Horseshoe Crab Advisory Panel Report

March 2, 2004

The Horseshoe Crab Advisory Panel had a conference call on February 26th to discuss the 2004 Draft Stock Assessment and Draft Addendum III. The following is a summary of that call.

Participants

Rick Robins (dealer/processor, VA)
Jim Cooper (biomedical, SC)
John Turner (proxy for Carl Safina, conservation, NY)
Jay Harrington (commercial/handpicker, MA)
Jeff Eutsler (commercial/trawl, MD)
Frank Eicherly (commercial/dredge/conch, DE)
Brad Spear (staff, ASMFC)

2004 Draft Stock Assessment Report

One AP member stated that the document was well written and user friendly. Several AP members indicated that there were problems with some of the analyses and data reported. They made the point that fishery-dependent data is not necessarily indicative of actual harvest or abundance. Landings compiled by NMFS from the 1970s through the late 1990s are only indicative of states where reporting was mandatory. Landings compiled by ASMFC since 1998 do not necessarily reflect abundance of horseshoe crabs in individual state waters. The Stock Assessment Report was modified to qualify Tables 1 and 2 and Figures 1 and 2. The text of the report (Section 5.1.1.3) already reflects the difficulty in interpreting these numbers.

Various surveys were found to have little or no value in assessing the status of horseshoe crabs, as stated in the 1998 Advisory Report for the HSC Stock Assessment Peer Review. This was primarily because the surveys were not designed to catch horseshoe crabs. One AP member pointed out that many of the same surveys were used in the meta-analysis of the 2004 stock assessment to determine trends. He went further to say that the meta-analysis does not discern among surveys. In other words, each survey is equally weighted in the analysis. All participants recommended that the Board require a peer-review of the 2004 stock assessment.

Overall, most participants on the call were not impressed with the findings and recommendations of the report because of the lack of detail. However, they did find relevance in what was reported. The AP agreed with the report that there are regional/local horseshoe crab populations. One participant suggested investigating the usefulness of replenishment in locally depleted areas. In reference to finding 9.0b, participants stated that the powerful surveys around the Delaware Bay region (ocean benthic trawl survey and DE Bay spawning survey) indicate a leveling off of horseshoe crab abundance. Watermen in DE say they are seeing indication of increased populations because they are seeing many more juveniles than in the past. As a result, those watermen have no more faith in the regulatory actions taken by DE. They say that they have

received little to no praise for the reductions they have already suffered and that new regulations must show some sort of compassion for this.

One member said that there is no mention in the assessment report about the horseshoe crab as a voracious predator of shellfish. He stated that horseshoe crabs feed on some of the same intertidal species that shorebirds feed on. In making a case to the Board, he cited the ASMFC mission statement that makes reference to promotion and protection of all fisheries, such as shellfish. For more detailed on this point, see the December 1, 2003, Advisory Panel report and Appendices A and B (attached).

Participants were also disappointed with the assessment because it does not give population parameters. Further, the analysis was not conducted with reference to the harvest cuts that took place in 2000 under Addendum I. However, the Panel generally agreed with the idea of exploring an interim assessment method for application to the DE Bay region, as recommended in 9.0c of the report.

The Panel had mixed feelings with the report's recommendation of establishing an ARM working group. Those against it felt that there were already too many people affecting the management of horseshoe crabs and that political pressure from shorebird biologists has compromised some of the scientific information. Those who support the recommendation felt that if horseshoe crab management will be affected by needs of shorebirds, then it makes sense to bring other scientists into the process.

VT Ocean Benthic Trawl Survey

The Panel had a brief discussion about the trawl survey. Members want to make sure the Board was aware that the survey conducted in 2003 was done later in the fall then the previous two years. Several members stated that the gear efficiency used by VT researchers in their analysis is overstated. Their analysis assumes 100% gear efficiency, while others suggest there is closer to 25% efficiency. Work has been done to test gear efficiency with hydraulic surf clam dredges. The Panel recommended that VT build into its study design a test of gear efficiency. The Panel also recommended that the survey be extended into Delaware Bay.

Addendum III

In questioning the justification of Addendum III, one member cited the DE Bay Shorebird-Horseshoe Crab Assessment Report (May 2003). He cited from page 22, "The mean maximum knot count, however, did not differ between 1986-1996 and 1997-2002 periods." He asked why should further reductions on horseshoe crab harvest occur now if red knot levels appear to similar to what they were 10 or 15 years ago.

One AP member stated that the harvest reduction recommended in the Peer Review Report of Shorebird TC Report was based on an analysis that used the lower control limit of the ocean benthic trawl survey. The trawl survey is already ultra-conservative and should use the mean control limit.

The Panel discussed the harvest of horseshoe crabs for use in the biomedical industry. The Panel felt that information on magnitude of harvest should be readily available since it is a requirement under the 1998 FMP and draft Addendum III. Massachusetts and South Carolina are known to have sufficient tracking to obtain these numbers. The Panel recommends that the Board, Plan Review Team, and Technical Committee work together to investigate this issue to determine reliable harvest numbers of crabs used for biomedical purposes.

Study practicality of bait-biomedical transfer of crabs before making mandatory.