

Chapter 17

Assessment of the Atka mackerel stock in the Gulf of Alaska

EXECUTIVE SUMMARY

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Introduction

Gulf of Alaska (GOA) Atka mackerel has been moved to a biennial stock assessment schedule to coincide with the availability of new survey data from the biennial trawl survey. A full assessment was presented in 2011, which included data from the 2011 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 the lack of reliable estimates of current biomass. In 2007, the assessment presented for consideration Tier 5 calculations of ABC and OFL based on 2007 survey biomass estimates. However the Plan Team and SSC agreed with the authors that reliable estimates of Atka mackerel biomass were not available and recommended continuing management under Tier 6. The 2011 assessment presented Tier 6 recommendations and did not present Tier 5 calculations given the large variances associated with the 2011 survey biomass estimates, which were essentially based on two significant hauls encountered in the western Gulf of Alaska. The Council set the Gulfwide 2012 (and 2013) 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.* 2011, <http://www.afsc.noaa.gov/refm/docs/2011/GOAatka.pdf>).

New information and projection

New catch information includes updated 2011 catch (1,615 t), and 2012 catch (1,187 t) as of November 3, 2012 (http://www.fakr.noaa.gov/2012/car110_goa.pdf). The 2012 GOA Atka mackerel catch through November 3 was 59% of the 2012 TAC; the 2011 GOA Atka mackerel catch was 81% of the TAC.

Since the 2011 assessment, ages from the 2011 GOA fisheries have become available. A total of 93 otoliths were collected from 26 hauls from the Shumagin and Chirikof areas. The data show the strong 2006 and 2007 year classes observed in the Aleutian Islands (Figure 17.1). The 1999 and 2001 year classes, which were very strong in the Aleutian Islands, are still observed in the GOA age distribution.

There is no new information incorporated into the projection. For the 2013 (and 2014) fishery, we recommend an ABC of 4,700 t. This ABC is equivalent to last year's ABC for 2012. The corresponding reference values for Atka mackerel are summarized below. Because information for Atka mackerel is very limited, they are managed in Tier 6.

Quantity	As estimated or <i>specified last year for:</i>		As estimated or <i>recommended this year for:</i>	
	2012	2013	2013	2014
<i>M</i> (natural mortality)	0.3	0.3	0.3	0.3
Tier	6	6	6	6
OFL (t)	6,200	6,200	6,200	6,200
maxABC (t)	4,700	4,700	4,700	4,700
Specified/recommended ABC (t)	4,700	4,700	4,700	4,700
Status	As determined <i>last year for:</i>		As determined <i>this year for:</i>	
	2010	2011	2011	2012
Overfishing	n/a	n/a	n/a	n/a
(for Tier 6 stocks, data are not available to determine whether the stock is in an overfished condition)				

Area apportionment

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

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 to improve imprecise survey biomass estimates.

Summaries for the Plan Team

Species	Year	Biomass	OFL	ABC	TAC	Catch
Atka mackerel (Gulfwide)	2011	Unknown	6,200	4,700	2,000	1,615
	2012	Unknown	6,200	4,700	2,000	1,186 ¹
	2013	Unknown	6,200	4,700		
	2014	Unknown	6,200	4,700		

1/ Current as of November 3, 2012 (http://www.fakr.noaa.gov/2012/car110_goa.pdf).

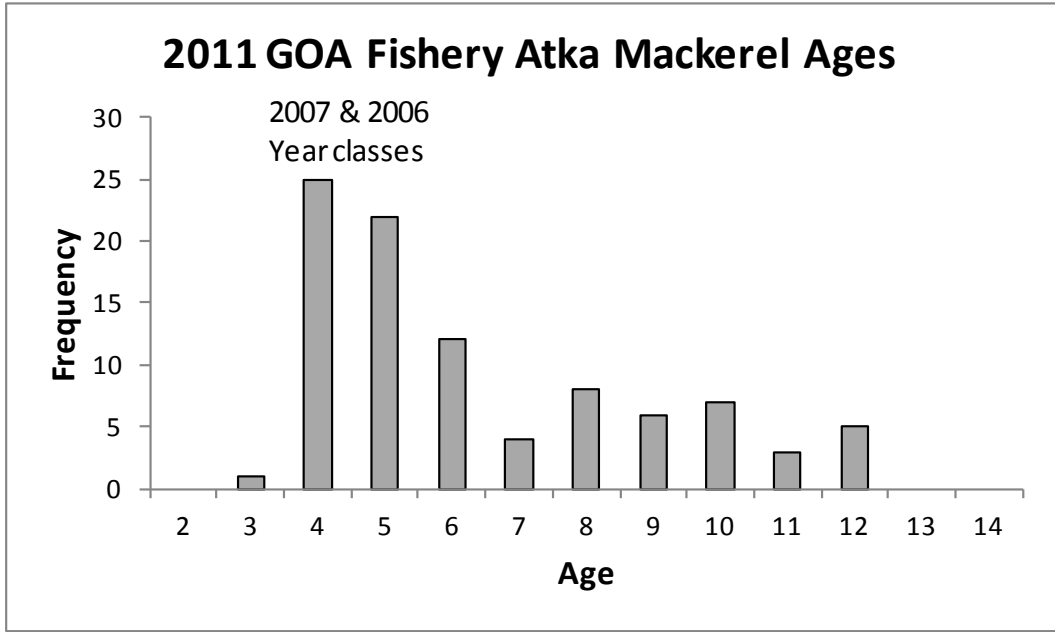


Figure 17.1. Age frequency distribution of Atka mackerel from the 2011 Gulf of Alaska fisheries. A total of 93 otoliths were collected and aged.

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