

# **RS and GIS based analysis of *Ommastrephes bartrami* resources in the North Pacific Ocean : A case study for 2001**

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The *Ommastrephes bartrami* is the second important fish in the North Pacific Ocean, which is the main catch of China because of its large amount and important value in economy. With the development of RS, GIS and GPS, more convenient and exact data can be gained to pioneer a new field of ocean fishery research. The article first summarizes some researches and their results of the *Ommastrephes bartrami* resources in the Pacific Ocean by Chinese scholars, then researches the catch of *Ommastrephes bartrami* from 1995 to 2001 using SST and chlorophyll-a data derived from remote sensing images and statistical production data collected from fishery companies in this area and specially analyzes the causes of severe reduce in harvest in 2001. In order to illustrate the reasons, the environment structure, the Dorsal mantle length compositions of *Ommastrephes bartrami* and the stomach contents of some harvested *Ommastrephes bartrami* have been analyzed. The wandering of Kuroshio in south of Japan, the puniness of Kuroshio and the cooler of water in the northern part of the ocean are the disadvantageous facts in hydrologic structure. The reduction in abundance of *Ommastrephes bartrami* in the western part of the ocean was the important reason for declining of the catch in the area. The poor food abundance happened to be another unfavorable factor. But in the eastern part of the ocean, what worked most on the failure of production was the poor acknowledgment with the schools, which caused an earlier withdrawing of fishing vessels from the waters when there were some difficulties in searching of fishable schools.

**Key words:** *Ommastrephes bartrami*; SST; chlorophyll-a; the North Pacific Ocean; RS; GIS