Tag and release of the pelagic shark species in the SBT fishery

Hiroaki Matsunaga and Hideki Nakano
National Research Institute of Far Seas Fisheries, FRA, JAPAN

【Abstract】

In the RTMP and EFP observer program, 2065 sharks of 6 species were released with tags by the research vessels and scientific observers in about 6 years from 1998 until now. Blue shark was dominant occupying more than 80% and porbeagle (19%) followed it. Seven tags, 6 blue sharks and 1 porbeagle, were returned. Ratio of recapture was 0.34 %. The longest time at liberty is 1105 days and the longest migration is 3400 km, both of them were blue sharks. Number of the recaptured sharks is not enough to make clear the migration pattern and the population structure. So it is necessary to increase the number of tagged sharks.

サメ類の標識放流は 1998 年に開始され、2003 年迄の 6 年間に、6 種の合計 2065 個体が調査船や科学オブザーバーによって放流された。種組成は、ヨシキリザメが 1658 個体（80%）と最も多く、ニシネズミザメが 388 個体（19%）で続いており、これら 2 種で殆どを占めている。再捕はヨシキリザメ 6 個体、ニシネズミザメ 1 個体の計 7 個体で、再捕率は 0.34%と非常に低かった。再捕までの日数は 1105 日が最長で、移動距離はヨシキリザメの 3400km が最も長かった。しかし、未だに放流尾数も再捕尾数も少ないので、不明な点が多く残っている。今後は、これらを増やす事が必要である。

【Introduction】

A lot of pelagic sharks were caught by the tuna longline fishing boats in the SBT fishery. In the RTMP and EFP observer program which started from 1992, many data have been collected and analyzed. Consequently basic information about the biology and ecology of these sharks such as growth, distribution and stock status, has been accumulated. Therefore, there is little of knowledge as to the migration and the population structure. So we conducted the tag and release of the main pelagic shark species in order to accumulate these information.

【Materials and Methods】

Tag and releases of sharks were conducted by the research vessels and scientific observers. We used the reliable stainless dart tags made in USA. Usually, sharks were lifted on boards, measured, tagged near the dorsal fins and then released.

We distributed posters to fishing markets, fishing boats and related organizations to ask reporting of recapture of tagged sharks. There are two types of posters. One type was made in the CCSBT which include not only sharks but also bony fishes. The other type was for sharks only. The latter was written in both English and Japanese on the water-resistant A4 size paper. It is striking because of the yellow background and black illustrations. It is also introduced in the home page of our institute. Reports of the recapture were sent from the research vessels, scientific observers and fishing boats. We sent caps as rewards to the persons who sent the recapture reports. Color of the cap is green or deep blue, and logo mark is attached on the front side.

【Results and Discussion】

Tag and release of sharks was started in 1998 and 2065 sharks of 6 species were released with tags in about 6 years until now (Fig.2). Blue shark was dominant occupying more than 80% (1658 individuals), and porbeagle (19%, 388 individuals) followed it (Fig.3). These two species occupied most of the tagged sharks, which is considered to show the species composition of sharks caught by the tuna longline fishery (Matsunaga & Matsushita 2001).

Seven tags, 6 blue sharks and 1 porbeagle, were returned. Ratio of recapture was 0.34 % showing much lower value than the result in the North Pacific (1%, Matsunaga 2001). The longest time at liberty is 1105, followed by 743 and 323 days, all of which were blue sharks. The longest migration is 3400 km of blue shark moving from south to north. Next is 1900 km of blue shark from east to west. The migration patterns are much different between the two examples (Fig. 4).

Number of the recaptured sharks is not enough to make clear the migration pattern and the population structure. So it is necessary to increase the number of tagged sharks.

【References】

Matsunaga H. and Y. Matsushita (2001): Distribution of teleosts and elasmobranchs dominated in the SBT fishery. CCSBT-ERS submitted report, 10p.

Matsunaga H. (2001): Tag and release of pelagic sharks in Japan. Enyo 108, 9-12.

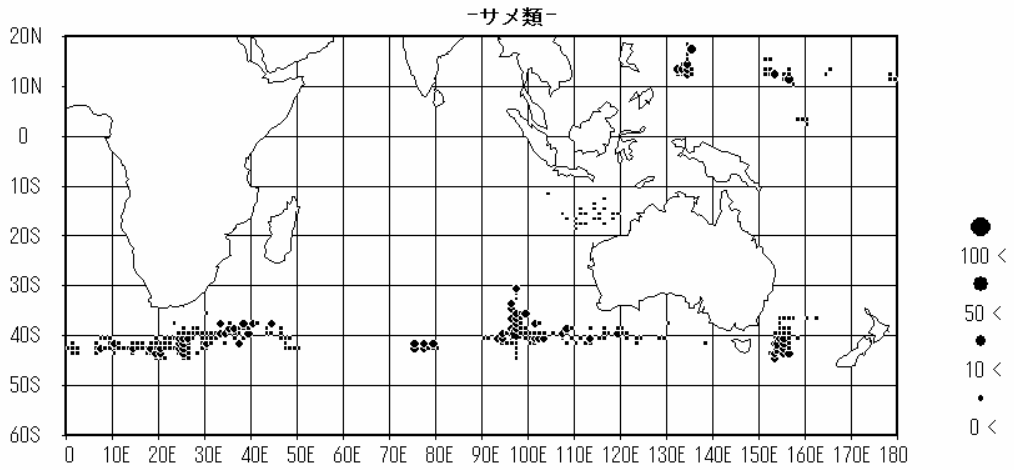

Fig.1 Tagging locations of pelagic sharks.

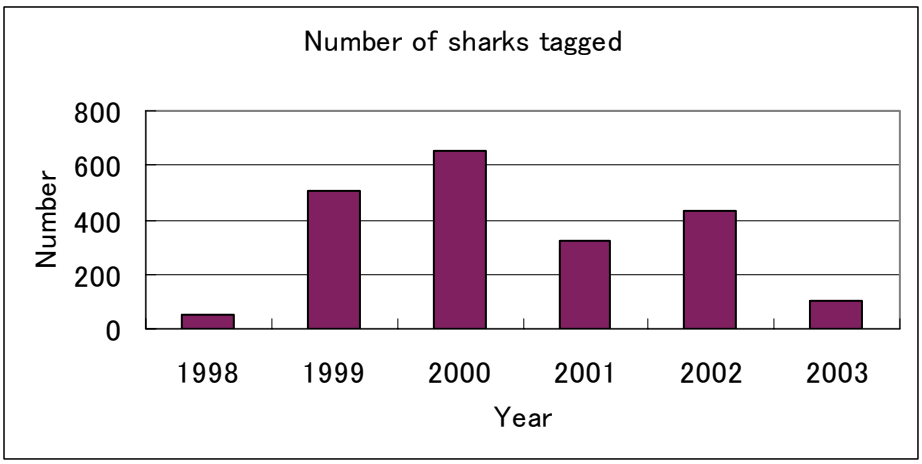

Fig.2 Number of sharks tagged and released.

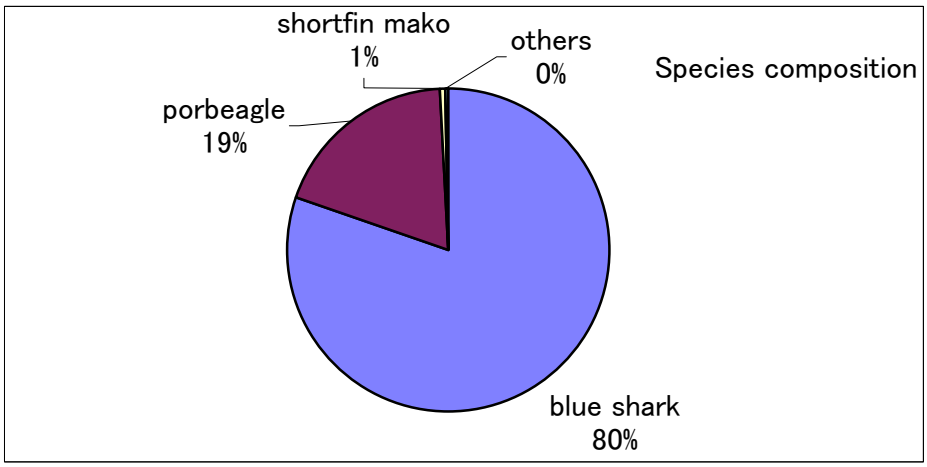

Fig.3 Species composition of sharks tagged and released.

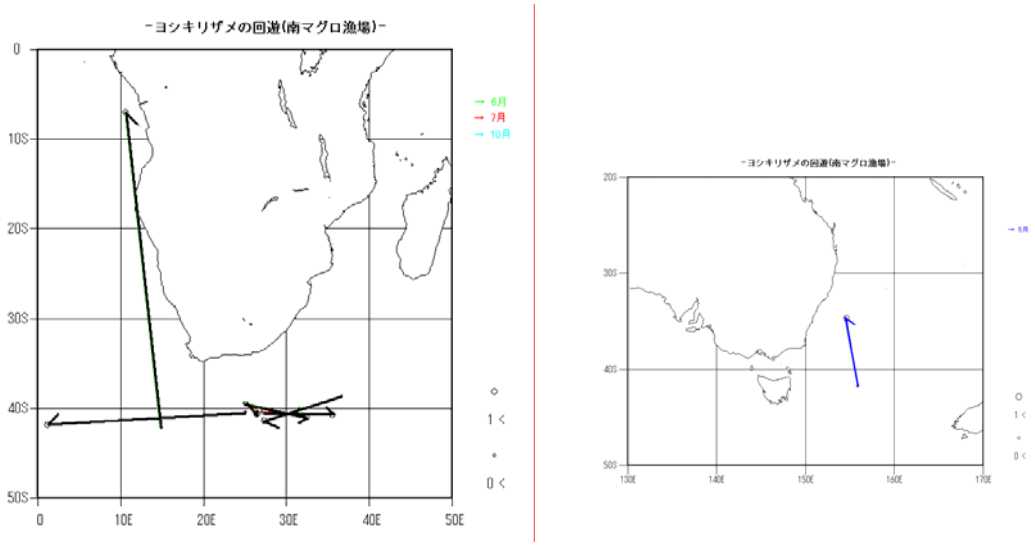

Fig.4-1　Migration of blue sharks.

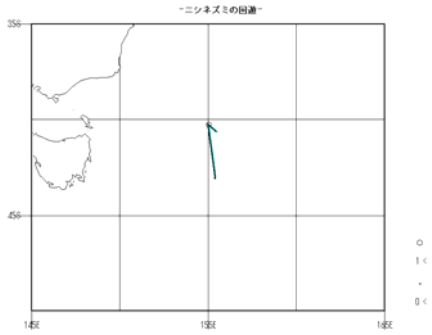

Fig.4-2　Migration of porbeagle.