CM 1998/O:3 Theme Session (O) on Deep-Water Fish and Fisheries

Cephalopod species captured by deepwater exploratory fishing off New England.

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ABSTRACT.—Difficult economic conditions for New England's commercial fishing fleet have lead to a search for new resources. Federal resources have been used to subsidize exploratory trawling beyond the edge of the continental shelf by refitted New England fishing vessels. Potential targets include deepwater species of fishes, decapod crustaceans, and cephalopods. The first eight cruises of the F/V CONTENDER captured 19 species of cephalopods in 13 families, including 4 octopods, 12 oegopsid squids, 1 myopsid squid, and 2 sepiolids. One additional species of oegopsid squid was collected by jigging from F/V PERSERVERENCE.

Keywords: cephalopod, squid, octopod, exploratory trawling, deep-water fishing, continental slope.

Introduction

To determine the feasibility of commercial fishing in deep water off New England (northeast USA), a series of trawling cruises by F/V CONTENDER was supported with funds from the Saltonstall/Kennedy (S-K) grant program. Cephalopods were among the potential resources of interest. The S-K program also supported experimental jigging for squid by F/V PERSERVERENCE. We report here on the cephalopod species captured during this work.

Materials and Methods

Representative cephalopod specimens were retained from the trawl samples collected during the eight CONTENDER cruises. Additional specimens resulted from use of squid-jigging machines on two PERSERVERENCE cruises. The specimens were frozen aboard ship and then transported to the Northeast Fisheries Science Center. There, they were thawed, fixed in formalin, and then sent to the National Museum of Natural History for identification.

Results

The following species were identified from specimens collected during the trawling:

Octopoda Incirrata

Octopodidae

Bathypolypus arcticus

Graneledone verrucosa

Alloposidae

Alloposus mollis (=Haliphron atlanticus)

Octopoda Cirrata

Stauroteuthididae

Stauroteuthis syrtensis of the state of the

Decapoda Oegopsida

Enoploteuthididae

Abralia veranvi

Gonatidae .

Gonatus fabricii

Histioteuthididae aid a crack consultation in a great teat and as a consultation of the consultation of th

Histioteuthis bonellii

Histioteuthis (eltaninae?)

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Histioteuthis. sp. by the first out of the control of the factor of the control o

Ommastrephidae in costalium of the factorium of the analysis and the costalium of the costa

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Ornithoteuthis antillarum

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Mastigoteuthis magna

Octopoteuthididae

Octopoteuthis megaptera and applied to the second s

Pholidoteuthididae

Pholidoteuthis adami

Cranchiidae

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Decapoda Sepioidea and modela and an analysis of the control of th

Sepiolidae

Rossia megaptera

Stoloteuthis leucoptera and a grant for the second of the

An additional species of ommastephid squid, Ommastrephes bartramii, was caught by jigging.

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Ommastrephes bartramii is the only species with real potential for future expanded exploitation. It is commercially fished in the North Pacific, and the specimens caught by jigging were large and suitable for market. Of the species collected by trawling, those with the greatest commercial potential (I. illecebrosus and L. pealeii) already are exploited. Gonatus fabricii is an Arctic/Boreal species which could have commercial potential if sufficient concentrations could be located. Histioteuthis bonellii is a large squid that was encountered fairly commonly, but its tissues are ammoniacal and thus not suitable for human consumption. Another large squid, P. adami, is uncommon and its flesh lacks firmness. Other squid species are very small (e.g., A. veranyi and the sepiolids), or ammoniacal. The octopod G. verrucosa is large and muscular and has been reported in Canadian fish markets. It is the only octopod collected that has some commercial potential.