

Chapter 3-11

Fisheries

Abstract

Since ancient times, various methods of fishing have been developed in Lake Biwa. The total fish catch, however, has been declining since peaking in 1955. There are various causes behind this, such as the devastation of spawning and nursery grounds and feed damage by invasive species and great cormorants.

Keywords: Lake Biwa, Fishery, Fish catching

1. Major methods of Fishing

Various methods of fishing including Eri-trap (small type set nets) and Yana-trap (a weir) fishing, or boat fishing like Sashi-ami (a gill net) and Sokobiki-ami (a trawl) have been developed in Lake Biwa.

1.1 Eri-trap and Yana-trap Fishing

“Eri” is a traditional fish-trapping method that employs large nets that are extended into the lake from the lakeshore, forming an arrow shape. Fish swim along the nets and finally end up in the trap called “tsubo.” The Yana-trap is placed at the lower reaches, forming a fan to catch the fish that are swimming into the upper reaches. Both methods are used mainly for ayu (sweet fish, *Plecoglossus altivelis altivelis*).

1.2 Sashi-ami

“Sashi-ami” is a net like trap resembling a curtain in the water and is used to catch mainly nigorobuna (round crucian carp, *Carassius auratus grandoculis*), Biwa-masu (Biwa salmon, *Oncorhynchus masou subsp.*) and ayu.

2. Fish and Shellfish in Lake Biwa

In Lake Biwa, many different kinds of fish and shellfish are caught. For example, endemic species like nigorobuna, honmoroko (willow minnow, *Gnathopogon caerulescens*), Biwa-masu and clams such as Seta-shijimi (Seta clam, *Corbicula sandai*) and various other species like ayu (sweetfish) and shrimps such as sujiebi (*Palaemon paucidens*).

3. Fish Caught in Lake Biwa

The total catch of fish was about 10,000 tons per year in 1955, but has been falling year by year, decreasing to 1,272 tons in 2011. In particular, shellfish like Seta-shijimi and types of fish like nigorobuna and honmoroko have dramatically decreased. The total amount of the production was about 5 billion yen in the 1980s, but has recently dropped to around 1.2 billion yen.

3.1 Ayu (Sweetfish)

The catch of ayu is the largest in the fisheries of Lake Biwa.

Ayu are used as food. In addition, because of their beautiful appearance and the fact that they are frequently caught using the “tomozuri” method of fishing, they are shipped live to destinations nationwide under the name “Biwa ayu” for purposes such as breeding and stocking rivers.

3.2 Nigorobuna (Round Crucian Carp)

Nigorobuna is well-known as an ingredient of the traditional fermented product called “funazushi.” The catch of nigorobuna, however, has decreased since around in 1985, when there was an increase in an invasive species called the Largemouth bass.

3.3 Biwa-masu (Biwa Salmon)

With Lake Biwa as its ocean, biwa-masu has the same life cycle as salmon. Recently, culture of biwa-masu has become popular.

4. Approaches for Increasing the Fish Catch

Various approaches have been implemented, such as releasing fry and young shells, planting reeds to provide spawning and nursery grounds for fish and remov-

ing waterweed and invasive species. Some fishermen have also been trying to avoid catching small fish and shells to conserve fishery resources.

(Fisheries Management Division, Shiga Prefectural Government)t

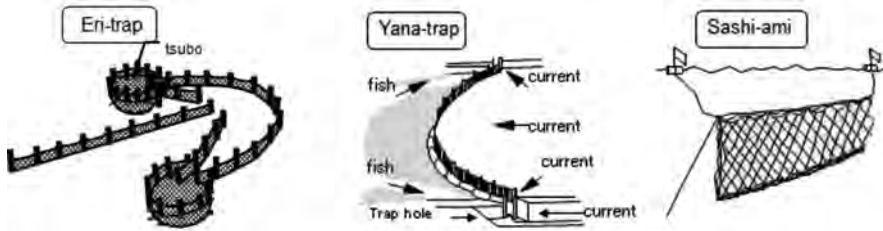


Fig. 3-11-1 Major methods of fishing in Shiga Prefecture

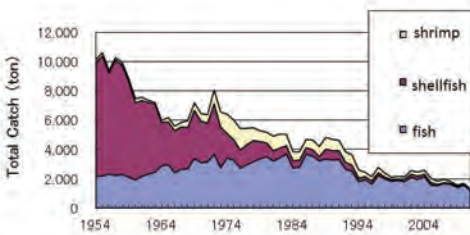


Fig. 3-11-2 Changes in the total catch of Lake Biwa's fisheries(Reference: Annual Report of agriculture, forestry and fishery statistics in Shiga Prefecture and the Kinki region)

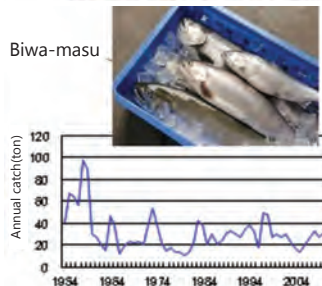
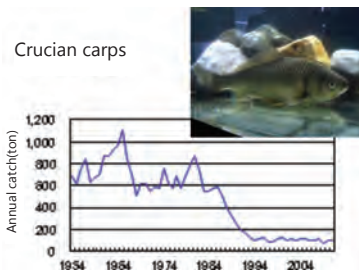
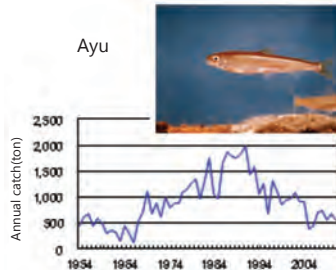


Fig. 3-11-3 Changes in the annual catch of ayu, crucian carp and biwa-masu (Reference: Annual Report of agriculture, forestry and fishery statistics in Shiga Prefecture and the Kinki region)

Tomozuri: Tomozuri is a method of fishing which uses live ayu to catch other ayu. A decoy ayu is placed on a hook and other ayu are caught when they attack what they consider to be an intruder in their territory.