

Scientific and Statistical Committee Comments on
Final Harvest Levels for 2001

Widow Rockfish

The Scientific and Statistical Committee (SSC) reviewed Appendix B of the widow rockfish stock assessment, which considers alternative minimum stock size/overfishing thresholds for widow rockfish. The report contrasts the default definition of stock status with the results of a new analysis of spawner-recruit (S/R) data, which had not been reviewed by the Stock Assessment Review (STAR) Panel.

The stock assessment results indicate the point estimate of spawning output in 1999 is 23.6% of the unfished level, which is below the fishery management plan amendment 11 default minimum stock size threshold (25%). The approximate 95% confidence interval ranges from 16% to 38.6% of the unfished level. The new S/R analysis estimates B_{msy} and presents the case that stock status could range from nearly overfished (Ricker model) to healthy (Beverton Holt model).

The SSC finds the results of the new S/R analysis are not adequate to reliably characterize widow rockfish stock status. The S/R data used in the analysis are not sufficiently informative to describe a meaningful stock-recruit relationship, and some of the results of the S/R analysis are not internally consistent with the results of the stock assessment. In particular, it is difficult to reconcile the Beverton Holt model results with the long term decline in spawning biomass and recruitment shown by the stock assessment.

The SSC encourages further S/R work for widow rockfish and other species. It is important to consider a variety of potential S/R relationships, and modeling should provide likelihood profiles of the steepness parameter. It would be useful if the analyses could be presented together with stock assessments to assure internal consistency of the results and to get the maximum benefit from a full STAR Panel review of the work.

While recognizing the uncertainty about the point estimate of stock status, the SSC supports the optimum yield (OY) of 1775 mt recommended by the Groundfish Management Team for widow rockfish in 2001, which was derived from an $F_{65\%}$ harvest rate as modified by the 40-10 policy. Projections indicate this policy will result in rebuilding the widow rockfish stock within a ten-year period.

Pacific Ocean Perch

The SSC is concerned the preliminary OY for Pacific Ocean perch (POP) (626 mt) reflects overly optimistic projections of stock rebuilding due to a reliance on potentially untenable stock recruitment assumptions. The new stock assessment indicates an improvement in POP stock status, suggesting that it may be possible to rebuild the stock faster than previously thought, or, alternatively, to obtain higher yields during the period of rebuilding. Until a thorough rebuilding analysis is conducted with the new assessment results, the SSC recommends using the yield projected for 2001, as put forth in the existing rebuilding plan (303 mt) as a lower bound. The SSC further recommends the new stock rebuilding analysis should provide catch projections based on a constant fishing rate and not a constant catch over the rebuilding time period.

Whiting

Biomass estimates produced by the new assessment are very close to the values reported by the 1999 assessment. Some errors were identified in the catch tables of the new assessment; however, the SSC was informed that the correct catch values were used in the stock assessment model, so this error does not affect the assessment results. The SSC recommends the Council should use the 2001 OY (238,000 mt) as put forth in the previous assessment. Assuming an 80% US share, this corresponds to 190,000 mt.

Darkblotched Rockfish

The OY range is based on uncertainty in the amount of darkblotched rockfish taken in the foreign rockfish

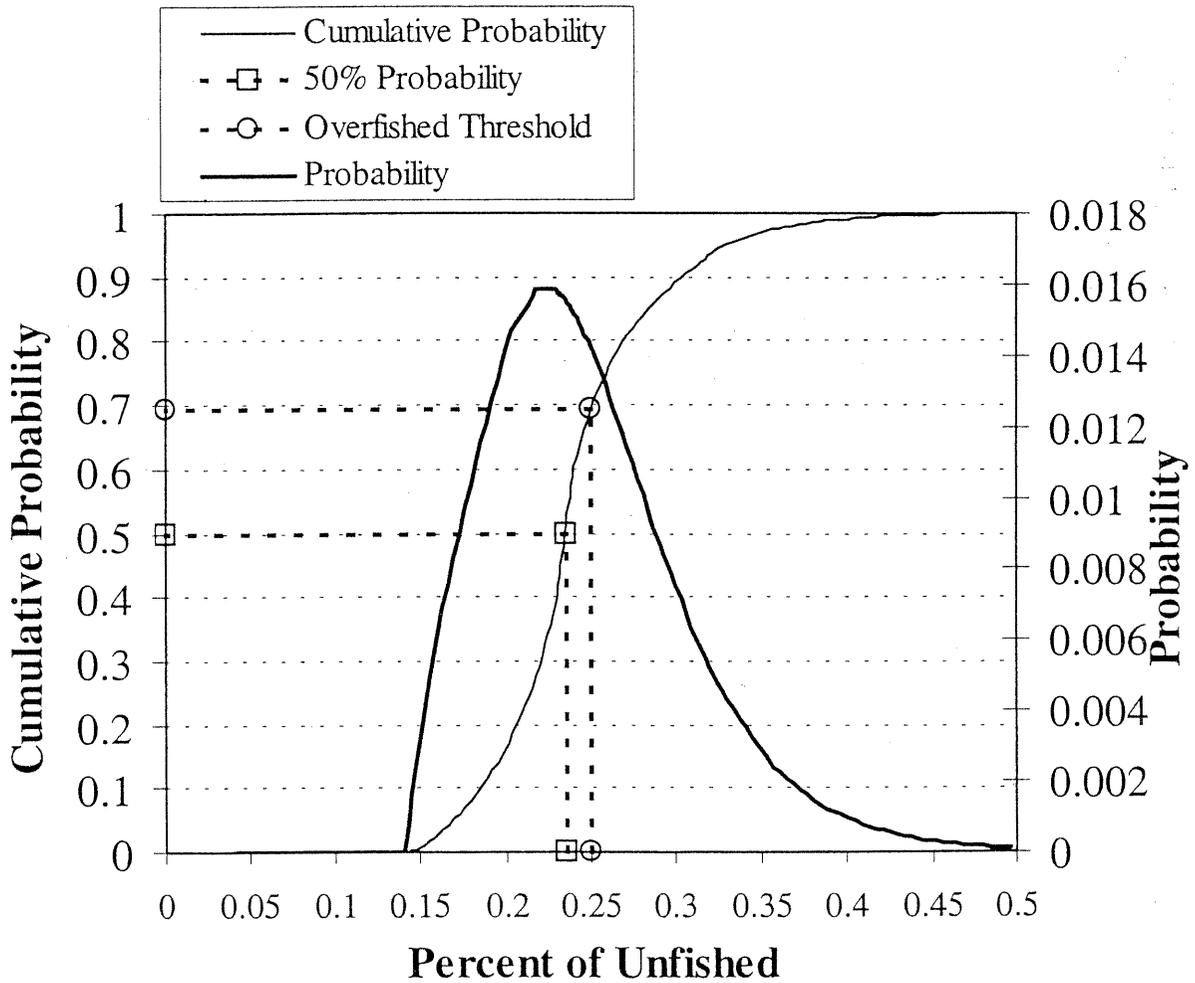
fishery. The SSC understands that data are available which may provide an opportunity to better estimate the species composition of the Russian catch in the early years of the fishery. These data should be evaluated, and, if found reliable, should be incorporated into the next darkblotched stock assessment and other applicable slope rockfish stock assessments.

RecFIN

The SSC reviewed a report prepared by the RecFIN statistics subcommittee, which evaluated alternative estimators of ocean boat fishing effort and catch in Oregon. The report compared the sampling programs of the NMFS Marine Recreational Fisheries Statistics Survey (MRFSS) and the Oregon Ocean Boat Survey (OBS). The SSC is impressed with the quality of the report and the level of effort put into examining the properties of two recreational fishery survey datasets. The SSC endorses the subcommittee's recommendations for improvements in both surveys, and concurs with their recommendations to 1) use adjusted OBS estimates during periods when the two surveys overlap, and 2) use stratified MRFSS without the freshwater stratum during other periods. The SSC also recommends that Oregon Department of Fish and Wildlife derive variance estimates to accompany past and future OBS estimates of recreational catch.

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Figure 28. Profile likelihood for the ratio of 1999 spawning output (SO) to an estimate of the unfished level (SO_0). The unfished level was computed as the average recruitment from 1968-1976 times the spawning output-per-recruit with $F = 0$.



Source: **Status of the Widow Rockfish Resource in Y2K**
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