

## American Fishermen's Research Foundation News ©

American Fishermens Research Foundation (AFRF) is involved in the ongoing stock assessment of North Pacific albacore as well as the management and regulation in both hemispheres of the Pacific ocean. There are initiatives to establish new and uniform Biological Reference Points (BRP's) and possible Harvest Control Rules (HCR's) both at the international and federal levels. Many of these plans and proposals are competing and different, and laced with politics despite sound science. At considerable expense AFRF continues to represent the U.S. albacore trollers and baitboats at these forums, and continues to be involved in the scientific process through the International Science Committee - Albacore Working Group (ISC-ALBWG). Although we represent ALL U.S. albacore trollers and baitboats because all vessels delivering albacore to AFRF contracted buyers, both fishermen and processors contribute. The fees as per the AFRF contract are paid by the buyers and not deducted from the fishermen's proceeds. Unfortunately, some buyers still do not contribute. We encourage all to contribute to keep us in the game. We recognize beyond tagging information it is difficult to see something tangible that AFRF is doing since most is at too-long meetings in far away places where like it or not your future is being set.

**North Pacific Albacore Archival Tagging Project:** The F/V Her Grace with technicians from SWFSC onboard just completed the first tagging charter of 2014 deploying 39 archival tags. AFRF expects to deploy another batch in October on the F/V Royal Dawn.

There has been another recovery of a tag that was deployed by the Royal Dawn on October 8, 2014 about 50 miles off the Columbia River. After 1,035 days at seas and traveling 4,257 nautical miles it was recovered by a Chinese longliner about 200 miles north of the equator along the 170 E longitude. The fish was 18 pounds when tagged and 42 pounds when recovered.

We will still be doing sampling where fish can be set aside at outlets such as Ilwaco Fish Co. And other participating buyers and fishermen are paid for the fish. Fish need to be measured and location recorded and marked before freezing. Sampling kits are available from Southwest Fisheries Science Center (SWFSC).

### **Albacore Working Group and International Scientific Committee Meeting results** – By Dr. Vidar Wespestad

The Albacore Working Group (AlbaWG) and International Scientific Committee for Tuna and Tuna-like Species (ISC) met in Taipai, Taiwan in mid-July where the AlbaWG completed the 2014 albacore stock assessment and presented results to ISC. The ISC accepted the stock assessment and responded to clarifications directed to the ISC and the AlbaWG by the Northern Committee of the WCPFMC. Vidar Wespestad attended the meetings on behalf of American Fishermen's Research Foundation (AFRF) and American Albacore Fishermen's Association AAFA).

The full ISC report can be found at: <http://tinyurl.com/mg9rqqc>

The ISC report also contains the albacore stock assessment in annex 10 to the document.

The AlbacoreWG produced estimates of current female SSB stock size of approximately 110,101 t in the terminal year of the assessment (2012) and stock depletion was estimated to be 35.8% of unfished SSB.

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This compares to an estimate of MSY estimated to be 105,571 which is achieved at a female spawning biomass of 49,680 t. Thus it is clear that the current biomass is adequate to produce MSY and overfishing is not occurring.

The relationship to stock size and fishing is best shown in Table 7 of the ISC report where all of the proposed reference points are compared to results from the assessment model base case with average recruitment. The results are shown for the proposed reference points relative to fishing in two periods, 2002-2004 when fishing rates were high compared to the more recent period 2010-2012. What is noteworthy is that the rate of fishing is low relative to the reference point is not exceeded in either period except for most of the reference points. One interesting aspect is that the current reference point proposed by the NC of WCPFC as a limit point is extremely conservative producing a spawning biomass twice that of the MSY biomass. This is due to the way the BRP is calculated and the data included.

The ISC concludes that the North Pacific albacore stock is healthy and that current productivity is sufficient to sustain recent exploitation, assuming average historical recruitment continues. The expectation is that the stock will be stable over a ten-year projection if recruitment remains near current levels.

The next step is selection of a target and a limit reference point. The ones proposed by AlbaWG are all rate based BRPS and there is a desire for biomass based ones. Also there is a problem with the current limit of Fssb-Athl in that it is more conservative than MSY. The Canadian government this week submitted a proposal to establish a limit reference point at F20% which is close to the estimated MSY under average recruitment levels and a target reference point at F40, but this may be a bit high for a productive species like albacore where a target reference point of F30% may be more appropriate.

Table 7-1. Potential reference points and estimated F-ratios using current F (F2010-2012) and F2002-2004 (reference years for North Pacific albacore CMMs adopted by the IATTC and WCPFC) to assess current stock status, associated spawning biomass and equilibrium yield for North Pacific albacore when exploited at F2010-2012. Median SSB and yield are shown for FSSB-ATHL as this simulation-based reference point is based on a non-equilibrium concept.

Reference Point	F2002-2004/FRP	F2010-2012/FRP	SSB (t)	Equilibrium Yield (t)
FSSB-ATHL	0.85	0.72	100,344	90,256
FMSY	0.76	0.52	49,680	105,571
F0.1	0.56	0.51	73,380	93,939
FMED	1.34	1.30	156,291	74,640
F10%	0.71	0.63	22,867	96,590
F20%	0.80	0.71	54,530	105,418
F30%	0.92	0.81	86,192	99,612
F40%	1.07	0.94	117,855	89,568
F50%	1.29	1.13	149,517	77,429

The ALBWG having completed the recent stock assessment and will not meet formally again until 2016 to prepare for the next assessment. There will be a one day meeting prior to the 2015 ISC meeting to

update catch and effort statistics. The WG at the ISC meeting brought forward two issues for consideration by the ISC Plenary:

1. Data from China – currently the ALBWG can obtain aggregated catch data from sources other than China directly. The Chinese fishery seems to be growing in size and it may be catching the largest albacore since it operates between the equator and 15°N. There is a need for more and better data on the size composition of the catch in this fishery along with detailed spatial and temporal information on catch and that could be obtained through the ongoing participation of Chinese scientists in ALBWG workshops.
2. The 2014 assessment implemented a two-sex growth model. Very little sex-specific information is currently available. The ALBWG requests that the ISC Plenary encourage all members to collect sex-specific size composition data from their fleets.

In summary the latest stock assessment (2014) is accepted and approved by the ISC with a finding that overfishing is not occurring. There are several biological reference points that can be established to monitor harvest rates and that the management bodies should look toward adopting a target and limit harvest level. Canada has proposed potential rates put forward by ISC as candidates for consideration. Under average recruitment adoption of all but the extremes should allow fisheries to continue if effort and recruitment stay within observed levels. The next difficult step will be to develop control rules to insure that harvests stay within the range that prevents overfishing. This may be very difficult in a multinational multigear fishery.

#### **Ocean Conditions Observation** August 25, 2014 - By Mark Hess - Ocean Imaging

I have attached a few screen shots which show the SSTs and Chlorophyll levels in the northeast Pacific from 2009-2014. A few of the most notable observations when comparing 2014 to the previous 5 years are:

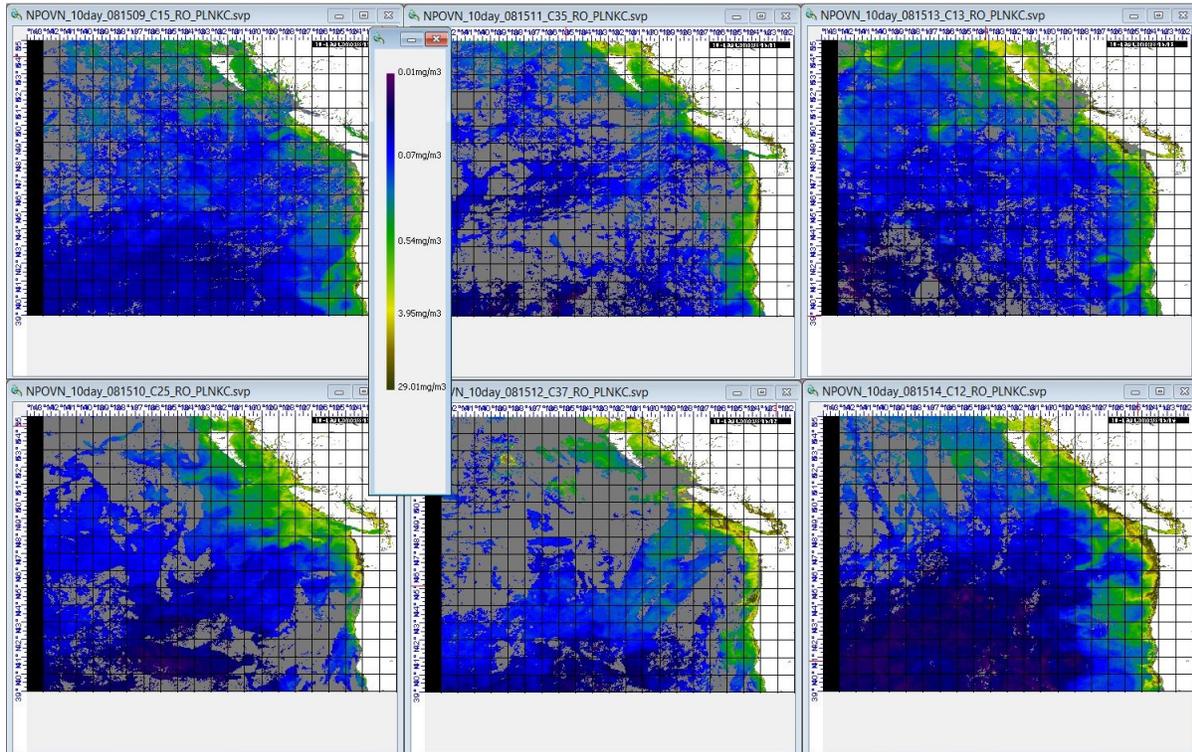
- 1) Except for an area of strong coastal upwelling from Newport to the South, the warm water has pushed farther north than prior years – especially along the northern coast inside of 132°W. You can see water as warm as 65°F up almost as far north as the south end of the Queen Charlotte Islands. If you compare this coastal SST phenomenon to the five years before you will see that this condition is quite atypical.
- 2) Compared to previous years, we are now seeing the warm water push very close to shore around the mouth of Columbia River, however coastal upwelling is quite strong to the north and south of this area - south of Newport and off of the west coast of Vancouver Island.
- 3) We are seeing strong phytoplankton blooms (as indicated by the high Chlorophyll levels) associated with the coastal upwelling south of the Columbia River area and streaming southwest from the southeast side of Vancouver. Not only are these blooms stronger (higher Chlorophyll levels) than in the 5 prior years, the plumes are extending farther 1°-2° farther offshore. While coastal upwelling resulting in phytoplankton blooms is normal for the West Coast this time of year, the magnitude of the blooms and the westward extent are unusual. You will also notice a much quicker change over distance between the high coastal Chlorophyll levels and large, blue body of water to the southwest. This could indicate stronger, deep water oceanographic convergence zones which will help concentrate the fish.

The good news is that the strong plankton blooms combined with the warm temperatures should bring nutrients and baitfish into the area resulting in continued good fishing. Remember that while catches in 2010-2013 were highest in the 59°F-62°F range, NMFS satellite tag data indicate that the preferred temperature of the tagged albacore was on average 64.5°. The warmer temperatures we are seeing now are in the 65°F-66°F range. The warm, blue pocket between the plankton bloom extending from Vancouver Island and the bloom extending off of mid-southern Oregon looks especially interesting. These blooms could also, however, push the fish farther offshore with late season catches increasing outside of the 128°W-129°W lines.

It is difficult to say whether these conditions are due to El Nino or a pending El Nino. The latest NOAA El Nino report forecasts a 65% chance of an El Nino forming this fall to early winter – with the El Nino beginning as early as July (which has obviously passed).

[http://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/enso\\_advisory/ensodisc.pdf](http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.pdf)

**Note: The graphic below are in B&W but are in color on the above link or e-mailed newsletter.**



**Partial List of Science and Management Meetings: AFRF and WFOA will be represented at these.**

- Northern Committee of the Western Central Pacific Fisheries Commission - September 1, 2014 to September 4, 2014 - Japan
- Pacific Fisheries Management Council (PFMC) - September 11-14, 2014 - Spokane, WA.
- WCPFC Advisory Committee - October 6-7, 2014, Honolulu, Hawaii
- PFMC - November 13 - 16, 2014- Costa Mesa, CA
- Annual Meeting of the WCPFC - December 2014 - Apia, Western Samoa

**AFRF Contracted Buyers:** Bornstein Seafoods Inc., Bumble Bee Seafoods, Chicken of the Sea International, Driscoll's Wharf, High Seas Tuna Inc., Interocean Fisheries, Island Trollers Inc., Jessie's Ilwaco Fish Company, JK Fisheries, Ilwaco Landing LLC, New Day Fisheries, Pacific Seafood Group, Papa George Gourmet Albacore, Pelican Packers Inc., Seafood Producers Co-op, Star Kist Seafoods, Starvin Marvin Seafoods, Trident Seafoods, Tri-Marine International, Whole Foods Select Fish, Wild Planet Foods Inc

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