SEDAR1-DW1 Life History and Reporductive Data Documentation

Size and age at maturity of females (Sex codes = 2, 5):

Immature: maturity code = 1
Mature: maturity code = 2, 3, 4, 5, 7, 8, B, C, D, E, F, G
Eliminated maturity codes = 0, 6, 9, A
See MARMAP life history studies.doc and Histological Criteria.doc for definitions of sex and maturity codes. Histological Criteria.doc is Table 3 that is referred to in the first file.

Raw data file: porgylh3
EXCEL files: agemat.xls, sizemat.xls
Program files: agemat.sas, sizemat.sas

Gear and period specific maturity curves should be used given the plasticity exhibited over time. One exception could be pooling 1984-89 data from blackfish and Florida traps in size at maturity analysis as probit analysis indicated that the curves for these two gear types are weakly different; data for the resulting maturity curve is on Sheet 2 of EXCEL file. All data are from fishery-independent sampling by MARMAP program. Fishery-dependent samples collected by MARMAP were not used as few immature specimens were present.

Sex ratio (Sex codes = 1, 2, 4, 5):

Eliminated maturity codes = 0, 1, 9, A
See MARMAP life history studies.doc and Histological Criteria.doc for definitions of sex and maturity codes. Histological Criteria.doc is Table 3 that is referred to in the first file.

Raw data file: porgylh3
EXCEL files: sexratioage.xls, .sexratiolength.xls
Program files: sexratioage.sas, sexratioage2.sas,
sexratiolength.sas, sexratiolength2.sas

In calculating the proportion of males, transitional specimens were also considered males because they will likely function as males within a few months. The resultant curves for MARMAP data were not as smooth as the maturity curves, so data were pooled by gear for Hook and Line, blackfish trap, and Florida trap (see Sheet 2 of EXCEL files). Data from chevron trap samples were not pooled. A curve for fishery-dependent samples collected by MARMAP is also presented.

The consensus of all workshop participants was to run the model with two ways of estimating spawning biomass (female biomass vs. total spawning biomass)

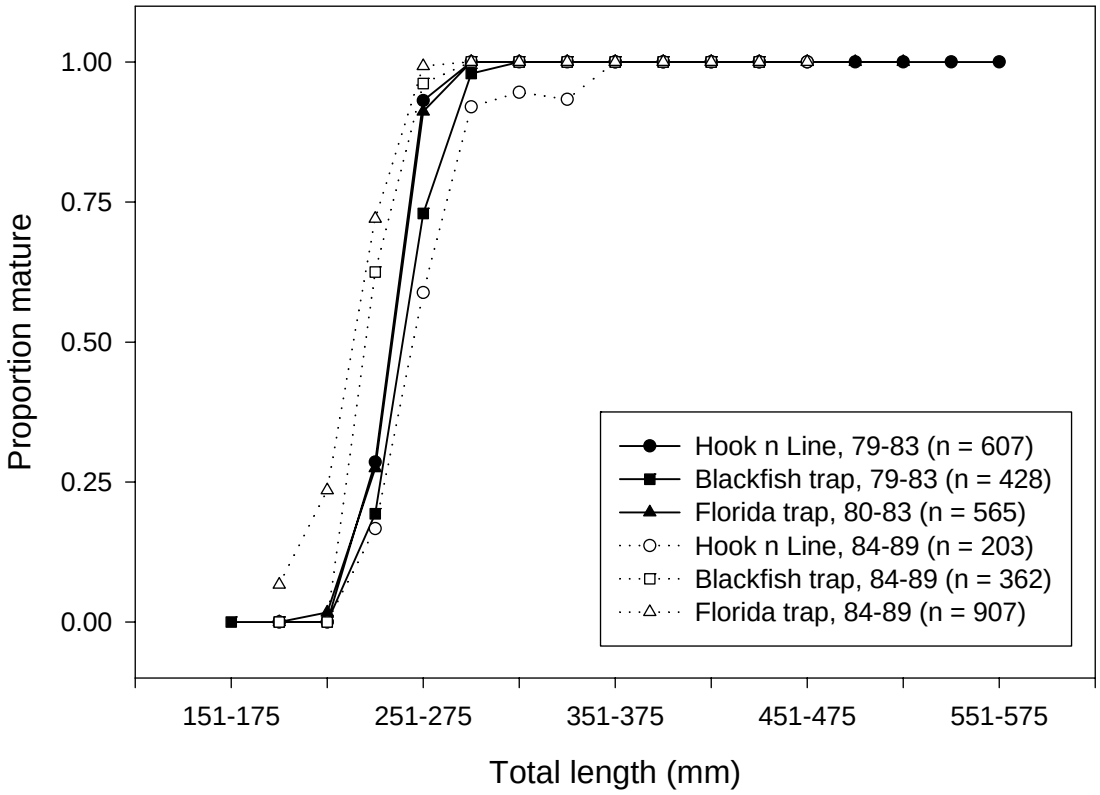
because female biomass may be the more sensitive measure. Doug Vaughan used total spawning biomass in previous population assessments. The proportion of males has not changed notably in the 1990s (see Chevron trap data), whereas there was a shift in size at maturity during the same period such that females are maturing at larger sizes. Age at maturity did not shift in the 1990s. The Life History sub-committee suggests that the modelers consider using size at maturity to estimate female spawning biomass because the shift in maturity during the 1990s, in combination with no change in the proportion of males, reduces the lifetime reproductive potential of females.

Annual fecundity:

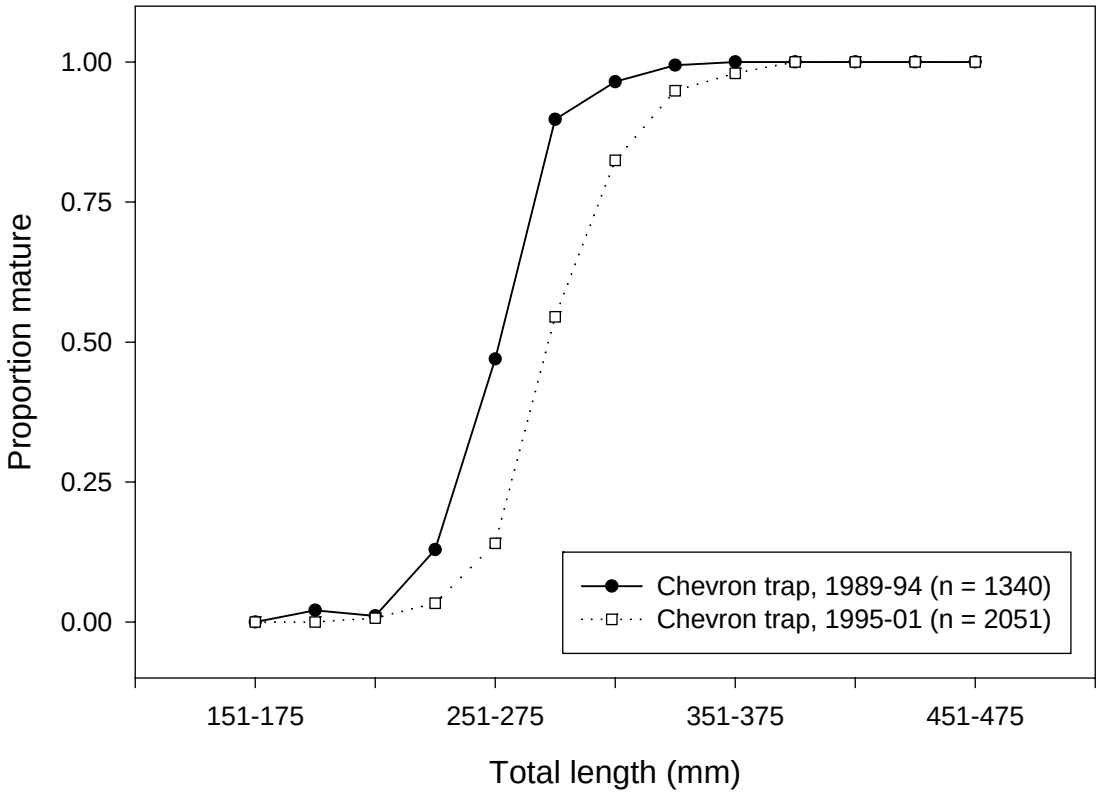
Raw data file: Annualfec.xls

Summarized by D. Wyanski
14 March 2002
Modified, changing to current title for histo procedures file
S Nichols 4/11/02

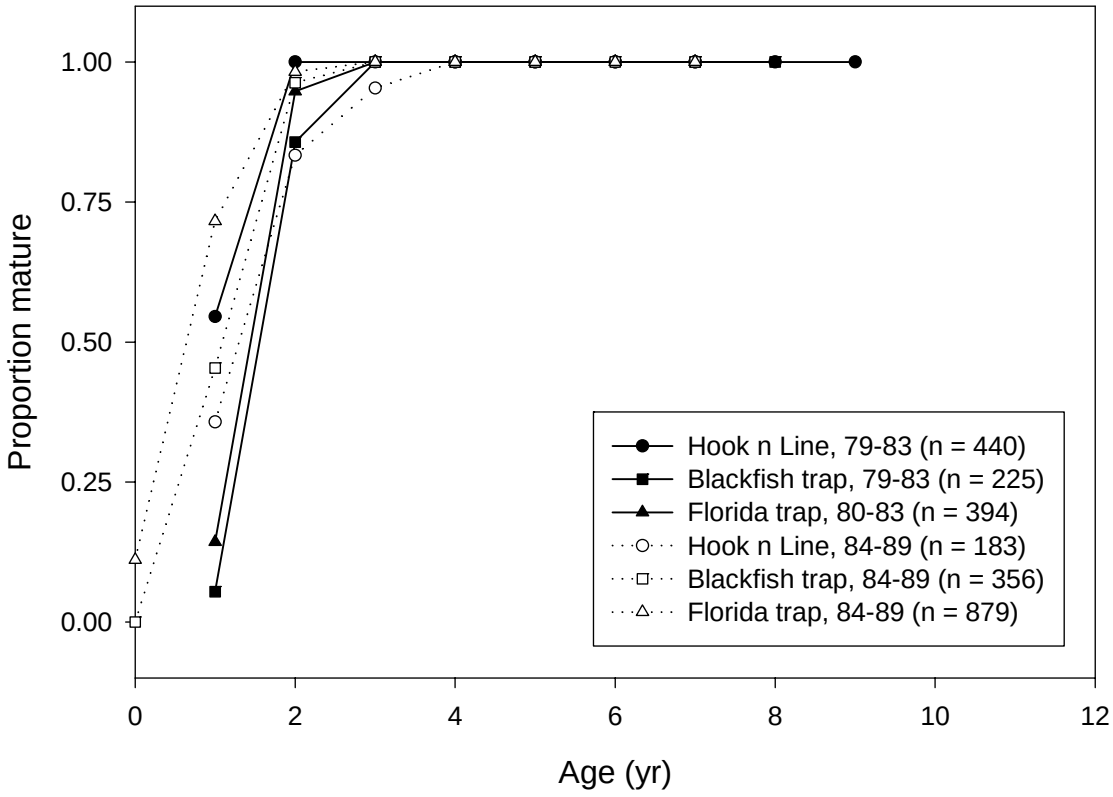
Red porgy - size at maturity
MARMAP, fishery-independent



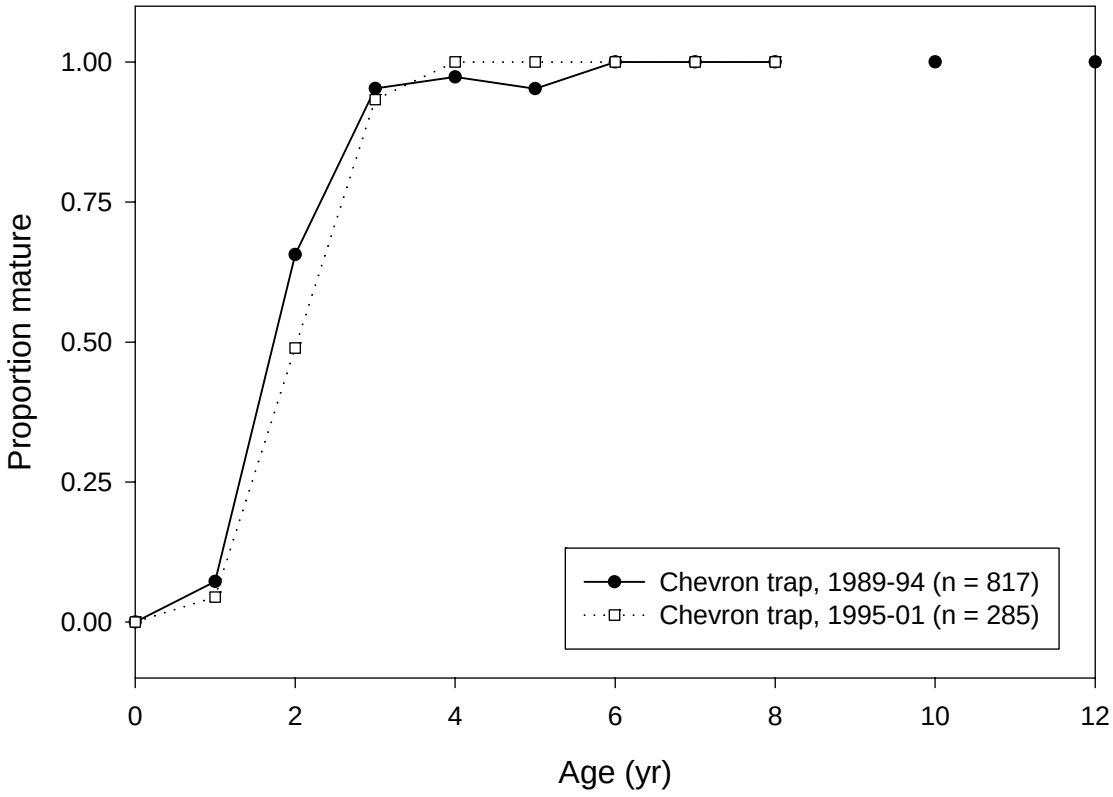
Red porgy - size at maturity
MARMAP, fishery-independent



Red porgy - age at maturity
MARMAP, fishery-independent



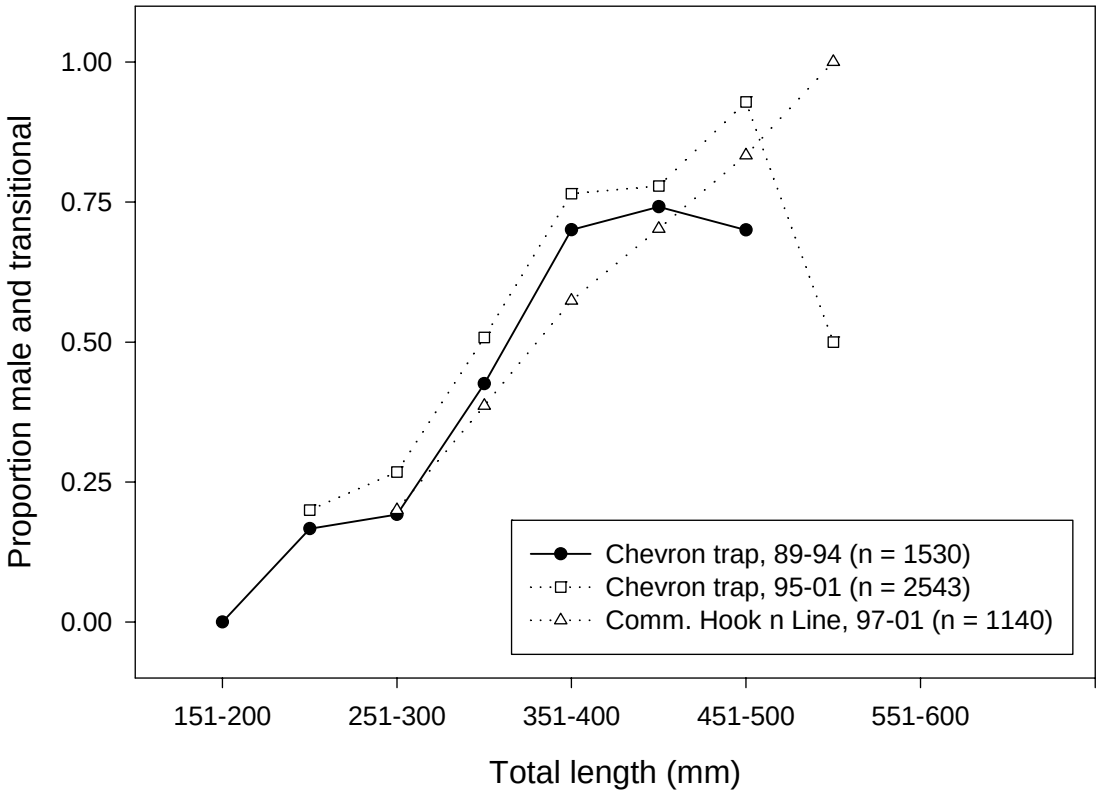
Red porgy - age at maturity
MARMAP, fishery-independent



Proportion male plot vs. length is on sheet 2 in sexratiolength.xls

Proportion male plot vs. age is on sheet 2 in sexratioage.xls

Red porgy
MARMAP, fishery-independent



Red porgy
MARMAP, fishery-independent