

# New Record of the Golden Grouper *Saloptia powelli* (Perciformes: Serranidae) from North Sulawesi, Indonesia

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BRIEF  
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**New Record of the Golden Grouper *Saloptia powelli*  
(Perciformes: Serranidae) from North Sulawesi, Indonesia<sup>1</sup>**

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**Abstract**—One specimen (300 mm in standard length) of *Saloptia powelli*, belonging to the family Serranidae, was newly collected in a local fish market in Manado, North Sulawesi, constituting a new record for the species in the Indonesian archipelago. This species was diagnosed by the following morphological traits: dorsal rays VIII–11, anal rays III–8, well-defined opercular spines, pelvic fins below pectoral fins, caudal fin emarginate, mouth moderate in size, supplemental maxillary present, fine teeth in irregular rows on vomer and palatines. Head, body, and fins yellow in color. We suggest “kerapu emas”, a translation of its existing common name “golden grouper”, for the Indonesian species names.

**Keywords:** new record, *Saloptia powelli*, Serranidae, North Sulawesi, Indonesia

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INTRODUCTION

The golden grouper *Saloptia powelli* belongs to the family Serranidae, which is comprised of five subfamilies of 73 genera, 522 species that are distributed in tropical and temperate seas worldwide (Heemstra et al., 2003; Nelson, 2006; Eschmeyer et al., 2010). Among the 163 grouper fish species of the subfamily Epinephelinae, 46 species have been reported from Southeast Asia and 39 species in 7 genera from Indonesia (Craig et al., 2011; Habibi et al., 2011).

Golden grouper (*Saloptia powelli*) was collected from Cook Islands in the South Pacific, and reported as a new species by Smith (1964). This species is now known to be distributed from the Western Pacific to French Polynesia, including Okinawa, Taiwan, South China Seas, Mariana Islands, Society Islands, Cook Islands, American Samoa, Fiji, and Tuamotus (Heemstra, Randall, 2001). Recently, one specimen of *S. powelli* was caught by hook and line from the coastal waters of North Sulawesi, Indonesia. Here, we describe the morphological characters of *Saloptia powelli* as an addition to the list of Indonesian fishes.

MATERIALS AND METHODS

One specimen of *Saloptia powelli* was found at the Bersih Hati local fish market, Manado, North Sulawesi. The specimen had been collected by hook

and line on vessels that frequently fish as far as the Northern Maluku Island, Halmahera (Fig. 1). Counts and measurements generally followed Heemstra, Randall (1991). Tissue was collected from the caudal fin of the specimen and preserved in 96% ethanol. The present tissue sample and specimen were deposited at the Indonesian Biodiversity Research Center (IBRC), Denpasar, Bali, Indonesia. Molecular identification of the specimen was conducted using the polymerase chain reaction (PCR) of a 651 bp DNA fragment of the mitochondria cytochrome oxidase subunit I (mtCOI). DNA was extracted using 10% Chelex solution (Walsh et al., 1991) and PCR performed using a M13-tailed universal fish primer cocktail (VF2\_t1, FishF2\_t1, Fishr2\_t1 (Ward et al. 2005), FR1d\_t1 (Ivanova et al., 2007)). The DNA sequence of the mtCOI gene obtained from the present specimen was compared to that of *Saloptia powelli* (Accession ID: JQ432090) deposited in the National Center for Biological Information data base (NCBI). The genetic variation among sequences was assessed by eye using the program *Molecular Evolutionary Genetic Analysis*-MEGA 5.1 (Tamura et al., 2011).

***Saloptia powelli* Smith, 1964**—new  
Indonesian name—“kerapu emas”  
(Fig. 2, Table)

*Saloptia powelli* Smith, 1964. Fig. 1. Type locality—  
Cook Island.

<sup>1</sup> The article is published in the original.

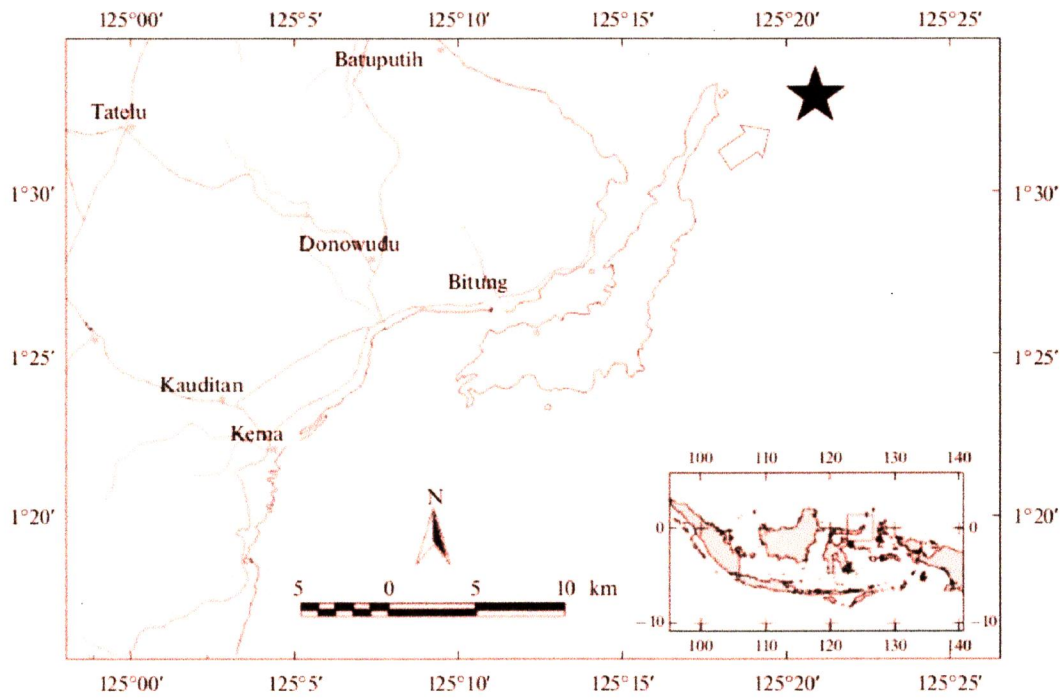


Fig. 1. Coastal waters of North Sulawesi, Indonesia, (★)—collected location of *Saloptia powelli*.

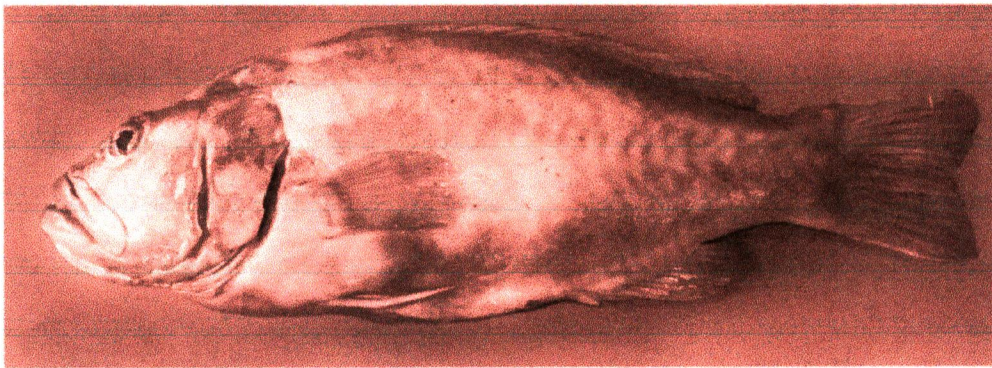


Fig. 2. *Saloptia powelli*, 300 mm SL, North Sulawesi, Indonesia.

**Material examined.** IBRC-100655, one specimen, 300 mm in SL, Manado Island, Indonesia, hook and line, 24 November 2014.

**Description.** Counts and measurements were shown in table. Body oblong, robust, its depth less than head length and 2.8 times in standard length. A pair of canines at front of both jaws; lower jaw with

2 rows soft teeth, but no enlarged canines at mid-side of jaw. upper edge of operculum distinctly convex; subopercle and interopercle serrate. Dorsal fin origin behind vertical rear end of operculum, the fin membranes slightly incised between the spines, the third spine longest. Pectoral fins short and rounded, the middle rays longest, sub equal to pelvic fins, 2.4 times in head length.

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Counts and proportional measurements expressed as percentages of standard length of the *Saloptia powelli*

Morphological characters	Present study IBRC-100655	Citation	
		Heemstra and Randall, 1991	Smith, 1964
Number of specimens	1	?	1
Total length, mm	370	?	?
Standard length, mm	300.0	250.9	340.0
Counts:			
dorsal fin rays	VIII, 11	VIII, 11	VIII, 11
anal fin rays	III, 7	III, 8	III, 7
pectoral fin rays	14	14	15
Lateral line scales	77	70–78	75
First gill arch (upper + lower)	(9 + 17)	(8–9 + 16–17)	–
Measurements:			
head length	38.3	–	–
body Depth	35.1	–	–
body width	14.7	–	–
Dorsal fin base length	41.6	–	–

**C o l o r.** Body generally yellow. Dorsal side lighter in color with some areas turning rose. Some reddish blotches/blushes on the head and above the eye, fins yellow.

**D i s t r i b u t i o n.** This species is known to inhabit depths in the range of 140–367 m, from the Western Pacific to French Polynesia, Ryukyu Island, Okinawa, the Great Barrier reef, Taiwan Province of China, South China Sea, Marina Island, Society Island, Cook Islands, American Samoa, Fiji, Tuamotus, and the Philippine Sea (Heemstra and Randall, 2001; Arthur et al., 2013), and Indonesia (present study, Fig. 1).

**Remarks.** The morphological characteristics of the present specimen agreed well with those of *Saloptia powelli* in having a moderately oblong body with small scales that are strongly ctenoid, dorsal fin with VIII spines and II soft rays, anal fin with III spines and 8 soft rays, well-defined opercular spines, pelvic fins below pectoral fins, and caudal fin emarginated (Smith, 1964; Heemstra and Randall, 2001; Arthur et al., 2013). In addition, we adopted a molecular identification method based on mtCOI DNA sequences to ascertain the species identification. The result indicated that the mtCOI sequence of the present specimen was almost identical (99%) to that of *Saloptia powelli* from the National Center for Biological Information BLAST database, NCBI (data not shown).

One specimen of *Saloptia powelli* (Serranidae) which was presented in this study provides new knowledge about their specific distribution and gave a new country record for this species.

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