

## A record of *Sebastes schlegelii* Hilgendorf, 1880 from Dutch coastal waters

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### Abstract

*Sebastes schlegelii*, a western Pacific rockfish species, is reported for the first time for The Netherlands. The presence of an established population is possible and warrants further investigation.

**Key words:** *Sebastes schlegelii*, rockfish, Scorpaenidae, exotic species

In Dutch marine waters, non-indigenous species from the western Pacific are relatively common. Most of these species were first observed after 1964, when Pacific oysters (*Crassostrea gigas* (Thunberg, 1793)) were imported into Europe (Wolff 2005). Among these Pacific species no fish species have yet been reported. *Sebastes schlegelii* Hilgendorf, 1880, a western Pacific rockfish species, caught in 2008 in the south-western coastal waters of The Netherlands represents the first example.

The genus *Sebastes*, containing the rockfishes, is the most species-rich genus in the family Scorpaenidae (Teleostei: Scorpaeniformes) with approximately 110 species worldwide. Their highest diversity is in the North Pacific (Kai et al. 2003; Hyde and Vetter 2007). The rockfishes exhibit a great diversity in their morphology and ecology, exploiting coastal habitats ranging from shallow rocky areas to depths of about 1000 meters (Love et al. 2002; Nakabo 2002). Only four species are found in the North Atlantic: *S. mentella* Travini, 1951, *S. norvegicus* (Ascanius, 1772), *S. fasciatus* Storer, 1850 and *S. viviparus* Krøyer, 1845, mainly inhabiting relatively deep waters with depths of 40-1000

meters (Ishida 1995; Roques et al. 2001; Love et al. 2002).

A Dutch specimen of rockfish, which was about 20 centimetres in length (Figure 1), was caught by an angler on 11th April 2008 in the Oosterschelde near Het Goesse Sas (Figure 2). The angler, Carlo van Rijen, had joined an organised fish trip meaning that there were approximately 25 eyewitnesses to the catch. After taking pictures the fish was released. At that time the fish was unidentified and, after consultation with specialists, was later published as a possible wreckfish (*Polyprion americanus* (Bloch & Schneider, 1801)) (Dohmen 2008).

Judging from the photograph, the Dutch specimen (Figure 1) has 13 dorsal spines, 12 or 13 dorsal-fin rays, seven anal-fin rays, and 18 pectoral-fin rays. The specimen also has three sharp lachrymal spines, an oblique dark band on the cheek, and a grey body with dark mottling. Such characters are contrary to all Atlantic species of *Sebastes*, which have 15 dorsal spines, reddish body and one or two lachrymal spines (Ishida 1995). These characteristics, however, do fit with *S. schlegelii* from the western North Pacific (Nakabo 2002; Yamada et al. 2007).



**Figure 1.** The *Sebastes schlegelii* specimen caught in the Oosterschelde, The Netherlands. Photograph by Carlo van Rijen



**Figure 2.** The locality of record of the Dutch *Sebastes schlegelii* specimen

*Sebastes schlegelii* is one of the most common rockfishes in the western North Pacific. It inhabits shallow rocky shores from 10 to 100 meters in depth and is widely known from the north-eastern coast of China, all coasts of Japan (except for the Ryukyu Islands), and the Korean Peninsula (Yamada et al. 2007). Because of its high commercial value, *S. schlegelii* has been one of the main targets of stock-enhancement and aquaculture, especially in Korea. The farming technique for *S. schlegelii* has been rapidly developed during the last decade, and aquaculture production of *S. schlegelii* is second in Korea only to the flounder *Paralichthys olivaceus* (Temminck & Schlegel, 1846) (Lee 2002).

We can only speculate how this individual of *S. schlegelii* reached the Oosterschelde. The most likely scenarios are importation by the

aquarium trade and subsequent release or passive transport in ballast water tanks of a ship. The conditions in the Oosterschelde seem to be favourable for this species as they are comparable with areas within its natural range. So the presence of an established population is possible and warrants further investigation.

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