

# First Record of the Rockfish *Sebastes melanops* from the Western North Pacific, with Comments on its Synonymy (Osteichthyes: Scorpaenoidei: Sebastidae)

Yoshiaki Kai<sup>1,6</sup>, Nozomu Muto<sup>2</sup>, Tsutomu Noda<sup>3</sup>,  
James W. Orr<sup>4</sup> and Tetsuji Nakabo<sup>5</sup>

<sup>1</sup>Maizuru Fisheries Research Station, Field Science Education and Research Center, Kyoto University, Nagahama, Maizuru, Kyoto 625-0086, Japan

E-mail: mebaru@kais.kyoto-u.ac.jp

<sup>2</sup>Division of Applied Biosciences, Graduate School of Agriculture, Kyoto University, c/o The Kyoto University Museum, Kyoto University, Yoshida, Sakyo, Kyoto 606-8501, Japan

<sup>3</sup>Tohoku National Fisheries Research Institute, Fisheries Research Agency, Miya-machi 1-3-5, Miyako, Iwate 027-0052, Japan

<sup>4</sup>NOAA, National Marine Fisheries Service, Alaska Fisheries Science Center, Resource Assessment and Conservation Engineering Division, 7600 Sand Point Way NE, Seattle, Washington 98115, USA

<sup>5</sup>The Kyoto University Museum, Kyoto University, Yoshida, Sakyo, Kyoto 606-8501, Japan

<sup>6</sup>Corresponding author

(Received 13 March 2013; Accepted 31 July 2013)

*Sebastes melanops* Girard, 1856, formerly known from the Aleutian Islands and the southeastern Bering Sea to Baja California, USA, is reported from the western Pacific on the basis of two specimens collected from Iwate Prefecture on the Pacific coast of northern Japan. One of the Japanese specimens is described here in detail and compared with specimens from the eastern North Pacific. Sequence data from the mitochondrial DNA control region of this species are also provided and compared with closely related congeners. *Sebastes columbianus* (Hubbs and Schultz, 1933) is herein regarded as a junior synonym of *S. melanops* on the basis of an examination of type specimens. Conversely, another supposed junior synonym, *S. simulans* (Gill, 1864) may not be conspecific with *S. melanops*.

**Key Words:** Teleostei, Actinopterygii, distribution, mitochondrial DNA, *Sebastes columbianus*, *Sebastes simulans*.

## Introduction

The rockfish genus *Sebastes* Cuvier, 1829 is the most species-rich genus in the Sebastidae, containing over 110 species (Nelson 2006) characterized by having a round pectoral fin, 13–15 dorsal-fin spines, and a posteriorly pointed suborbital stay that is not strongly connected with the preopercle (Matsubara 1943). In Japanese waters, 33 species are now recognized as valid (Kai and Nakabo 2013; Nakabo and Kai 2013).

*Sebastes melanops* Girard, 1856 is one of the most common rockfishes in the eastern North Pacific, known from the Aleutian Islands off Amchitka Island and the southeastern Bering Sea to Baja California (Kramer and O'Connell 1995; Orr *et al.* 2000; Love *et al.* 2002; Mecklenburg *et al.* 2002) (Fig. 1). Recently, Poltev and Shubin (2013) reported “*S. ciliatus*” from the northern Kuril Islands, but the photo given by them is apparently of *S. melanops* (see “Remarks” section below). Although this could be the first record of *S. melanops* from the western North Pacific, the report of Poltev and Shubin (2013) lacked a detailed morphological description based on voucher specimens. In early 2012, two specimens of *Sebastes melanops* were captured by a set-net in Miyako, Iwate, Japan, representing the first reliable record

of this species from the western North Pacific (Fig. 2). In this paper, a detailed description of one of these specimens is provided. Comparisons with eastern Pacific specimens, including type specimens of nominal species related to *S. melanops*, are also made. We conclude that *S. columbianus* (Hubbs and Schultz, 1933) is a junior synonym of *S. melanops*. *Sebastes simulans* (Gill, 1864) has been treated as a junior synonym of *S. melanops* (*e.g.*, Jordan and Evermann 1898; Love *et al.* 2002; Barsukov 2003), but it may not be conspecific with the latter. We also present partial sequences of the mitochondrial control region (mtCR) of Japanese and eastern North Pacific specimens of *S. melanops*, confirming our identification.

## Materials and Methods

Methods of counts and measurements generally follow Kai and Nakabo (2008). “Body depth 1” is the distance between the origins of the first dorsal-fin spine and the pelvic-fin spine; “body depth 2” is the distance between the origins of the last dorsal-fin spine and the first anal-fin spine. The last two soft rays of both the dorsal and anal fins were counted as single rays, each pair being associated with a single pterygiophore. Terminology of the head spines fol-