

Chapter 16

Assessment of the Atka Mackerel Stock in the Gulf of Alaska

EXECUTIVE SUMMARY

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November 2010

16.1 Introduction

Gulf of Alaska (GOA) Atka mackerel has been moved to a biennial stock assessment schedule to coincide with new survey data. A full assessment was presented in 2009, which included data from the 2009 GOA bottom trawl survey. On alternate (even) years we present an executive summary with updated catch, last year's key assessment parameters, any significant new information available in the interim, and projections for this year.

Gulf of Alaska Atka mackerel have been managed under Tier 6 specifications since 1996 due to lack of reliable estimates of current biomass. The 2007 assessment presented Tier 5 calculations of ABC and OFL (based on 2007 survey biomass estimates) for consideration. The Plan Team and SSC agreed with the authors that there is not a reliable estimate of Atka mackerel biomass and recommended continuing management under Tier 6. The Council set Gulfwide 2010 OFL, ABC, and TAC for Atka mackerel at 6,200 t, 4,700 t, and 2,000 t, respectively. Last year's full assessment is available on the web (Lowe *et al.* 2009, <http://www.afsc.noaa.gov/refm/docs/2009/GOAatka.pdf>).

16.2 New information and projection

New catch information includes updated 2009 catch (2,222 t), and 2010 catch (2,408 t) as of 23 October, 2010 (http://www.fakr.noaa.gov/2010/car110_goa.pdf). The 2010 GOA Atka mackerel catch through October 23 is 400 t over the 2010 TAC. The 2009 and 2010 data shows that significant catches were taken in area 610 and to some extent from area 620 by rockfish fisheries. This increase in Atka mackerel catches in the Western GOA has been noted since 2007. Under the Rockfish Program, catcher processors who historically would move out of area 610 after the POP fishery closed, are now remaining in the area and targeting northern and pelagic shelf rockfish. This is contributing to greater catches (much of it discarded) of Atka mackerel.

Since the 2009 assessment, ages from the 2009 GOA survey have become available. A total of 328 otoliths were collected from 66 hauls throughout the Western and Central Gulf. The data continue to show the strong 1999 to 2001 year classes in the age distribution (Figure 1). An unusual observation was the relatively large proportion of 4-year olds of the 2005 year class. This is in contrast to the Aleutian Islands which have shown above average numbers from the 2006 year class in the fishery and survey.

There is no new information incorporated into the projection. For the 2011 (and 2012) fishery, we recommend an ABC of 4,700 t. This ABC is equivalent to last year's ABC for 2010 (and 2011). The corresponding reference values for Atka mackerel are summarized below. Because Atka mackerel are managed in Tier 6, information is very limited.

Quantity/Status	Last year		This year	
	2010	2011	2011	2012
<i>M</i> (natural mortality)	0.3	0.3	0.3	0.3
Specified/recommended Tier	6	6	6	6
Specified/recommended OFL (t)	6,200	6,200	6,200	6,200
Specified/recommended ABC (t)	4,700	4,700	4,700	4,700
Is the stock being subjected to overfishing?	No	No	No	No
(for Tier 6 stocks, data are not available to determine whether the stock is in an overfished condition)				

16.3 Area apportionment

There is no area apportionment for GOA Atka mackerel. The Council manages GOA Atka mackerel on a Gulfwide basis.

16.4 Research priorities

Regional and seasonal food habits data for Gulf of Alaska Atka mackerel is very limited. Studies to determine the impacts of environmental indicators such as temperature regime on Atka mackerel are needed. Further studies to determine whether there have been any changes in life history parameters over time (e.g. maturity-at-age, fecundity, weight- and length-at-age) would be informative. More information on Atka mackerel habitat preferences would be useful to improve our understanding of Essential Fish Habitat (EFH), and improve our assessment of the impacts to habitat due to fishing. Better habitat mapping of the Gulf of Alaska would provide information for survey stratification and the extent of trawlable and untrawlable habitat, which could help with imprecise survey biomass estimates.

16.5 Summaries for the Plan Team

Species	Year	Biomass	OFL	ABC	TAC	Catch
Atka mackerel (Gulfwide)	2009	Unknown	6,200	4,700	2,000	2,222
	2010	Unknown	6,200	4,700	2,000	2,408 ¹
	2011	Unknown	6,200	4,700		
	2012	Unknown	6,200	4,700		

1/ Current as of October 23, 2010 (http://www.fakr.noaa.gov/2010/car110_goa.pdf).

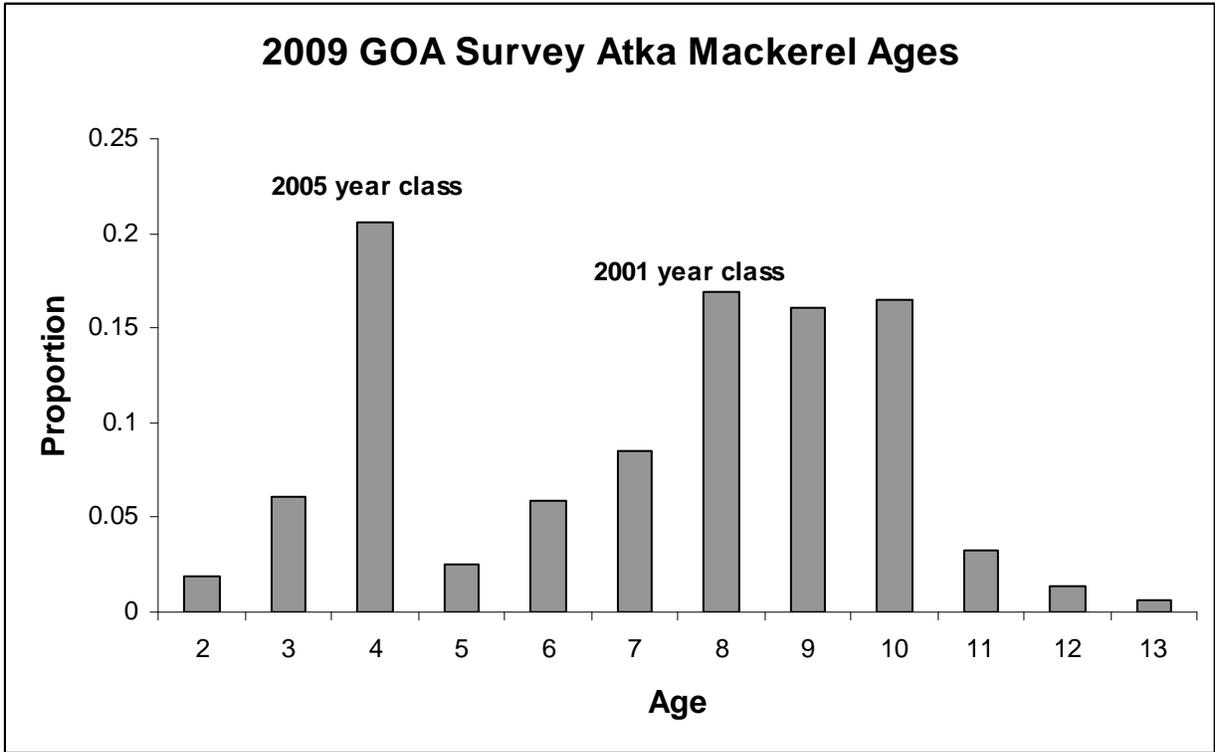


Figure 1. Age frequency distribution of Atka mackerel from the 2009 Gulf of Alaska bottom trawl survey. A total of 328 otoliths were collected and aged.

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