

## American Fishermen's Research Foundation News ©

**AFRF Board Meetings:** AFRF held its winter board meeting on January 21, 2011 online. The spring meeting will be held on the morning of March 30, 2011 at the Holiday Inn Express in Astoria, OR. Any individual or group with an idea about albacore research or any other issue concerning the organization is welcome to present them to the board at anytime. Please contact us if you want to talk to the board or if you want to send a proposal to the board.

**Albacore Working Group** to meet at Far Seas Fisheries Research Institute in Shimizu Japan March 14-26, 2011, to complete a new North Pacific albacore (NPALB) stock assessment.

Vidar G. Wespestad, AFRF Science Consultant

The albacore stock assessment document is rapidly approaching and I will be attending the later part of the meeting. The first part of the meeting March 14-19 is directed toward incorporating the most recently submitted data for fisheries through 2009 and to explore alternative parameterizations. The second part of the meeting involves the full working group. The Working Group includes members from Mexico, USA, Canada, Japan, Taiwan, Korea and Japan with representatives from IATTC and the SPC. The primary goal of the workshop is to: review national fisheries in 2010 and update fishery data (annual catch data); conduct a stock assessment using fishery data through 2009; and, develop advice and recommendations for managers on stock status, future trends, conservation and future research needs.

In preparation for the assessment a meeting of SWFSC and PIFSC personnel was held at the Pacific Islands Fishery Science Center to examination the structure and formulation of the stock synthesis model, the primary population model used in the albacore stock assessment. Several issues were brought to light, most of which were of a mechanical nature; but, others relating to data analyze were found that need further examination within the working group.

A significant issue is the choice of growth parameters to apply in the model. During the working group meeting in October in La Jolla it became evident that growth curve parameters greatly effects model output. The model is a numbers based model that is run with length data. The growth data is needed to convert numbers to biomass. If the rate of growth is incorrect then the estimates of biomass as length or age could be over or under estimated. Continuing examination of growth estimation using updated data and model parameters suggests that the model can produce relatively robust and biologically reasonable growth parameters, similar to otolith based growth estimates, and provide a best fit to the length data used in the model. These findings are encouraging and will be examined closely at the stock assessment workshop.

The other significant charge of the Working Group is to develop a biological reference point for North Pacific albacore. The Northern Committee provided the Working Group with guidance on reference points. The Committees choice was to establish a limit reference point that will require management action if and when the stock declines to the level proscribed. NGOs are calling for MSY based reference points to insure that the stock is not overfished. However, there is no guidance from either WCPFC or IATTC on the formulation of an MSY based reference point at this time. The Working Group is exploring various reference points, but is

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awaiting specific guidance on what is required.

It appears that everything is in place for a productive session and production of a stock assessment that should indicate a healthy stock. The Working Group will be complete just before the Annual Meeting in Astoria and there should be a formal report on the outcome at that time.

**Pacific Fisheries Management Council:** There are no HMS agenda items on the March PFMC agenda in Vancouver, WA. However, we expect a full agenda of the HMS advisory and management teams as well as the council at the April meeting in San Mateo, CA. Given the results of the new albacore stock assessment will be available, results will dictate the direction of albacore management will take over the next few seasons.

**Tuna Conference:** AFRF did not contribute to the Tuna Conference as we have in the past, but will not exclude us from contributing in the future if albacore related issues are on the agenda. This is an interesting event if you are into tuna research and science, and the following is from the announcement on behalf of the conference:

The Conference is just around the corner and we would like to take this opportunity to share important information regarding shuttle service to Lake Arrowhead and Tuna Conference t-shirts.

*We are very pleased to announce that this year there will be round-trip shuttle service available from NMFS/IATTC in La Jolla to Lake Arrowhead provided by an outside transportation company! Half the cost of the service will be paid by NMFS and IATTC, the other half by users. The cost per person will depend on the number of riders. We estimate your cost range to be \$40-\$90 per person (round trip, including tax and tip). This service is available on a first-come-first-serve basis. To reserve a seat, please contact Joydelee Marrow as soon as possible (no later than April 1). Please note that your reservation is your promise to pay for your seat, whether or not you use the service. At this time you do not need to send money; payment may be made at the Conference. The reservation must be non-refundable because, in order to actually reserve the shuttle service, we must select a bus size and pay in full in advance. Please note the shuttle will leave our facility on Monday May 16th at 9:00 a.m. and return on Thursday May 19th at roughly around 6:00 p.m.*

*Tuna Conference t-shirts will go on sale online at our website at [www.tunaconference.org](http://www.tunaconference.org) beginning March 18th. Tuna conference t-shirts make great gifts, are always in style, and go with anything from jeans to pinstripes!*

*And, last but not least... For those of you still considering attending, we have only a few rooms left. Please refer to [www.tunaconference.org](http://www.tunaconference.org) for registration and other conference information.*

*We are looking forward to seeing you at the 62nd Tuna Conference!*

*Cleridy Lennert-Cody and Joydelee Marrow  
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**One presentation at the conference will be as follows:** Vessels of WFOA and AAFA contributed the samples to this research.

**Otolith chemistry of albacore (*Thunnus alalunga*) in the eastern Pacific Ocean**

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North Pacific albacore tuna (*Thunnus alalunga*) support the most lucrative fishery for a highly migratory species on the U.S. West Coast, and currently are assessed and managed as one stock. Population structure of North Pacific albacore, however, may be more complex than the current single stock hypothesis, given the apparent regional differences in growth rates and movement patterns in the eastern Pacific Ocean (EPO). Accurately characterizing population structure and stock mixing is critical to effective management. Otolith chemistry is one approach to investigate population structure of tunas and other fish. The principal assumption is that the otolith acts as a natural tag because the chemical composition of the otolith is related to the physicochemical conditions of the water mass inhabited. Water mass chemistry has been shown to be regionally variable, allowing scientists to recreate movement patterns. As such, the purpose of this study is to examine chemical signatures in the otoliths of albacore collected in two regions of the EPO that have shown limited mixing: northern region (offshore Oregon and Washington, >40°N) and southern region (offshore California, <40°N). Samples from three age classes (ages 2-4) were collected from each region through recreational and commercial fishing vessels from July to October of 2010. For each fish, one whole otolith is being analyzed for stable isotopes of <sup>13</sup>C and <sup>18</sup>O using a stable isotope mass spectrometer, while the other otolith is being analyzed for several trace elements (Ba, Ca, Li, Mg, Mn, Sr) using solution-based inductively coupled plasma mass spectrometry (ICP-MS). We hope to retrospectively link otolith chemistry results to large-scale physicochemical conditions (i.e. salinity, temperature, sea surface oxygen) to determine if regional differences exist which would support a two-stock hypothesis in the EPO. Ultimately, our findings will add valuable information on the life history and population structure of this economically important species.

\* Student and presenter

**AFRF Tagging Charters:** American Fishermen's Research Foundation (AFRF) continued the long term archival-tagging cooperative project with Southwest Fisheries Science Center (SWFSC). Unfortunately, weather and the lateness of the tagging effort resulted in only about ½ of the first batch of albacore being tagged. Tagging was on two trips by two separate vessels because of distance and weather involved. The vessels were compensated on a per-day basis and will be available to finish the tagging in 2011. The charter vessel Playboy II tagged some albacore in September out of Westport, WA, and the F/V Royal Dawn tagged another 22 over four days in October off Oregon and California. The second batch of tags and any remaining from 2010 will be placed early next season. AFRF with cooperation of SWFSC also attempted tagging a few larger albacore out of Hawaii on a local handline vessel but found no fish at the time, SWFSC personnel felt this may be useful in seeing the migration patterns of a few larger albacore in that region and if there were any correlations or similarities with the previously tagged albacore.

If you recover one of these tags, it is worth \$1,000 in reward funds. AFRF is concerned about the lack of any recoveries in the past two seasons despite having more than 600 tags at liberty. We expected more from the western Pacific area as the younger albacore entered the longline fisheries. Thus, far only one albacore has been recovered that traveled all the way across the Pacific and that tag was not found until the fish reached the cannery in Bangkok.

**National Seafood Marketing Coalition:** Both WFOA and AFRF support this concept and formation as a vehicle to promote U.S. fisheries and fund potential research on U.S. species. For the last year, the

development and organization of the National Seafood Marketing Coalition has been underway. The Coalition now represents over 50 member organizations (including 3 State Legislatures) from 25 states who have voiced their support to their Congressional Delegations. The primary goal of the Coalition is the formation of a National Seafood Marketing Fund which will provide sustainable marketing funding for U.S. seafood producers. This will increase the value of the nation's fisheries, increase the viability of the industry as a whole, and create jobs.

The National Seafood Marketing Coalition (Coalition) supports the creation of a National Seafood Marketing Fund (Fund) administered by Regional Seafood Marketing Boards (Boards) and funded by long-term, consistent sources. Several potential funding sources are under consideration, including duties and tariffs on imported seafood and other fishery sources. The basic concept is to consistently invest a portion of revenues into the marketing of domestic U.S. seafood products. Broad and sustained marketing over time will grow demand for seafood, increase its value, grow the economy, increase jobs related both directly and indirectly to the industry, and increase tax revenues across local, regional, state and federal levels. These economic benefits will also be accompanied by an increase in the health of Americans as domestic consumption of seafood increases.

**CCSI Meeting:** The California Sustainable Seafood Initiative which is under the California Ocean Protection Council will meet March 15, 2011 in Sacramento, CA. It will be a one day meeting at the CalEPA building in Sacramento in the Sierra Hearing room. . The CalEPA building is located at 1001 I Street, Sacramento, CA 95812-2815. The agenda is being finalized, the meeting will have a 10:00 AM start and going through to about 5:00 PM. Wayne Heikkila is on this advisory committee as California is trying to find a way to promote California fisheries in general. There is much apprehension that some of the proposed ideas go far beyond what is required and may add more layers of bureaucracy on an already stressed industry. But that is why we attend. See: [www.opc.ca.gov](http://www.opc.ca.gov)

**Carbon Footprint Fuel Survey:** If any albacore troll and baitboat owner wishes to participate in this survey there is a link below. It is a survey of gear types and the amount of carbon footprint in the fishery. I would guess the albacore troll fleet would show very good depending on how the numbers may get used. It is up to you if you want to fill it out. Instead of an attachment it can be accessed on the WFOA website on the fish report page below. Just look for the blinking announcement and click on the two links. It can be then filled out online and emailed to the address on the bottom.

Link: <http://wfoa-tuna.org/fishreports/>

*The American Fishermen's Research Foundation (AFRF) has supported research and education of the albacore and pole and troll fishery since 1971. It was founded by fishermen with foresight to see the issues we are now facing such as maintaining access to the ocean for all U.S. albacore fishermen. More than six million dollars have been spent on projects and research related to this fishery. The industry by contribution pays most of the funds beyond dock price of albacore. AFRF supports the entire albacore fishery with its' efforts, not just individuals and association members.*

**AFRF Contracted Buyers:** *Bornstein Seafoods Inc., Bumble Bee Seafoods, Chicken of the Sea International, Driscoll's Wharf, 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, Shamrock Fisheries, Star Kist Seafoods, Starvin Marvin Seafoods, Trident Seafoods, Tri-Marine International, Whole Foods Select Fish, Wild Planet Foods Inc*

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