

A Pregnant Smooth Hammerhead *Sphyrna zygaena*, Collected in the Western Coastal Water, Korea

By Youn Choi

Department of Marine Biotechnology, Kunsan National University, Gunsan 54150, Republic of Korea

ABSTRACT A smooth hammerhead, *Sphyrna zygaena*, was caught from the coastal water of Boryeong-si, Chungcheongnam-do, Korea in June 13, 2014. The shark had a total of 23 fetuses in its body. There were 12 males and 11 females. The total length of the young sharks ranges from 49.0 cm to 54.7 cm. This collection suggested that western coastal water of Korea is a birth ground of smooth hammerhead, *Sphyrna zygaena*.

Key words: Fetuses, birth ground, *Sphyrna zygaena*

INTRODUCTION

Smooth hammerhead sharks *Sphyrna zygaena* are widespread in both Hemispheres in temperate, subtropical and tropical seas including the Korean coastal water (Nakabo, 2002; Kim *et al.*, 2005). This shark is distributed over the continental and insular shelves from the surface up to 200 m, usually 20 m in depth. The sharks are viviparous with a yolk-sac placenta, producing 20 to 50 young sharks, after a gestation of 10 to 11 months. The adult attained up to 400 cm in total length, and matured at about 210 to 240 cm, adult males to at least 256 cm, adult females at least 304 cm. The size at birth ranges from 50 to 61 cm (Compagno, 1984; Last and Stevens, 1994). They were caught with pelagic longlines, handlines, and bottom trawls.

MATERIALS AND METHODS

A smooth hammerhead shark was caught in the coastal water from Boryeong-si, Chungcheongnam-do by a stow net in June 13, 2014, and the shark was pregnant. The total length was measured. We dissect the shark and determined the sex and measured the fetuses.

RESULTS AND DISCUSSION

The smooth hammerhead sharks are distributed in overall Korean coasts and young hammerhead sharks are frequently caught by other fishing gears (Choi *et al.*, 2000). However, there are only records for distribution of hammerhead sharks and there isn't any report on the birth of hammerhead sharks in Korea (Choi, 1998). This study dissected a pregnant hammerhead shark caught in the west coast and checked the number of fetuses to present the total length and sex ratio. The hammerhead sharks are generally known to give a birth to 29~37 fetuses (Compagno, 1984). The smooth hammerhead shark used in this study is measured 290 cm in total length and had a total of 23 fetuses in the body (Fig. 1). The fetuses were 12 males and 11 females. The total length ranges from 49.0 to 54.7 cm (mean 53.1 cm), which is similar to the data of Compagno (1984). The size at birth of the smooth hammerhead shark is known to be between 50~61 cm, and the fetuses in the adult female sharks body are fully grown to birth.

Smooth hammerhead shark *Sphyrna zygaena* feeds on a variety bony fish, including sea bass, herring, mackerel and small sharks, skates, stingrays, shrimps, crabs, squid and other invertebrates. These feed organisms are abundant in western coastal water of Korea. Based on rich tideland and continental shelf, the west coast, Korea shows high biological productivity and the hammerhead

*Corresponding author: Youn Choi Tel: 82-63-471-8892,
Fax: 82-63-465-3917, E-mail: choi@kunsan.ac.kr



Fig. 1. A smooth hammerhead shark and its fetuses caught from Boryeong-si, Korea collected by a stow net.

Table 1. Total length from by sex of 23 fetuses in an adult hammerhead shark *Sphyrna zygaena*

No.	Total length (cm)	Sex
1	49.9	
2	51.2	
3	52.2	
4	52.4	
5	52.8	
6	53.0	
7	53.2	MALE
8	53.5	
9	53.5	
10	53.7	
11	53.9	
12	54.4	
13	49.0	
14	52.7	
15	52.8	
16	53.2	
17	53.3	
18	53.4	FEMALE
19	53.5	
20	53.6	
21	53.8	
22	54.5	
23	54.7	

sharks' most preferred fish such as *Dasyatis akajei* and *Okamejei kenojei* are found in the west coast. Such environment offers good condition for the delivery of mother shark and the growth of new-born baby sharks (Choi and

Kim, 2001). In the cloaca of the mother hammerhead shark used in this study, a baby shark's tail was partially exposed. It shows that the hammerhead shark was a mother shark giving a birth. These data suggested that the western coastal water of Korea is a birth ground of smooth hammerhead.

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우리나라 서해 연안에서 잡힌 귀상어 임신개체

최 윤

군산대학교 해양생물공학과

요 약 : 2014년 6월 13일에 충청남도 보령시 연안의 안강망에 의해 귀상어 1개체가 포획되었으며, 이 귀상어는 모두 23마리의 새끼를 임신하고 있었다. 성비는 수컷 12마리, 암컷 11마리였고, 새끼 상어의 전장범위는 49.0~54.7 cm였다. 이러한 전장범위는 귀상어의 태어날 때 크기이며, 우리나라 서해 연근해가 귀상어의 출산장인 것으로 판단된다.

찾아보기 낱말 : 안강망, 귀상어, 출산장