
NOTE

Long-distance Migration of a Short-finned Squid, *Illex illecebrosus*

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Abstract

The recovery off the coast of Maryland in December 1979 of a short-finned squid tagged at Twillingate, Newfoundland, in early September 1979 represents the greatest distance travelled and longest time of tag retention recorded for *Illex illecebrosus* to date. This migrant travelled at least 1,260 miles in 107 days. The significance of this tag recovery with respect to stock identity and offshore migration in autumn is noted.

Introduction

In the Northwest Atlantic, short-finned squid range from central Florida to southern Labrador. Young squid are found in February–March in the vicinity of the northern boundary of the Gulf Stream (Fedulov and Froerman, MS 1980; Amaratunga *et al.*, MS 1980; Dawe *et al.*, MS 1981). They occupy the continental shelf in May–June and support substantial fisheries during summer and autumn. The major offshore fisheries are prosecuted on the Scotian Shelf and off the northeastern coast of the United States, but in the Newfoundland area the greatest proportion of catches occurs in coastal waters. In November–December, the squid leave the inshore areas and the continental shelf presumably to spawn and die. Longevity for this species is believed to be approximately 1 year (Hurley and Beck, 1979). Stock relationships are presently unknown, but it is hypothesized that the populations off eastern Canada and United States are components of a single stock (Tibbetts-Lange, MS 1979).

Results and Discussion

The long-distance migration of a tagged short-finned squid, reported in this paper (Fig. 1), resulted from a squid-tagging program conducted by scientists of the Research and Resource Services of the Canadian Department of Fisheries and Oceans in Newfoundland. A total of 13,490 short-finned squid were tagged during July–September 1979 at various localities around insular Newfoundland (Hurley and Dawe,

MS 1980). The squid were captured with Japanese-type mechanical jiggers and tagged immediately. An anchor tag bearing a code number and a return address was applied to the dorsal region of the collar of each squid. Other particulars of tagging methodology are described by Hurley and Dawe (MS 1980).

Approximately 200 short-finned squid were tagged at Twillingate, Notre Dame Bay (NAFO Division 3K), on 6 September 1979, and one of this group was recovered on 22 December 1979 at 38° 14'N, 73° 41'W, approximately 65 miles off the coast of Maryland (NAFO Div. 6B). It was recaptured by bottom trawl operated by the Japanese stern trawler *Banshu Maru* No. 7 at a depth of 150 m. This recovery represents the longest distance on record travelled by a tagged squid, a minimum distance of 1,260 miles, and the longest time of tag retention, 107 days. The minimum rate of travel for this squid was approximately 12 miles per day, a rate exceeded by only one previously reported long-distance migration (Hurley and Dawe, MS 1980). That migration was for a squid which travelled 225 miles from Fortune Bay, Newfoundland, to Cape Egmont, Nova Scotia, in 32 days. The maximum time of tag retention previously recorded for a short-finned squid was 62 days (Hurley and Dawe, MS 1980).

The southward migration of this squid is consistent with the hypothesis that short-finned squid migrate from Newfoundland inshore waters in late autumn to spawn presumably in January–February over oceanic depths in or near the warm Gulf Stream water. The migration of a squid over the greater part of the range

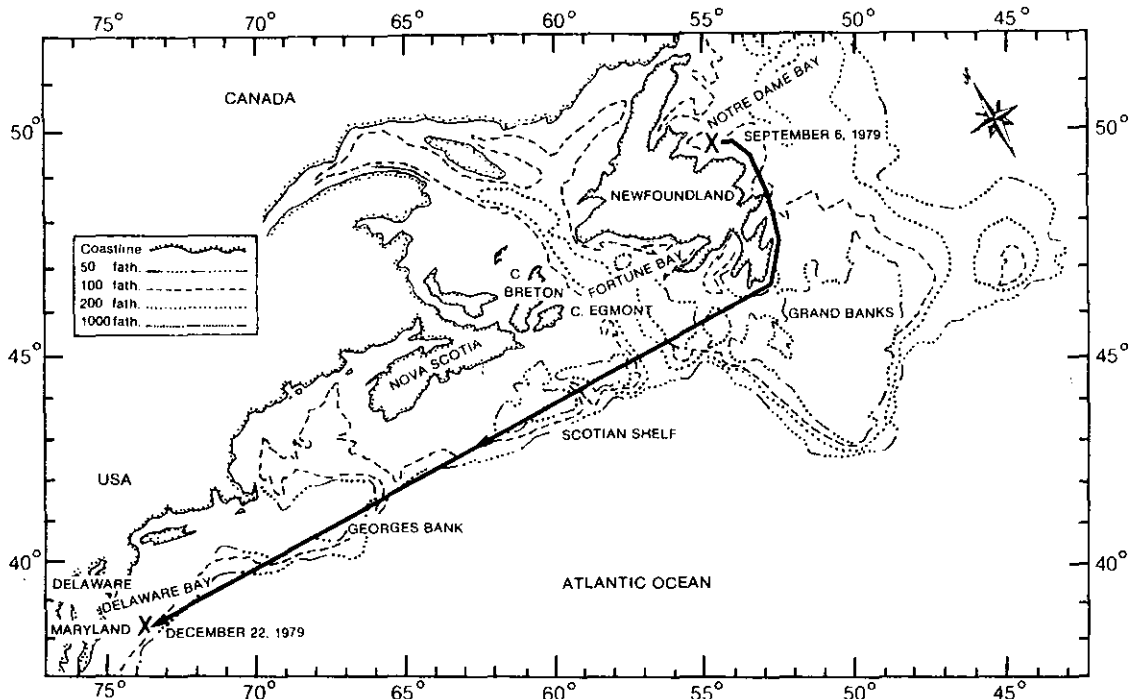


Fig. 1. The shortest possible migration route of the short-finned squid from tagging to recapture sites.

of the species supports the hypothesis of a single stock of *I. illecebrosus* in the Northwest Atlantic.

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