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Reprinted from the Alaska Fishery Research Bulletin  
Vol. 9 No. 1, Summer 2002

The Alaska Fisheries Research Bulletin can be found on the World Wide Web at URL:  
<http://www.state.ak.us/adfg/geninfo/pubs/afrb/afrbhome.htm>



## New Records of the Slender Codling *Halargyreus johnsonii* Günther, 1862 from the Eastern Bering Sea, Alaska

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**ABSTRACT:** Two specimens of the slender codling *Halargyreus johnsonii* Günther, 1862 were collected from the eastern Bering Sea, the most northerly records from the eastern North Pacific. The two immature specimens were collected in June of 2000 by bottom trawl during the Alaska Fisheries Science Center's groundfish survey of the eastern Bering Sea upper continental slope. These two individuals appear similar to all previously reported specimens from the Pacific and extend the range for the species to Alaska. Also reported herein are 5 previously unreported records of *H. Johnsonii* collected just south of the Gulf of Alaska in the eastern North Pacific.

### INTRODUCTION

The slender codling *Halargyreus johnsonii* Günther, 1862 is the single member of the genus in the family Moridae (Templeman 1968; Cohen et al. 1990). It is nearly worldwide in distribution having been reported from the western North Atlantic (Haedrich and Horn 1970), southeastern Atlantic (Trunov 1992), eastern North Atlantic (Mauchline and Gordon 1984), South

Pacific (Cohen 1973; Paulin 1983), western North Pacific (Kanayama et al. 1978), and eastern North Pacific from central California to British Columbia (Logan et al. 1993). Herein I report the occurrence of the slender codling from the eastern Bering Sea, the furthest northern record for the species in the North Pacific. In addition I report on previously unreported specimens of *H. johnsonii* collected from the eastern North Pacific south of the Gulf of Alaska.<sup>1</sup>

Table 1. Collection data for the 2 eastern Bering Sea *Halargyreus johnsonii* specimens collected in 2000 and the 5 previously collected in 1991 from the eastern North Pacific. Asterisk indicates skeleton and otolith collection only.

Catalog Number	Standard Length (mm)	Capture Depth (mm)	Bottom Temperature (°C)	Collection Date	Capture Area	Location	
						North Latitude	West Longitude
UW040279	230	852	3.1	June 21, 2000	Eastern Bering Sea	54°18.21'	166°43.28'
UW040280	450	998	2.8	June 21, 2000	Eastern Bering Sea	54°16.59'	167°37.49'
NMML0650*	180	730		May 31, 1991	Eastern North Pacific	54°04.95'	155°44.76'
NMML0259*	178	730		May 31, 1991	Eastern North Pacific	55°04.95'	155°44.76'
Uncataloged*	202	730		May 31, 1991	Eastern North Pacific	54°04.95'	155°44.76'
Uncataloged*	194	710		May 31, 1991	Eastern North Pacific	54°34.34'	155°04.32'
Uncataloged*	171	730		June 1, 1991	Eastern North Pacific	52°51.89'	153°56.55'

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**Acknowledgements:** I thank the crew and scientific party of the F/V *Morning Star*, R. Lauth, J. W. Orr, and W. Walker for aid in collecting of the specimens and the associated catch information, and J.W. Orr and unnamed reviewers for their helpful suggestions in improvement of this manuscript. Also thanks go to T. Pietsch and B. Urbain (University of Washington Fish Collection, Seattle, Washington) for museum curation of the specimens.

<sup>1</sup> Author's Note: During June 2002, six additional *H. johnsonii* were collected in the eastern Bering Sea from 4 bottom trawls aboard the F/V *Morning Star*. The specimens were collected at depths from 935–1,096 m between lat 54°N, long 166°W and lat 55°N, long 168°W. The northernmost specimen was collected from lat 55° 34.93'N, long 168°50.90'W in 1,039 m of water.

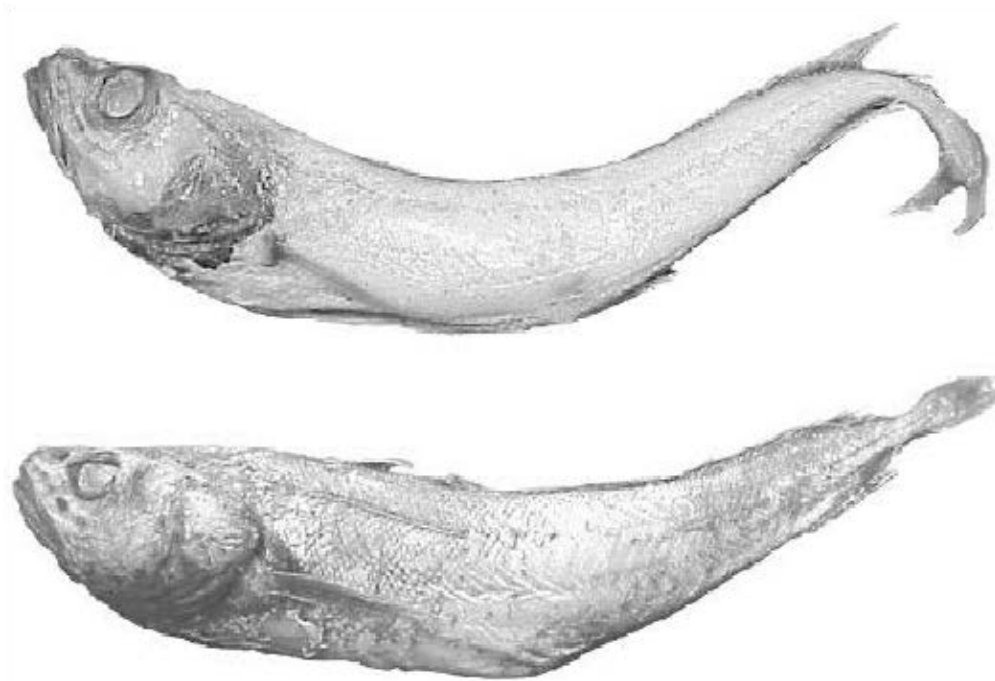


Figure 1. The slender codling *Halargyreus johnsonii* from the eastern Bering Sea collected June 2000. UW 040279, 230 mm SL (top); UW 040280, 450 mm SL (bottom).

## METHODS

Two individuals were collected in June 2000 during the National Marine Fisheries Service Alaska Fisheries Science Center's (AFSC) eastern Bering Sea slope survey using a bottom trawl aboard the F/V *Morning Star* to assess groundfish and invertebrate abundance and distribution (Mark Wilkins, AFSC unpublished data). Both specimens were collected at approximately latitude 54° N, just north of Unalaska Island in the Aleutian Islands. Whole specimens were preserved at sea in 10% formalin and later transferred to 70% ethanol. Measurements were recorded to the 1 mm and compared with previously reported specimens from literature descriptions (Figure 1; Tables 1 and 2). Specimens are housed at the University of Washington Fish Collection, Seattle, Washington. Additional Alaskan specimens were collected from the eastern North Pacific just south of the Gulf of Alaska during May-June of 1991 using midwater trawls deployed by the R/V *Miller Freeman* during research surveys. These 5 specimens were originally collected as study specimens and only the otoliths and skeletons remain. They currently are part of the National Marine Mammal Laboratories otolith and bone reference collections (2 specimens) and uncataloged in a private reference collection (3 specimens) (Table 1).

## DISCUSSION

Both eastern Bering Sea specimens are similar to the general description for the species described by Templeman (1968) and Paulin (1983) and those reported from the central and eastern North Pacific (Logan et al. 1993) and Japan (Kanayama et al. 1978)

Table 2. Morphometric and meristic data from the 2 eastern Bering Sea specimens of *Halargyreus johnsonii* collected in 2000.

Morphometrics and Meristics	University of Washington Catalog Numbers	
	UW040279	UW040280
Dorsal fin rays	7	7
Pectoral fin rays	16	17
Pelvic fin rays	damaged	5
Gill rakers on 1st Arch	7+18	5+21
Head length (mm)	64.6	115.4
Snout length (mm)	15.3	30.4
Pectoral fin length (mm)	39.9	69.8
1st Dorsal fin height (mm)	25.9	39.7
Body depth (mm)	34.2	72.5
Orbit width (mm)	16.7	25.4
Maxillary length (mm)	29.6	57.4
Inter-orbital width (mm)	12.5	29.7
Pre-dorsal length (mm)	67.8	136.1
Body depth at vent (mm)	29.7	60.9

(Table 2). The eastern Bering Sea and eastern North Pacific records reported herein suggest that the single species *H. johnsonii* is widespread in the North Pacific occurring from California (Logan et al. 1993) through Alaska and Japan (Kanayama et al. 1978).

Because *H. johnsonii* is similar in appearance to other gadoid fishes, its' identification might be confused with species such as the Pacific flatnose *Antimora microlepis*, longfin codling *Laemonema longipes*, walleye pollock *Theragra chalcogramma*, Pacific

hake *Merluccius productus*, and Arctic cod *Boreogadus saida*, where all species may overlap in distribution in the eastern Bering Sea. However, *H. johnsonii* is easily distinguished from all similar species because it possesses the combination of a strong projecting lower jaw with rudimentary symphyseal knob, first dorsal fin and pelvic rays that are not greatly elongated, a single caudal fin that is strongly indented mid-length, and a pectoral fin that does not reach the anus (Cohen et al. 1990).

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