

# A New Record of the Family Hoplichthyidae (Pisces : Perciformes) from Korea

Chung – Lyul Lee and Dong – Soo Joo

Department of Biology, College of Natural Sciences, Kunsan National  
University, Kunsan 573 – 701, Korea

A ghost flatheads, *Hoplichthys gilberti* Jordan et Richardson of the family Hoplichthyidae was studied for the first time in Korea. Five specimens were collected from Pusan in March 28, 1995. The *Hoplichthys gilberti* is similar to *H. langsdorfii* in morphological characters, but differs in having 1 rows of spinous processes on scute of both side of body, nearly same size between snout length and eye diameter and 13+3 pectoral fin rays. A new Korean name “Oegasiyangtae” is proposed for the *H. gilberti*.

## Introduction

*Hoplichthys langsdorfii* of family Hoplichthyidae from Korea had reported by Lee(1993). In their morphological characters, it was well known that head and body of the family Hoplichthyidae were elongated and extremely depressed, with many minute spines, no scales on head and body, a row of spiny scutes with sharp process along side of body and three or four lower pectoral rays free from other rays. *H. gilberti*, collected for first time in Pusan of Korea, was well distinguished from *H. langsdorfii* in several characters although fairly resembled in morphological features.

All counts and measurements of the specimens were made according to Matsubara (1979). The specimens of *H. gilberti* were deposited at the Department of Biology, Kunsan National University(BKNU).

## Genus *Hoplichthys* Cuvier et Valenciennes, 1829

*Hoplichthys* Cuvier et Valenciennes, 1829, Hist Nat. Poiss., 4, table of contents (type specimen : *Hoplichthys langsdorfii* Cuvier et Valenciennes) – Lee, 1993, Kor. J. Ichthyol., 7(1), pp. 8 – 11.

## *Hoplichthys gilberti* Jordan et Richardson

(New Korean Name : Oegasiyangtae)

*Hoplichthys gilberti* Jordan et Richardson, 1908, Proc. U. S. Nat. Mus., XXXIII, p. 647, fig. 6. Suruga Bay – Matsubara, 1979, Ishizaki – Shonten, p. 1129 – Jordan, Tanaka and Snyder, 1974, Linnaeus Press, Amsterdam, p. 289, fig. 238 – Cheng and Zheng, 1987, Science Press, Beijing, China, pp. 482 – 483 – Masuda *et al.*, 1988, Tokai University Press, p. 322 – Nakabo,

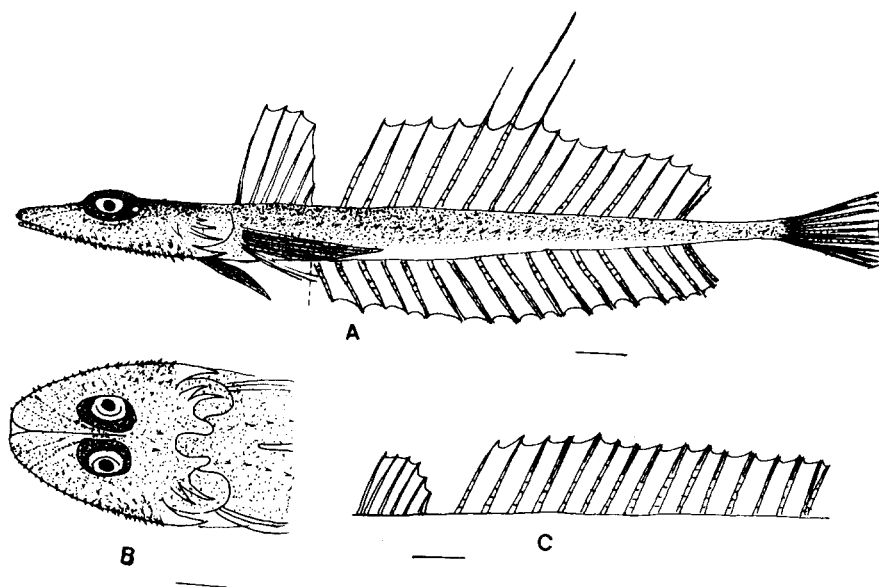


Fig. 1. *Hoplichthys gilberti* A : Lateral view, B : Dorsal view of head, C : Dorsal fin of female. Bars indicate 10m.

1993, Tokai University Press, pp. 540 - 541.

**Material examined** : BKNU 4001 - 4005, 5 specimens, 142.2~160.0mm, in standard length. Nampo - dong, Chung - gu, Pusan, March 28, 1995.

**Description** : Dorsal fin rays  $\text{VI} - 15$ , anal fin rays 17, pectoral fin rays 13+3, ventral fin rays 1,5, gill rakers 13~14, scutes 27~28, branchiostegal rays 7.

In percentages to standard length, body depth 8.1~8.7(8.3), head length 28.1~30.4 (29.3), caudal peduncle length 6.9~7.6(7.2), caudal peduncle depth 2.0~2.1(2.0), snout length 8.2~9.4(8.8), eye diameter 8.4~9.0 (8.6), interorbital width 0.9~1.3(1.1), length of predorsal 27.9~30.7(29.0), length of prepectoral 29.9~32.3(31.0), length of preventral 22.6~24.1(23.2), length of preanal 38.0~41.5 (39.8). In percentages to head length, snout length 27.7~31.3(30.0), eye diameter 28.3~30.0(29.4), interorbital width 3.3~4.4(3.8).

Head and body well depressed, body elongate, slender and tapering. Head broad with

numerous short spine at the margin. Two separate dorsal fins, first dorsal fin flexible. Fifth to seventh rays of second dorsal fin very elongated in males but not in female (Fig.1). No scales on the surface of body and head. But a row of spiny scutes along both side of body with 1 strong and sharp spines directed backwards (Fig. 2). But in partly, with minute spine under the large spine on each scutes. Snout length and eye diameter are nearly same length, no longer than eye diameter like that of *H. langsdorfii*. and 3 lower pectoral rays detached from other rays of pectoral fin. circumorbital bones made up five elements which are one preorbital and four suborbital bone, with numerous short spiny processes in the margin (Lee, 1993 ; Fig. 3). Ventral parts of suborbital bone without any spinous processes.

**Color in 10% formalin** : Head and body whitish, with many irregular minute blackish spots on surface of body and head, without large marks. Ventral parts white without blackish spots. First and second dorsal fin without any

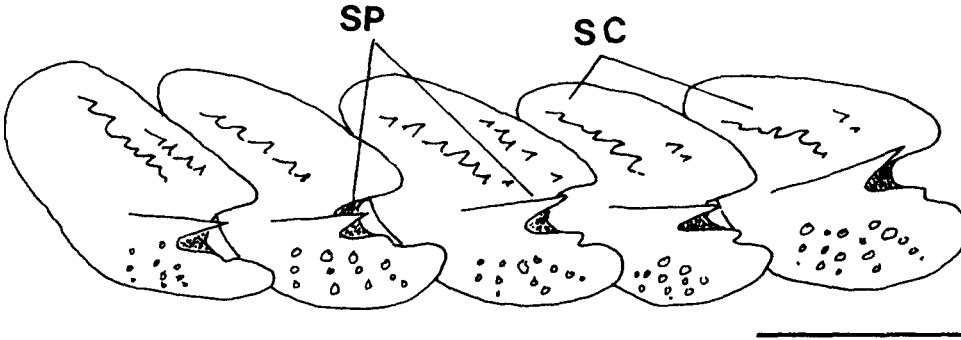


Fig. 2. The scutes of *H. gilberti* SC : scute, SP : spines. Bar indicates 5mm.

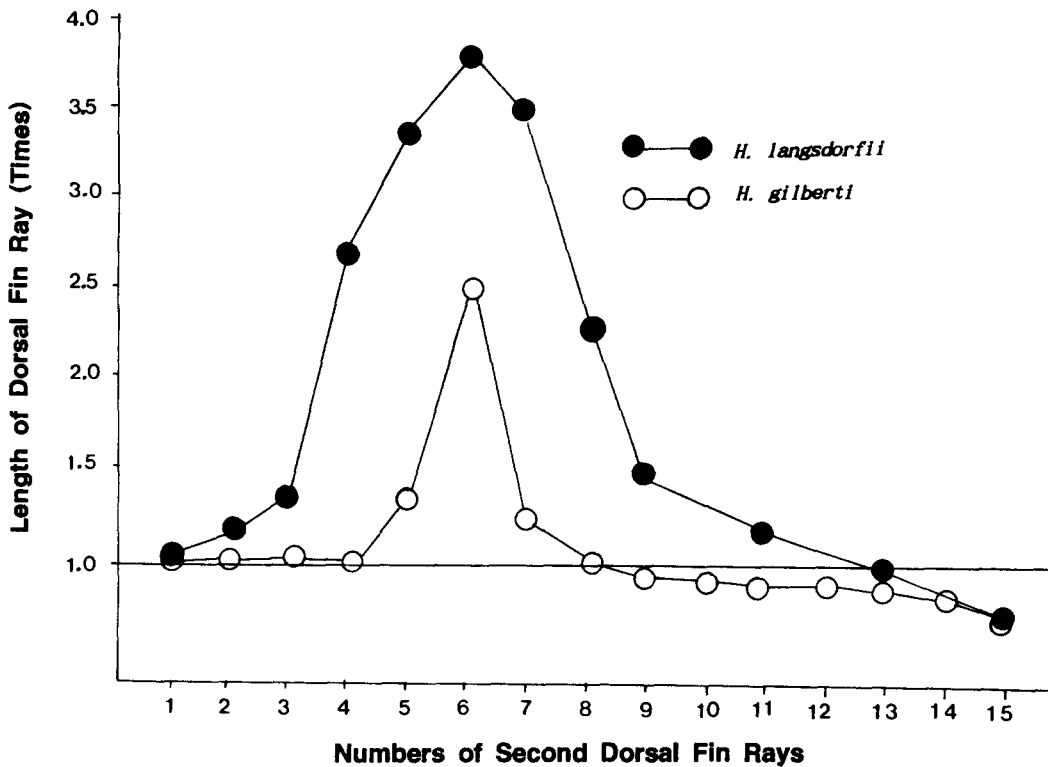


Fig. 3. The relationships of length to the each rays in second dorsal fin.

marks in both sexes, Anal fin is pale in males and females.

**Sex dimorphism :** In the males, fifth to seventh rays of second dorsal fin long filamentous, but no long in females (Fig. 1). Genital process in males, but not in females. The first dorsal fin in males is larger than that of females.

**Remarks :** The external appearances of this species were closely related to those of *Hoplichthys langsdorfii*, but it sharply differed from the *H. langsdorfii* in having some characteristics with 1 row of spine on scute of both side of body (*H. langsdorfii* has 2 rows), nearly same size between snout length (8.8 % in SL) and eye diameter (8.6% in SL)(Table 1), but 9.8

**Table 1. Comparison of several meristic counts between *Hoplichthys gilberti* and *speciemens*.**

Characters	Present specimens	<i>H. langsdorfii</i>	<i>H. gilberti</i>
		Lee(1993)	Masuda et al.(1988)
Dorsal fin ray	VI - 15	VI - 15	VI - 15
Anal fin ray	17	17	17
Pectoral fin ray	13 + 3	12 + 3	11 - 13 + 3 - 4
No. of scutes	27 - 28	27	27 - 28
No. of row of spines on the scutes	1	2	1
Gill rakers	13 - 14	10 - 14	10 - 13
Snout length	=ED *	>ED	<or=ED

\* : Eye diameter

and 6.6 % in *H. langsdorfii*, respectively. Length of second dorsal fin rays of *H. langsdorfii* were more longer than those of *H. gilberti* in same standard length (Fig. 3). Matsubara and Ochiai (1950) also emphasized that the differences between *H. gilberti* and *H. langsdorfii* were shown in number of rows of spine on scutes and length of snout. Matsubara (1979) has described that *H. acanthopliurus*, *Monhoplichthys gregoryi* and *M. smith* are synonym of *H. gilberti*. It is assumed that this species is distributed in the South Sea of Korea.

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韓國産 가시양태科 魚類 1 未記錄種 *Hoplichthys gilberti*

李 忠 烈 · 朱 東 秀  
群山大學校 自然大學 生物學科

1995년 3월 釜山에서 採集된 가시양태科 魚類 5 個體 (體長 142.2. - 160.0mm)를 分類한 結果 지금까지 우리나라에서는 報告되지 않은 *Hoplichthys gilberti* Jordan and Richardson으로 同定되었다. 본 種은 頭部와 가슴 부분이 심하게 腫편되어 있는데 外部 形態的으로는 *H. langsdorfii*와 아주 恰似 하나 *H. langsdorfii*와는 달리 體側 scute 위에 1줄의 가시 돌기가 나 있고, 가슴지느러미가 13+3이며, 吻長이 眼 經과 거의 같다는 점에서 잘 구별되었기에 이들의 特徵을 記載하면서, 본 種은 體側에 가시가 한개씩 나 있는 特徵에 따라 韓國名을 “외가시양태”로 命名하였다.