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

Gerald R. Hoff

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

Gerald R. Hoff

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.¹

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'

Author: GERALD R. HOFF is a Research Fisheries Biologist with the Resource Assessment and Conservation Engineering Division, Alaska Fisheries Science Center, National Marine Fisheries Service, NOAA, 7600 Sand Point Way N.E., Building #4, Seattle, Washington 98115. Email: jerry.hoff@noaa.gov

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.

¹ 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).

LITERATURE CITED

- Cohen, D. H. 1973. The gadoid fish genus *Halargyreus* (Family Eretmophoridae) in the Southern Hemisphere. *Journal of the Royal Society of New Zealand* 3(4):629–634.
- Cohen, D. M., T. Inada, T. Iwamoto, and N. Scialabba. 1990. FAO species catalogue. Gadiform fishes of the world (order Gadiformes). An annotated and illustrated catalogue of cods, hakes, grenadiers and other gadiform fishes known to date. Food and Agriculture Organization of the United Nations Synopsis 125(10).
- Haedrich, R. L., and M. H. Horn. 1970. The morid fish *Halargyreus johnsonii* from the New York Bight. *Journal of the Fisheries Research Board of Canada* 27(2):391–393.
- Kanayama, T., T. Sasaki, and H. Sasaki. 1978. Discovery of the morid fish *Halargyreus johnsonii* in the Western North Pacific. *Japanese Journal of Ichthyology* 25(1):68–70.
- Logan, J. E., K. L. Day, M. Marks, and O. Assemien. 1993. Occurrence of the codling (*Halargyreus johnsonii*, Moridae) in the eastern North Pacific. *California Fish and Game* 79(1):39–41.
- Mauchline, J., and J. D. M. Gordon. 1984. Feeding and bathymetric distribution of the gadoid and morid fish of the Rockall Trough. *Journal of the Marine Biological Association of the United Kingdom* 64:657–665.
- Paulin, C. D. 1983. A revision of the family Moridae (Pisces: Anacanthini) within the New Zealand region. *Natural Museum of New Zealand Records* 2(9):81–126.
- Templeman, W. 1968. A review of the morid fish genus *Halargyreus* with first records from the western North Atlantic. *Journal of the Fisheries Research Board of Canada* 25(5):877–901.
- Trunov, I. A. 1992. Fish of the family Moridae from the southeastern Atlantic (genera *Gadella*, *Halargyreus*, and *Antimora*). *Journal of Ichthyology* 32(4):38–45.

The Alaska Department of Fish and Game administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

If you believe you have been discriminated against in any program, activity, or facility, or if you desire further information please write to ADF&G, P.O. Box 25526, Juneau, AK 99802-5526; U.S. Fish and Wildlife Service, 4040 N. Fairfield Drive, Suite 300, Arlington, VA 22203 or O.E.O., U.S. Department of the Interior, Washington DC 20240.

For information on alternative formats for this and other department publications, please contact the department ADA Coordinator at (voice) 907-465-4120, (TDD) 907-465-3646, or (FAX) 907-465-2440.

