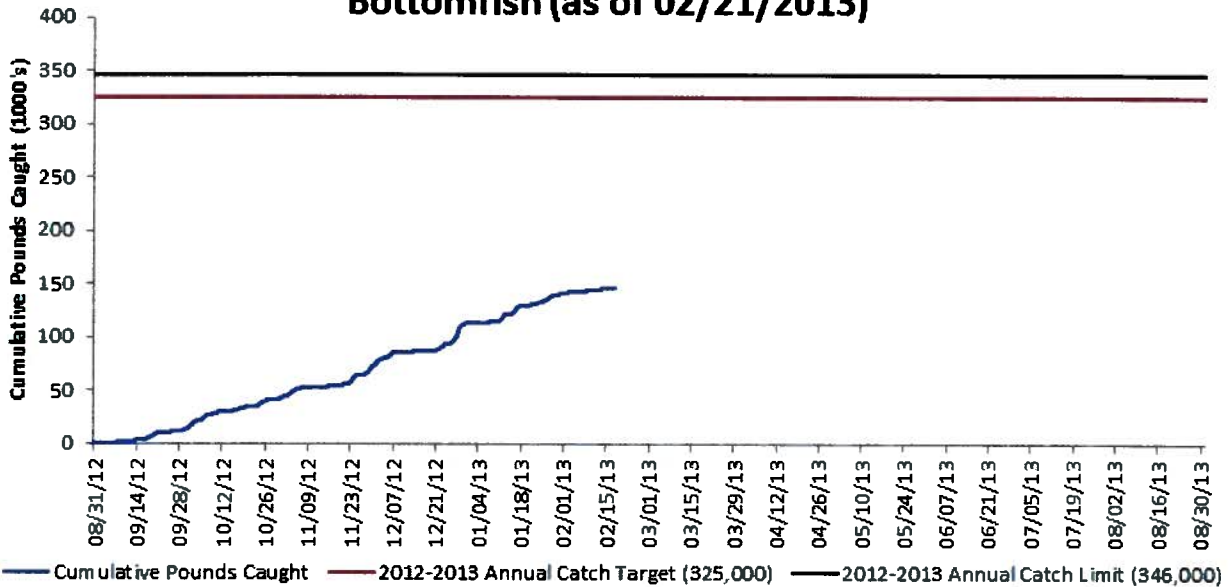


# BOTTOMFISH NEWS

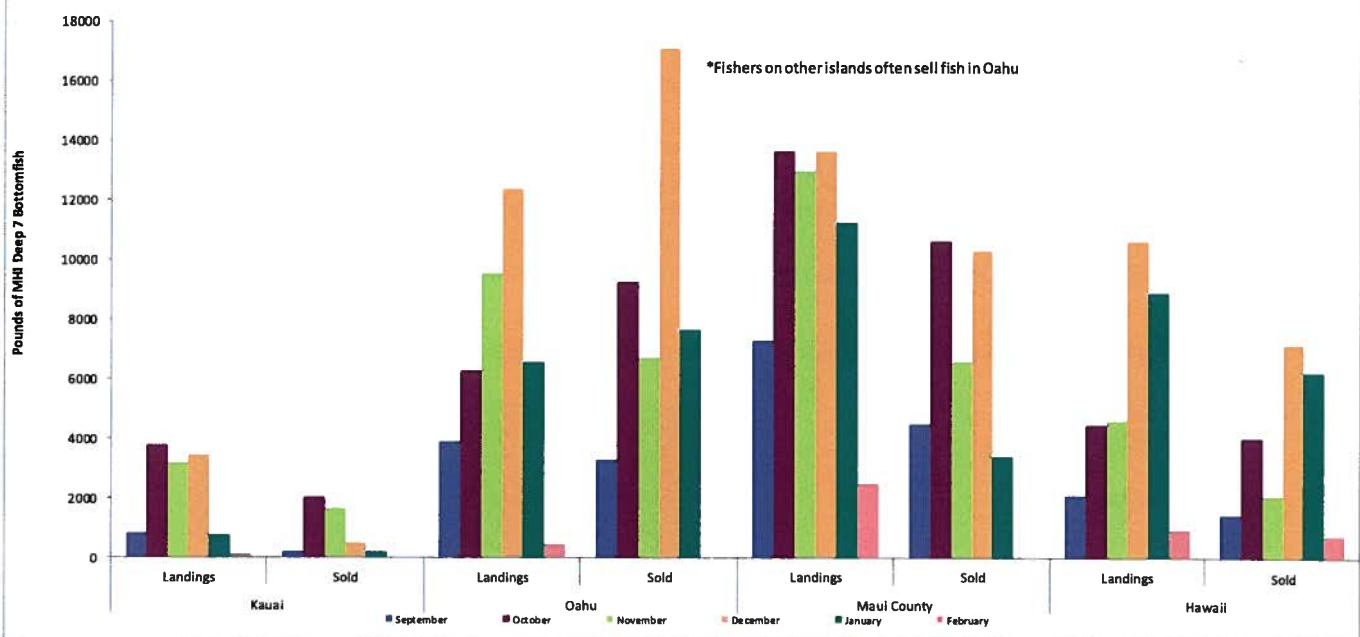


## Present Deep 7 Bottomfish fishing year

### Main Hawaiian Islands Monthly Catch of Deep 7 Bottomfish (as of 02/21/2013)



### Comparison of Landings and Sales of MHI Deep 7 Bottomfish by Island and Month from September 2012 to Present (as of 2/21/13)



[illegible]

**If you select this option it means you sold to someone that is not a registered fish dealer, please be sure to submit a Personal Cash Sales Report in addition to your trip report**

Q: "What if I ONLY went Bottomfishing for the month, but online the month still says 'Open' or 'Pending'? How do I close the report?"

**A: If you ONLY bottomfish for the month, then you are only required to submit your Bottomfish Trip Report(s) (due within a five day period from the end of your trip). Since, the Bottomfish Trip Reports are counted towards your Monthly Report requirement (due the 10th day of the following month) and you ONLY went bottomfishing, no other reports need to be submitted. Online, the month can be represented with an "Open" or "Pending" status with the "Completed" Bottomfish Trip Report(s) filed below it. It will be displayed in this manner until we can improve the online system. See example below.**

We are currently working to resolve this confusion, in the mean time please contact us if you have questions.

## Online Fishing Report

1200

Open  
Completed

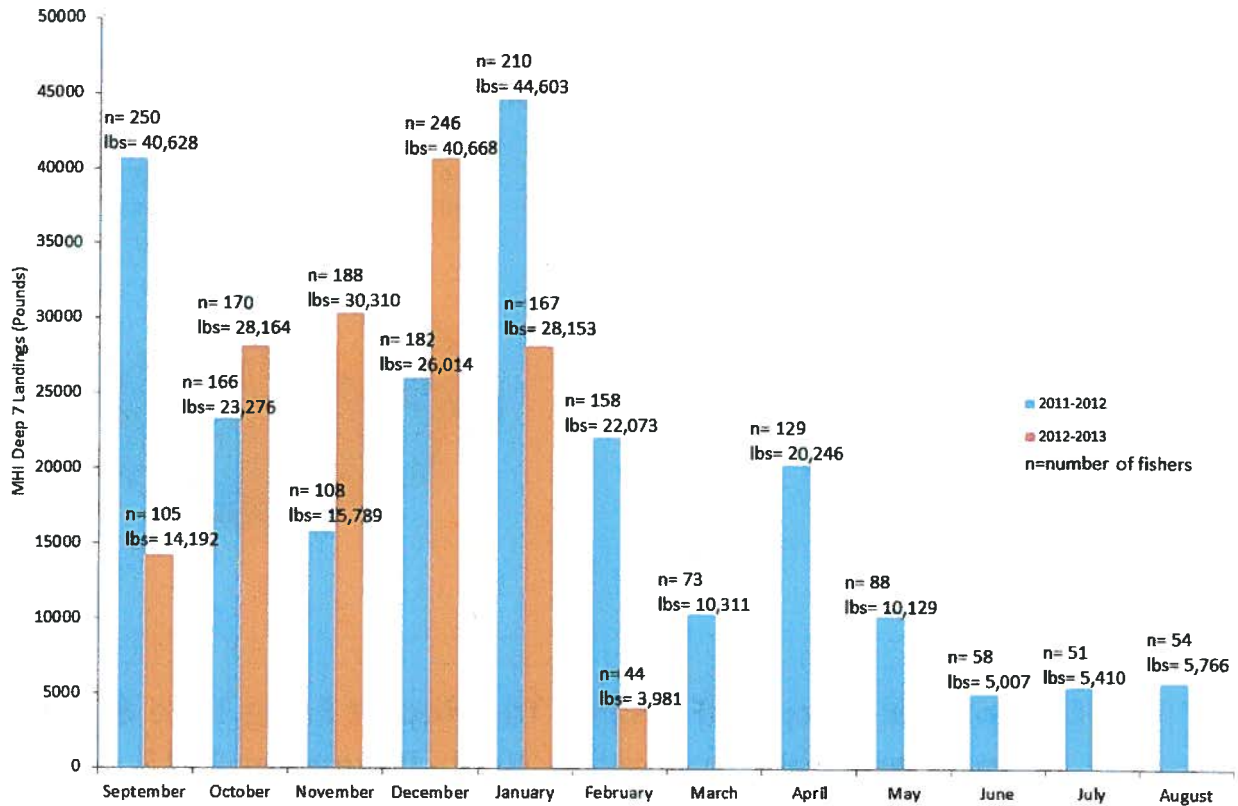
January 2, 2013

## HEAVY COMP

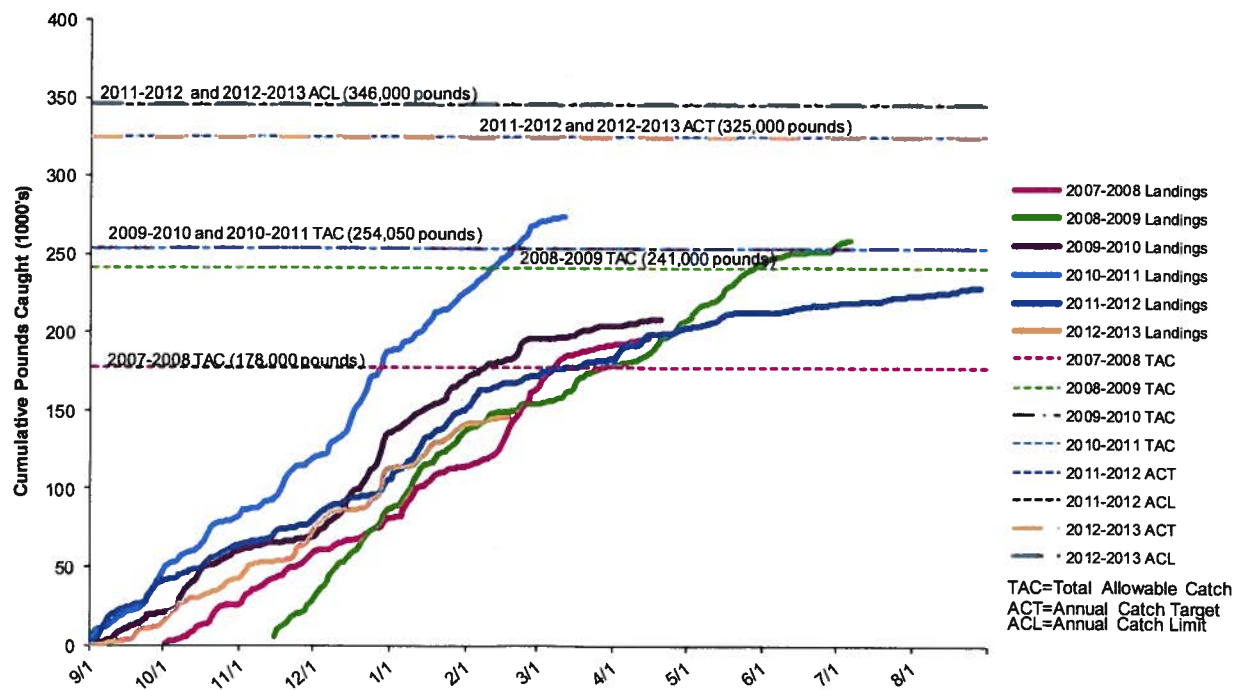
68

## Comparison of MHI Deep 7 Fishing Years

**Comparison of MHI Deep 7 Landings by Month for the 2011-2012 and 2012-2013 Fishing Years (as of 2/21/13)**



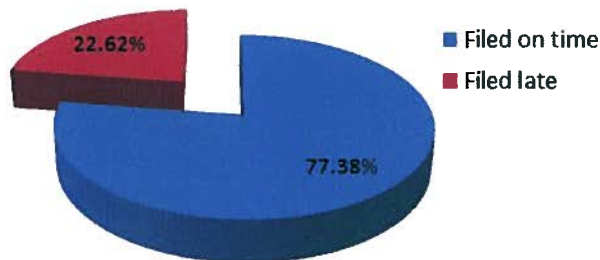
**Comparison of MHI Deep 7 Bottomfish Landings from 2007 to Present with catch limits (as of 02/13/2013)**



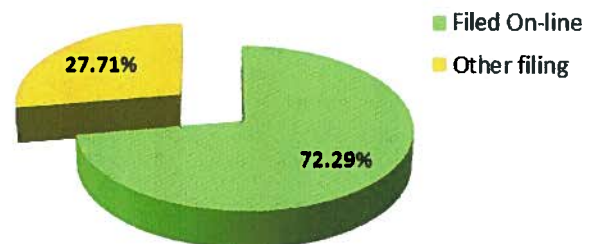
## MAHALO!! 77% of Deep 7 Bottomfish Trip reports are submitted on time!

77% of all of Deep 7 Bottomfish Trip reports are submitted on time, in an average of two and a half days after the trip end date. Of those submitted late, on average they are submitted within 16 days of the trip end date. Of these, 73% are submitted online. Thank you for your cooperation! The high compliance rate and high percentage of fishers using the online system is outstanding and greatly appreciated! We would like to remind fishers that everything they catch needs to be reported whether or not they sell it. All catch data is important to the scientists and is used when making stock assessments and determining catch limits. Keep up the good work!

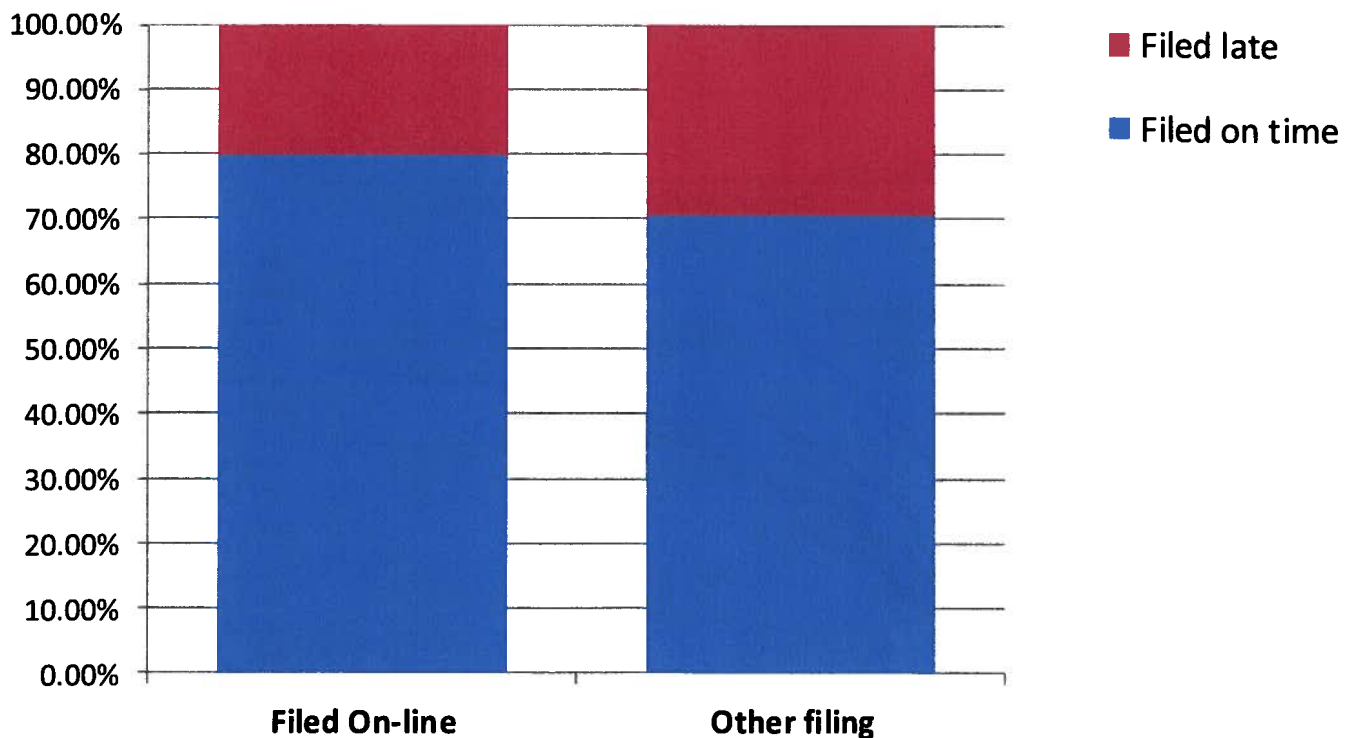
**Commercial Deep 7 BF Fishing Trip Report  
Compliance Rate September 2012 - December  
2012**



**Commercial Deep 7 BF Fishing Trip Report  
Online Adoption Rate September 2012 -  
December 2012**

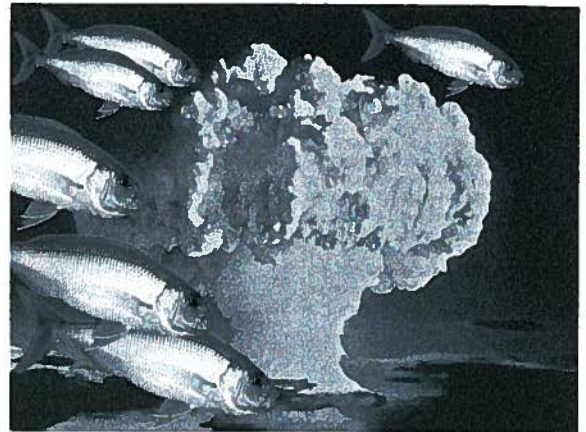


**Commercial Deep 7 BF Fishing Trip Report Filing Type &  
Compliance Rate September 2012 - December 2012**



## Nuclear bombs and how long opakapaka can live – Dr. Allen H. Andrews (NOAA Fisheries – PIFSC)

Opakapaka were originally seen as a relatively fast growing species with a maximum estimated age between 5 and 18 years. The methods used to come up with these estimates are good for validating the age of young fish, but not as appropriate for the largest fish. Most fish can be aged by counting annual growth zones in otoliths (fish ear bones), similar to counting rings in a tree. But opakapaka otoliths have not revealed growth zones that can be counted for the oldest fish. Therefore, the methods used for early fish growth were used to extrapolate an age for the largest fish. For some fishes this practice may be valid, but with opakapaka the results were unclear.

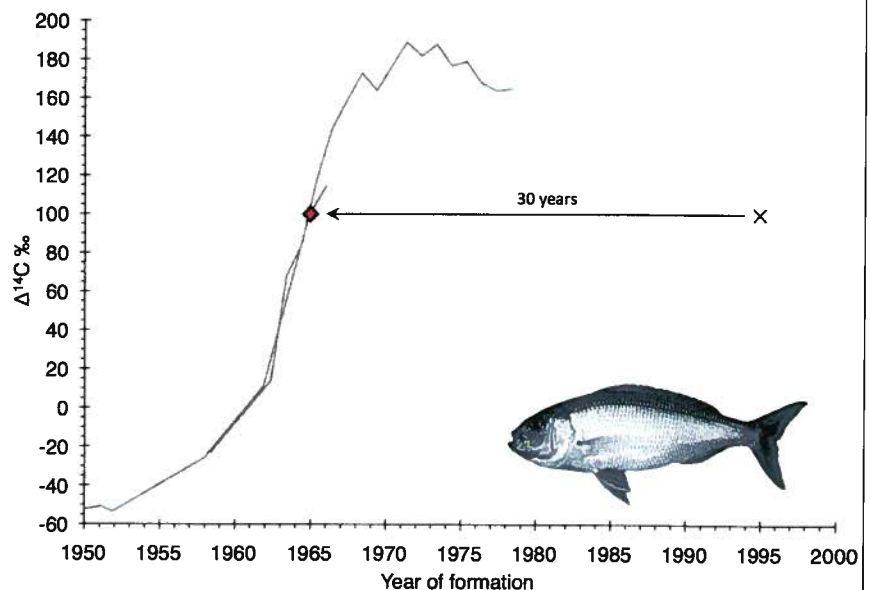


Validating the maximum age of fishes can be a difficult task. A number of methods have been used on other fishes, such as tag and recapture, but most of these methods cannot provide an actual age for a fish. Bomb radiocarbon dating made it possible to determine the maximum age of fishes and opakapaka is the most recent.

Bomb radiocarbon dating relies on a radiocarbon signal that was created by atmospheric testing of thermonuclear bombs in the 1950s and 1960s. This radiocarbon signal can be measured over time in reef building corals because coral stores the ocean signal in annual growth bands of the skeleton. The same is true for fish otoliths; the radiocarbon signal is stored in the otolith calcium carbonate. Hence, the measured radiocarbon in the otolith core (birth year) can be correlated to the coral radiocarbon record. The timing must be right because the birth year must be during the rise of radiocarbon (between 1955 to 1970).

An example of how this works is if a fish was captured in 1995 and its otolith core radiocarbon matched the coral record from 1965. This fish was 30 years old (see figure).

Bomb radiocarbon dating of opakapaka revealed they could live more than 40 years. In the study, otoliths from collections revealed ages from 11 to 43 years for lengths of 1'8" to 2'5" FL. Overall, the age and growth calculated for young fish by other methods remained valid up to about 5-10 years, but the extrapolated maximum ages underestimated true age. This means opakapaka can grow fairly large in less than 10 years, but each fish can reproduce for more than 30 years.



This kind of information is important for fishery management because proper stock assessments can be made to determine population productivity, and ultimately an estimate of a sustainable yield. Other species in the Deep 7 Bottomfish fishery are being studied at this time. The hapu'upu'u study is well underway and preliminary results indicate longevity is greater than previously estimated. Other fishes in this group under age exploration are onaga and gindai.

If you are interested in more information on this kind of research either visit "[www.astrofish.me](http://www.astrofish.me)" or email Dr. Andrews ([allen.andrews@noaa.gov](mailto:allen.andrews@noaa.gov)).



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**Key Online Benefits:**

- File commercial fishing reports
- Purchase/renew commercial fisheries licenses and permits
- Register bottomfish vessel

**Contact Information:**

Email: fishrpt@hawaii.gov

Phone: (808) 587-0595 / -0084 / -0594 / -0108



**Division of Aquatic Resources**  
Hawaii Department of Land  
and Natural Resources

Dear Commercial Bottomfish fishers and dealers-Please let us know what kind of information is useful to you. We welcome your feedback! Any feedback about the newsletter, positive or negative, is greatly appreciated! PLEASE CALL statistical staff member, Jessica Miller, (808) 587-0594 or e-mail [dlnr.ar.bf@hawaii.gov](mailto:dlnr.ar.bf@hawaii.gov). Mahalo! - DAR Statistical Unit

Thank you to everyone for your ideas and assistance in editing the Bottomfish Newsletter Volume 15! A special thanks to: Dr. Allen Andrews, Caitlin Burgess, Reginald Kokubun, Eric Yokomori, Dr. Robert Nishimoto.

Editor: Jessica Miller