SAFMC Council
SAFMC Spiny Lobster Committee
SAFMC Spiny Lobster AP
Gulf Council Spiny Lobster Committee

Re: Amendment 10 Spiny Lobster April 29, 2011

I hear many people quoting that all of the Spiny Lobster in Florida come from other areas of the Caribbean or elsewhere, so we don't need to establish an ACL, ABC, OFL,MSY, etc that will maintain any kind of breeding stock. I think this is a risky position to take. If the 10 year mean landings are 5.8 MM then I think it is risky to establish the MSY and ACL at 2 standard deviations above the mean (7.9 MM #'s). All other fisheries set limits less than the mean.

I think the proper thing to do for the fishery & sustainability is to do what is right for the long term, not the short term. If you leave a percentage of the lobsters out there for next year (this would be like leaving some money in the bank to draw on next year if you need it), consequently there will be a larger biomass & this will help even out the landings. This could also eliminate or help reduce the negative impacts during lean landing years.

Council should be more conservative with their management measures in the lobster fishery than what are the current "Council's preferred options in Amendment 10". I fear that some of these decisions will be based on flawed data (models with certain assumptions) and opinions rather than good science. When the data is questionable and we don't know what caused the lack of lobster for ~10 consecutive years we should err more on the side of conservation.

When I read the "Using microsatellite DNA analysis to identify sources of recruitment for Florida's spiny lobster (Panulirus argus) stock by John H. Hunt, William Sharp, Michael D. Tringali, Rodney D. Bertelsen, and Samantha Schmitt Florida Fish & Wildlife Conservation Commission" report I did not get the impression that we don't need to be concerned about spawning sizes & local recruitment. These quotes from their report provides evidence that "**there is some localized self-recruitment of lobsters"**.

Pg 7:"In conclusion, our results indicate that spiny lobsters are highly interconnected in terms of gene flow in locations along the coastal United States. However, differences in allele frequencies, trends in fixation indices, and the spatial separation of genotypes among some of the tested sample locations provides evidence for a degree of localized self-recruitment."

Pg. 6: "Because it was not confined to a few markers, it is possible that the observed single-locus disequilibrium resulted from undetected population structure within samples or from temporal effects. It is also possible that the observed deficits are caused by a technical artifact of genotype screening (i.e., null allelism). We will conduct additional detailed testing to distinguish between the two alternatives. The global value over all samples of FIS (0.0306) did not differ significantly from zero."

I believe that this leaves the door open to genetic structure within the population. P. argus samples from across the entire range did not have appreciable genetic population structure. They clearly have some more work to do which they acknowledge in the report.

The idea that the lack of evidence for local self-recruitment in FL is a rationale for "catch all you can" is perverse. Clearly upstream sources are necessary for FL, but self-recruitment won't be detected in FL due to panmixia. If they can't distinguish between self recruitment which has a mix of DNA and incoming mixes of DNA, then they really don't know how much of the recruitment is not from local spawning. So the question

about local recruitment remains open in my opinion. I think the real question is how much of the recruitment is from local stock, not whether the there is local stock recruitment.

In addition the report only collected samples over a 2 year period and in my mind leaves a lot of questions that still need to be answered:

1) What were the ages of the lobsters sampled (we could be trying to compare 1960 with 2005 larvae) – Most lobsters in Florida are maybe <5 years old vs NC lobsters could be 20 to 50 years old? Can anyone tell me how old the 8" and 9" carapace lobsters are that are routinely caught off NC?
2) This report is only a snapshot in time so it may not really be representative of a fishery that historically had longer living stock. A longer sampling period could provide more evidence of local recruitment.
3) The large breeder lobsters in the Dry Tortugas were fished out in the 90's so the whole local recruitment DNA scenario can now be a lot different. Not only did the larger lobsters produce a lot more (10X) eggs as the smaller ones, but there were also a lot more of them. Maybe the recruitment that used to come from the Dry Tortugas has been compromised. The quantity of larvae from that area could now be 1 % of what it used to be.
4) The other major factor is that this study was done during a recent time period when the lobster population was very low in Florida. The same study during a period of lobster abundance could show higher local recruitment numbers & would warrant more conservation and larger minimum sizes.
5) The PAV1 virus could also be a big factor. If a lot of the lobsters were diseased and not reaching spawning age/nor spawning and the population/biomass is way down then the DNA study may not show much local recruitment versus completing the study when the fishery is healthy with a good biomass. The current 3.0" minimum carapace size can also negatively affect the local recruitment data – larger lobsters with larger clutches could mean more local recruitment & more lobsters to harvest. The 3.5" carapace would also weigh more, so landings and recruitment could easily go up a significant %.
6) I have also heard from local lobstermen that when the lobsters get above a certain size they move to deeper water. If this is true, it could also affect local recruitment. Maybe by culling out all lobsters as soon as they reach 3" they don't get to move to an area that will be more likely to re-populate Florida.
7) Eddy currents, tides, storms, Ocean currents all affect where the larvae wind up going & settling and these things vary from year to year and decade to decade.
8) The larval movement modeling that was done only shows lines, I would think that a more accurate depiction would show wide color coded paths, similar to hurricane tracking and dye diffusion studies.

I suggest the council take a strong look at setting the MSY at the 10 year mean landing rate 5.8 MM's, then set the ACL at 90 % of the MSY and the ACT at 90 % of the ACL.

In summary, more work needs to be done to adequately determine what is going on in the fishery. An incomplete DNA study and a tide/current modeling based on many assumptions should not be the basis for a **"catch all you can"** fishery.

I also think that the council should change their preferred alternative regarding the use of shorts. I endorse the SAFMC Spiny Lobster AP's recommendation (2 years in a row) to do away with using shorts in the lobster trap fishery. Disallowing the use of shorts will provide a reduction in undersized lobster mortality, it will make it easier for law enforcement, it will increase the annual landings, and trap efficiency will not be affected because they will continue to use live lobsters as attractants (legal sized).

Sincerely,

Jim Atack
Spiny Lobster AP Member