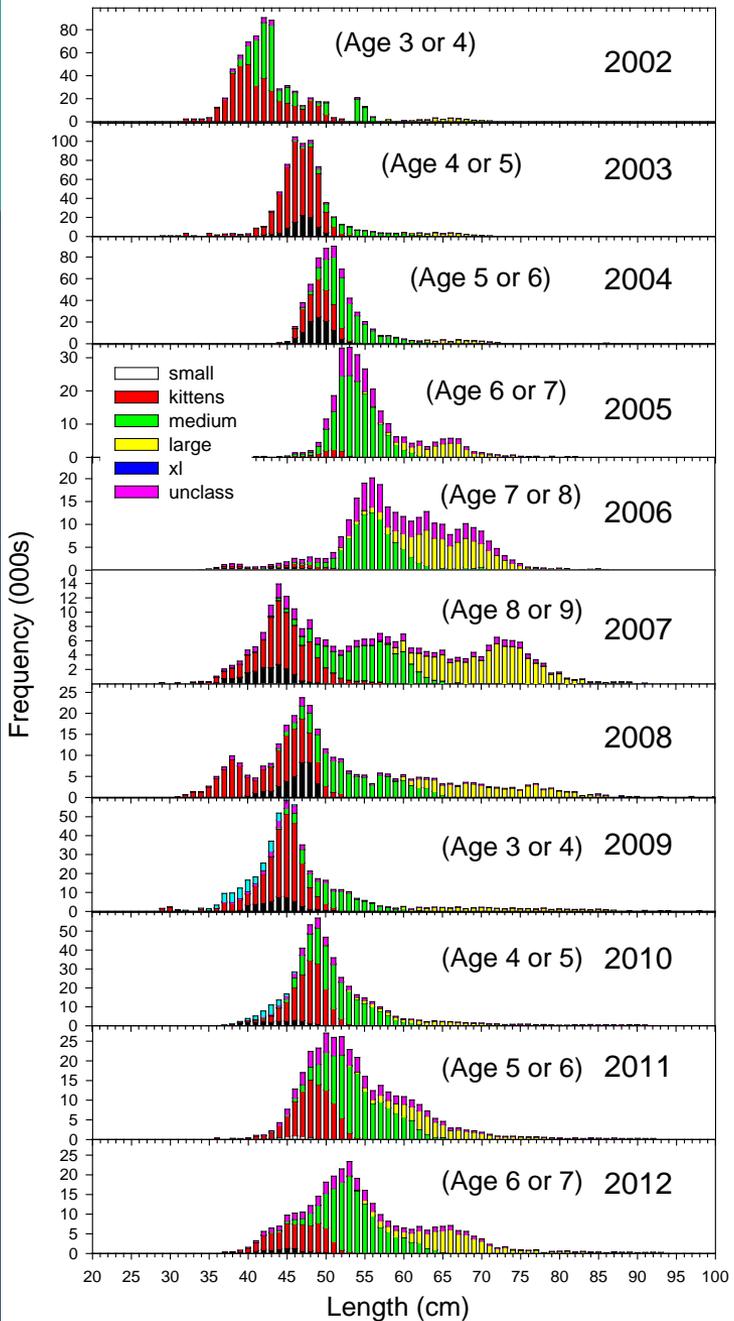
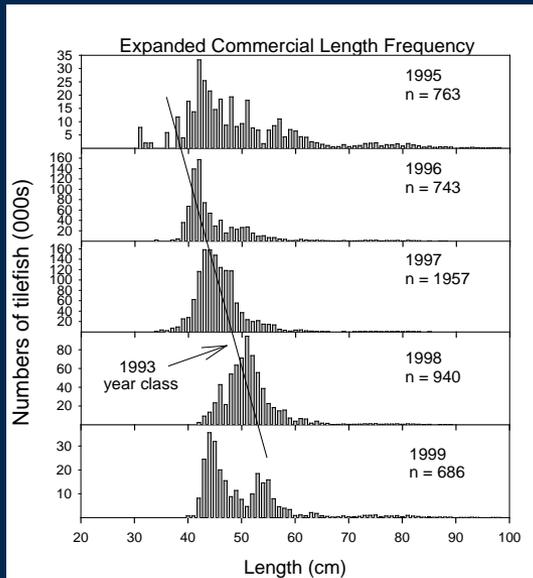




# ASPIC Surplus Production Model

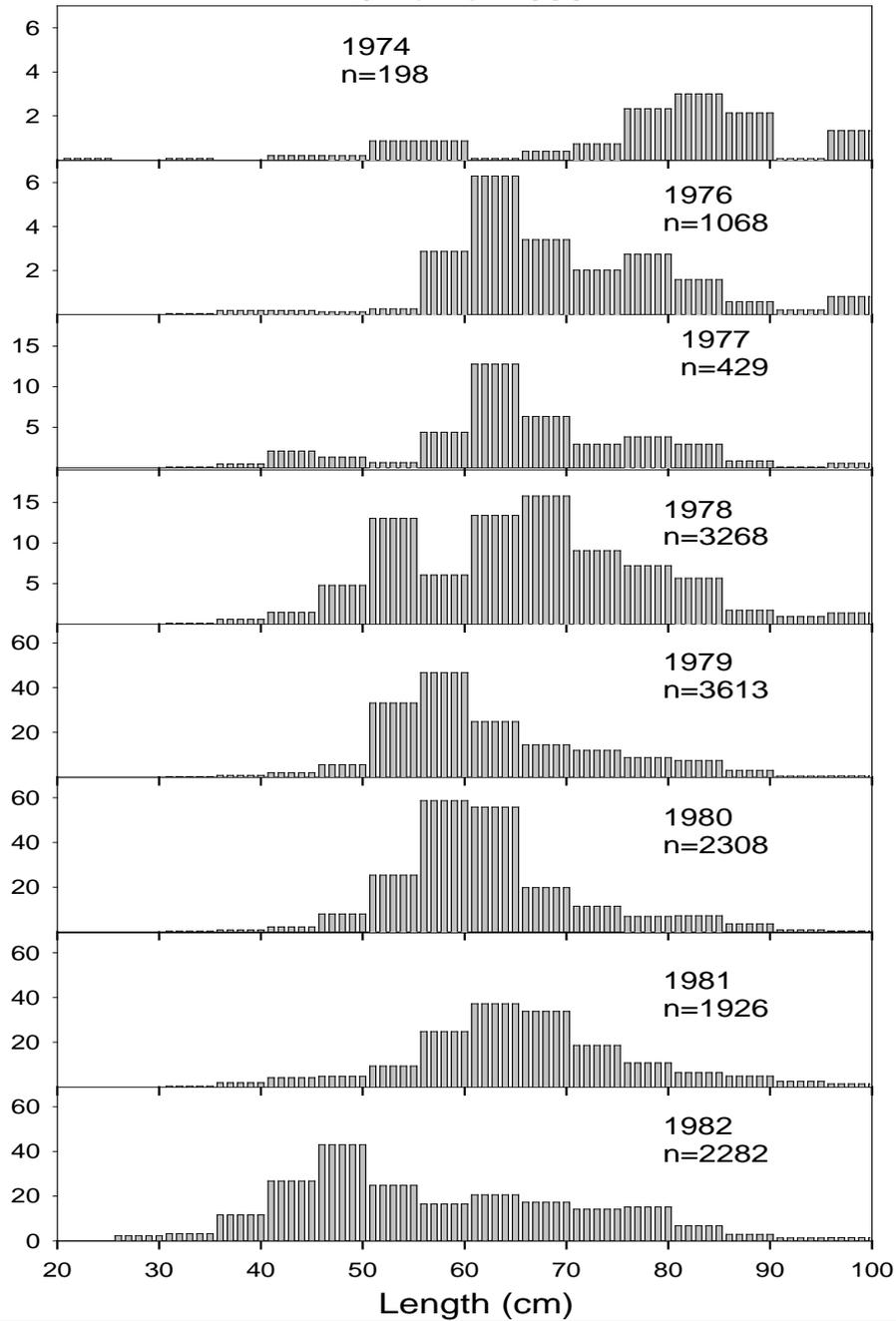


# NOAA FISHERIES SERVICE



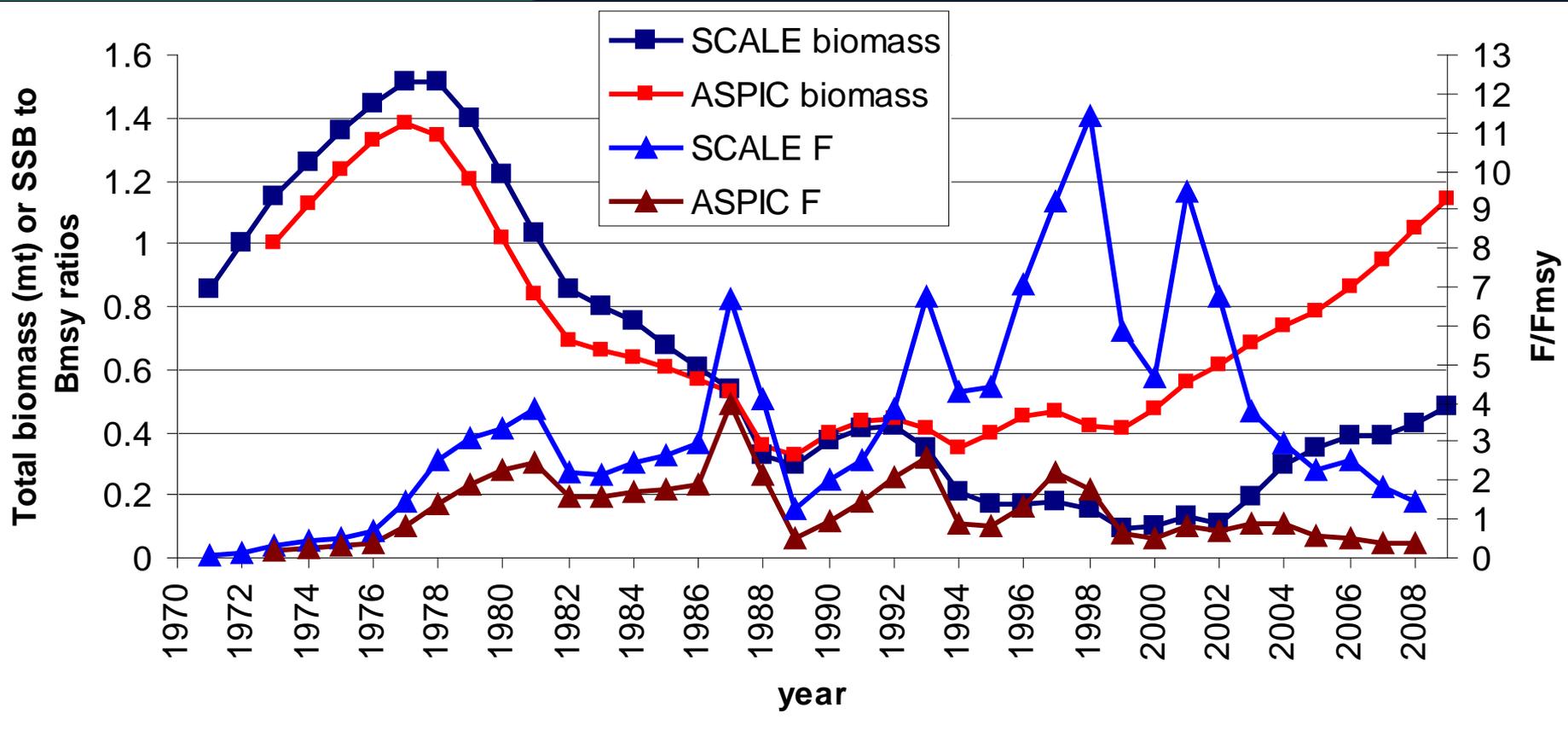


NJ Turner 1986



During the  
development  
of the fishery





Comparison between ASPIC and SCALE base runs



## Stock Status?

Both models have significant issues.

The models have different status determinations.

Increases in biomass are projected from both models at the 905 mt quota.





## Management History



- Golden tilefish FMP November 2001.
- FMP was based on the ASPIC model from a SSC review in 1999.
- Constant harvest quota (**905 mt**) to get to Bmsy in year 2011.
- SARC 41 in 2005 concluded that rebuilding was on schedule but projections should not be done.
- SARC 48 in 2008 also concluded that rebuilding was on schedule even though the ASPIC model suggested that the stock was rebuilt.
- SARC 58 will occur this Fall.

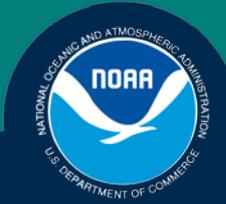


## Strengths

Major questions remain with the basic biology and exact stock status determination but improvements in stock condition appears to continue with the present removals based on a less reactive constant quota based management system.

## Challenges

The cost of a specialized tilefish fishery-independent longline survey may not make economic sense for such a small fishery. A more intensive fishery dependent haul by haul CPUE data collection system may also be too disruptive and burdensome for the industry while not addressing some basic questions with regards to fishery dependent indices.



## Data Poor Tilefish Proposed Solution



Perhaps a future optimal approach for tilefish would be to develop an industry based survey using two or three designated fishing trips each year. Industry based survey trips would follow a design similar to a fishery independent survey and collect more intensive size and catch information on a haul by haul basis with the acceptance that catch rates will be lower on survey trips relative to normal fishing operation.

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## Data Poor Golden Tilefish



Questions ?