

A quick look at groundfish species aged at the Alaska Fisheries Science Center

This table supplies a brief history of the ageing of groundfish species at the Alaska Fisheries Science Center. The coefficient of variation provides a very rough indication of the difficulty age readers have in producing precise ages. However, it should be kept in mind that the experience level of the age readers will also have a significance influence on the precision of the ages being generated.

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The history categories themselves provides a combination of our overall experience in ageing a particular species as it relates to volume, corroborative information, and difficulties that have been encountered. The history category does not express the actual difficulty of the different species, but instead provides a crude history summary that can be compared across species.

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Species	History Category	Percent CV	Production species	Occasional species	Corroboration with dominant yr classes	No major ageing problems	Some ageing problems	Current research	AFSC Validation						
									Known Age	OTC	Pb-210/ Ra-226	C14	MIA	Tags	
Alaska plaice	H3	2.91	X		X	X									
Arrowtooth flounder	H5	8.37	X				X								
Atka mackerel	H3	2.72	X		X	X								X	
Bering flounder	H4	1.94		X		X									
Bigmouth sculpin	H6	NA		X			X								
Big skate	H4	NA		X			X								
Dark rockfish	H3	3.48	X			X									
Dover sole	H4	10.64	X			X		X					X		
Dusky rockfish	H3	3.18	X			X									
Flathead sole	H5	7.09	X				X								
Giant grenadier	H6	NA		X			X	X							
Great sculpin	H4	6.78		X			X								
Greenland turbot	H6	6.71		X			X	X							
Harlequin rockfish	H3	4.23		X		X									
Kamchatka flounder	H4	9.23		X											
Longhead dab	H4	NA		X		X									
Longnose skate	H4	NA		X			X								
Northern rock sole	H3	2.94	X		X	X									
Northern rockfish	H3	4.13	X		X	X		X			X	X			
Pacific cod	H5	7.74	X				X								W otolith
Pacific ocean perch	H2	6.37	X		X	X		X			X	X			
Redstripe rockfish	H3	NA		X		X									
Rex sole	H5	8.76	X				X								
Rougheye rockfish	H5	8.11	X			X					X				
Sablefish	H1	10.83	X		X		X	X	X	X	X				X
Sharpchin rockfish	H4	6.51		X		X									
Shortraker rockfish	H6	NA	X				X				X				
Shortspine thornyhead	H6	NA					X	X			X				
Southern rock sole	H3	5.23		X		X									
Walleye pollock	H2	4.40	X		X	X					X				
Warty sculpin	H6	NA		X		X									
Yellowfin sole	H3	2.89	X		X	X		X					X		
Yellow Irish lord	H6	NA		X		X									

History Categories of Aged Species

H1. Species which are production aged with age validation through known age fish or OTC marks. Also ages are corroborated through experience and strong year-classes. No major ageing problems are apparent.

H2. Species which are production aged and corroborated with a weaker validation such as radiometric Pb-210/Ra-226 or C14. Year classes make sense, and no major ageing problems are apparent.

H3. Species which are production aged and are corroborated through experience: marginal increment analysis and/or strong year-classes. No major ageing problems are apparent.

H4. Species for which we have only very limited ageing experience. However, no major ageing problems are apparent from the specimens examined.

H5. Species for which we have substantial experience, but where a significant number of specimens may be very difficult to age. Research however indicates ages are reasonably correct and should provide good statistics on average age and longevity.

H6. Species for which we have had little experience, but will require more research to obtain usable age data. Ageing may require special techniques and ages are only approximate.

Validation Terms

Known age: otoliths from species of known age.

OTC: otoliths from fish tagged with oxytetracycline.

Pb-210/Ra-226: radiometric age validation.

C14: radiocarbon age validation.

MIA: marginal increment analysis.

Tags: recoveries or otoliths from tagged fish.