SCRS/1993/049

Col.Vol.Sci.Pap. ICCAT, 42 (1) : 146-149 (1994)

DESCRIPTION OF THE JAPANESE LONGLINE FISHERY OPERATING IN THE CENTRAL NORTH ATLANTIC

Miyabe, N., K. Hiramatsu

National Research Institute of Far Seas Fisheries,
5 chome, 7-1 Orido, Shimizu-shi, Shizuoka 424, Japan

SUMMARY

Japanese longliners newly started fishing in the central north Atlantic (40-50°N, 35-50°W) since 1989. Their target species are bluefin and bigeye tunas. This fishing takes place during the northern winter between October and February. A brief description of this fishing activity is given here.

RESUME

Les palangriers japonais pêchent récemment peu dans l'Atlantique central nord (40°-50°N, 35°-50°W), depuis 1989. Les espèces visées sont le thon rouge et le thon obèse. Cette pêche se déroule pendant l'hiver boréal, d'octobre à février. Le présent document fournit une brève description de cette activité de pêche.

RESUMEN

Los palangreros japoneses iniciaron la pesca en el Atlántico norte (40-50°N, 35-50°W) en el año 1989. Sus especies objetivo son el atún rojo y el patudo. Esta pesca tiene lugar durante el invierno boreal, entre los meses de octubre y febrero. El documento presenta una breve descripción de esta actividad pesquera.

INTRODUCTION

The separation of bluefin catch to west or east stock seems to be easy for most fisheries which operate in nearshore waters. However, it appears difficult in the case of the Japanese high seas longline fishery in the North Atlantic, as that fishery started catching bluefin at around the line (45°W) which separates two stocks. In 1990, the total catch in this area exceeded 500 MT for the first time. Since it is not known the existence of the geographical boundary, the bluefin assessment may have been largely affected depending on the assignment of the catch to one of two stocks.

This note was prepared in order to provide materials on above-mentioned fishery to facilitate the discussion in the bluefin working group.

DESCRIPTION OF THE FISHERY

The first exploratory operations were undertaken in the area of 47°N - 54°N, 40°W - 46°W by Daito Enyo Gyogyo Co. Ltd. in 1982 and 1983. Since then, fishing had been very sporadic. Fig. 1 shows annual catch in the area between 35°W and 45°W, north of 35°N (referred as central North Atlantic). In 1989 it recorded about 100 MT. It exceeded 600 MT in the next year and continued to increase to slightly less than 1400 MT in 1991. The preliminary catch in 1992 is about 1050 MT.

The monthly catch (in number of fish) distribution in 1991 (Fig. 2) provides seasonal change of fishing location. Fishing starts in October between 45°N and 50°N, and extends north and southward during November and December. It seems apparently that these two months are the high season. The fishing ground remains similar in January but catch starts shrinking. In February and March the catch continues to decrease and there are almost no catch in the area north of 45°N. Some catches were observed in the east of central area (30°N-40°N, 20°W-35°W). Since then there are no fishing in the central and western (west of 45°W) North Atlantic until the next fishing season.

The length frequency distributions of bluefin were shown monthly for the central and western North Atlantic in Fig. 3. The size range encountered is 120 cm to 260 cm in fork length. The majority falls between 150 cm and 220cm. In general, they were similar between two areas, although it appears that there are slightly more fish of larger size for the central area. The size of fish tends to become smaller as the season progresses.

Fig. 4 shows nominal CPUE by quarter and three areas (western, central and eastern (east of 35°W, north of 30°N) Atlantic). Before 1989 CPUE of central Atlantic was lower than those of other areas. Since 1989 they have been at the same level. In the western Atlantic, CPUE was always higher in the first quarter than the fourth quarter except 1985. This fluctuation is also found in the central Atlantic.

Species composition in terms of number of fish in the longline catch were also compared among three areas in Fig. 5. Relative share of bluefin was the smallest in the western Atlantic followed by central and eastern Atlantic in this order. Bluefin catch exceeded more than 50 % of the total catch in the high fishing season in the east Atlantic. In contrast albacore and yellowfin shares are larger in the western and central Atlantic.

In summary, the characteristic of fishery in the central Atlantic has more similarity with western Atlantic.above.

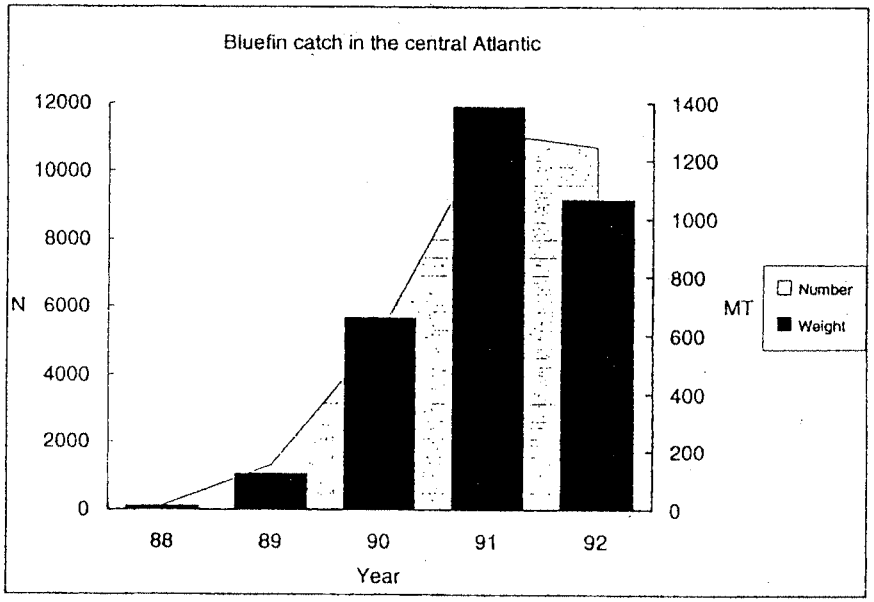
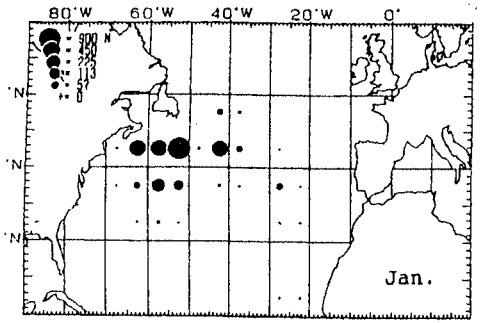
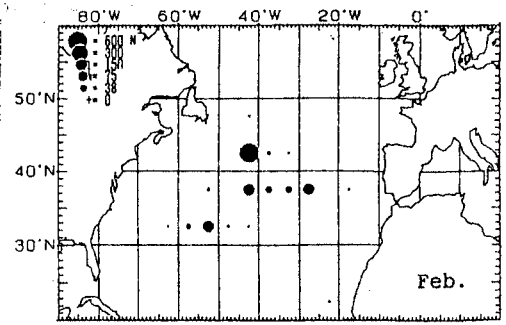
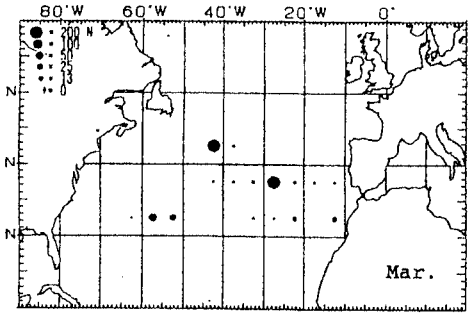
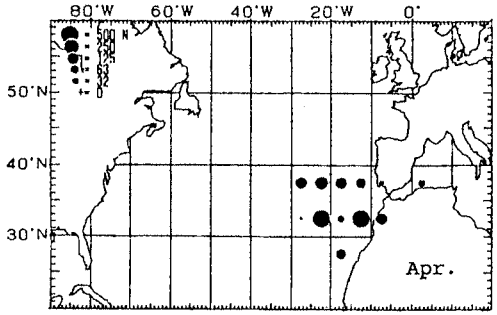


Figure 1. Annual catch of bluefin tuna in the central North Atlantic (30°N-55°N, 35°W-45°W) caught by the Japanese longline fishery.









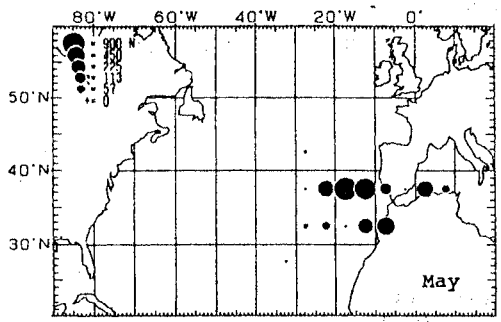
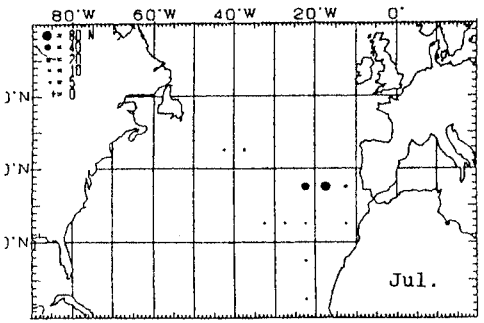
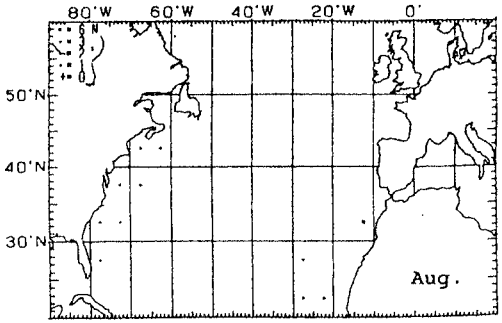
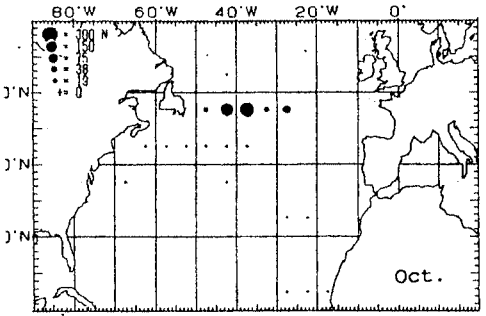
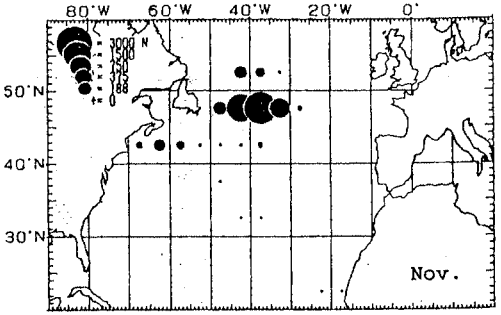


Figure 2. Monthly distribution of bluefin catch (in number) in 1991 from the Japanese longline fishery in the North Atlantic. Plus sign indicates fishing with no catch.









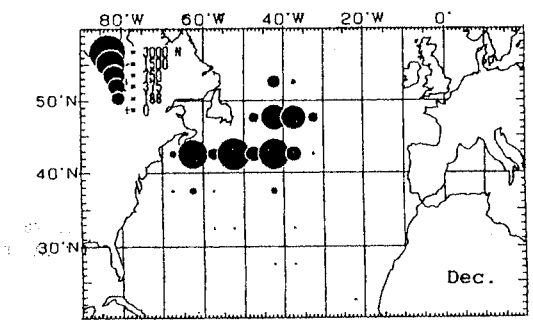


Figure 2. Continued.

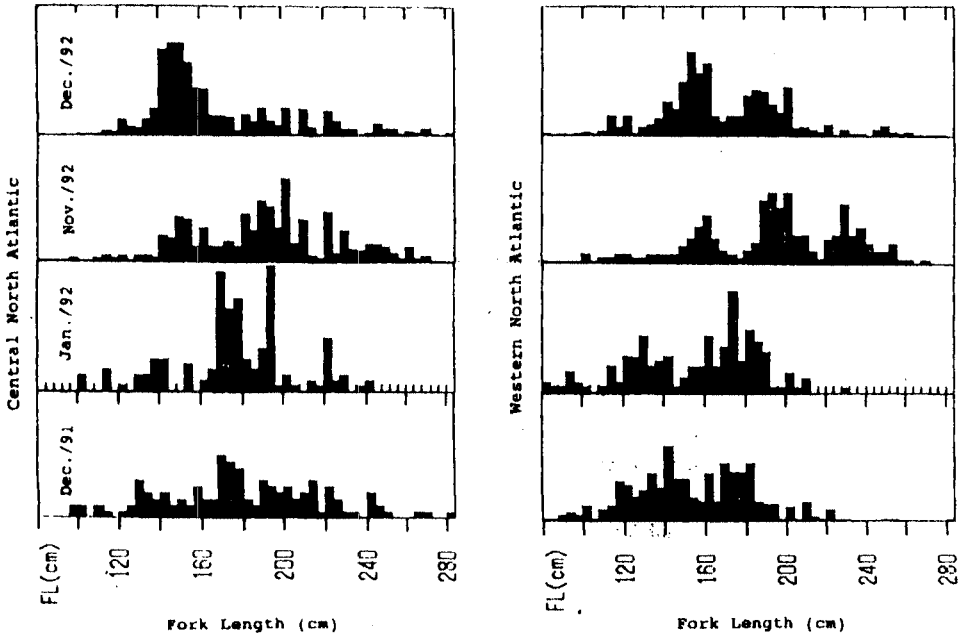


Figure 3. Length frequency distributions of bluefin caught in central and western North Atlantic.

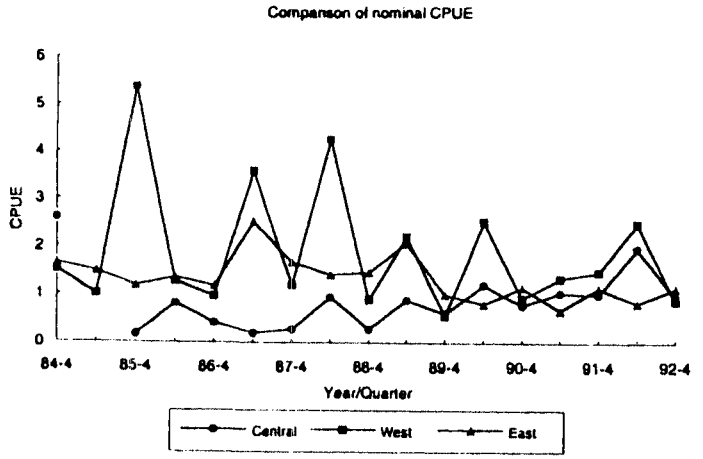


Figure 4. Comparison of nominal Japanese longline CPUE (per 1000 hooks) in three areas (western, central and eastern North Atlantic). CPUEs shown are the first and forth quarters for the western and central, the first and second quarters for the eastern Atlantic, respectively.

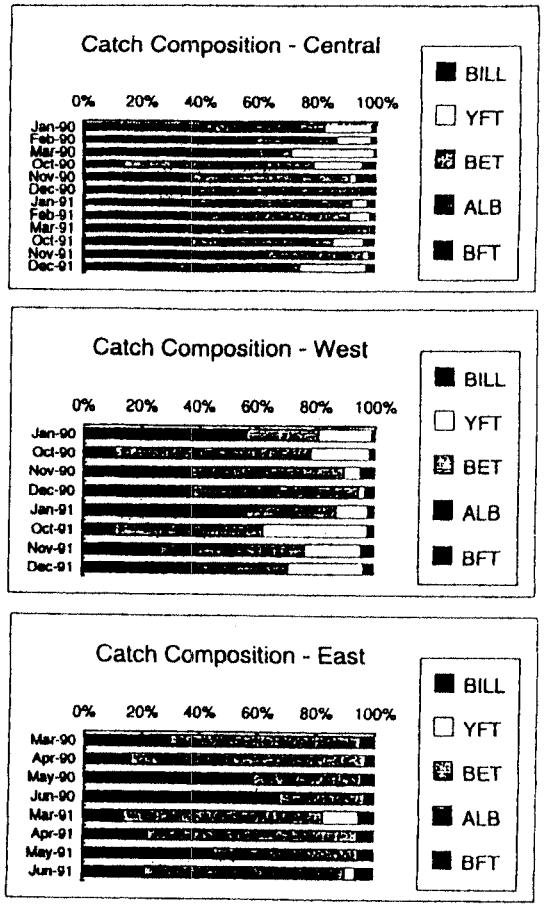


Figure 5. Monthly catch composition of bluefin in terms of number of fish for three areas in the North Atlantic during 1990-1991.