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A new species of the cardinalfish genus *Siphamia* (Perciformes, Apogonidae) from West Papua, Indonesia

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Abstract

A new species of the cardinalfish genus *Siphamia* is described from specimens collected in the Province of West Papua, Indonesia, at depths of 50–72 m. *Siphamia papuensis* **n. sp.** has a striated light organ which makes it a member of the *S. tubifer* species group. Within this group it is closely related to *S. argentea*, sharing with the latter 13 pectoral-fin rays, 9 developed gill rakers and an irregular pattern of yellowish green bars on the body. It differs from *S. argentea* in having an incomplete lateral line and in lacking dark marks on the head, and at the origin and end of the dorsal-fin and anal-fin bases, as well as the absence of red spots along the light organ and along the back. Japanese records of *S. tubulata* are reidentified as *S. argentea*, and new locality records for *S. argentea* and *S. stenotes* are reported. Analysis of sequence data from a 16S rDNA fragment revealed the clear separation of *S. papuensis* **n. sp.**, *S. argentea* and other included *Siphamia* species (*S. jebbi*, *S. tubifer* and *S. stenotes*).

Key words: Bali, Milne Bay, *Siphamia argentea*, *Siphamia papuensis* **n. sp.**, *Siphamia tubulata*, *Siphamia stenotes*, *Siphamia jebbi*, taxonomy, Vanuatu

Introduction

The Indo-Pacific apogonid genus *Siphamia* is unique among the family in having a bacterial bioluminescent system and spinoid scales. The group contains 23 species and was recently reviewed by Gon and Allen (2012). This genus has two main species groups: the *Siphamia tubifer* group has dark vertical or slanted striations on the light organ whereas the *Siphamia tubulata* group has dark dots scattered along the light organ. Species of *Siphamia* occur mainly on coral reefs and are frequently associated with invertebrates such as sea urchins, crown-of-thorns starfish, and coral. The present paper describes a new species from the Raja Ampat Islands, which lie off the extreme western end of the island of New Guinea in West Papua Province, Indonesia. It was collected during a series of reef fish biodiversity surveys of the Fiabacet Island chain, SE Misool region of Raja Ampat Islands, sponsored by the Misool EcoResort over the span of February 2011–September 2013. Over 1500 species of reef fishes have thus far been recorded from the Raja Ampat Archipelago, which is thought to harbour the world's richest diversity of reef fishes (Allen & Erdmann, 2009 & 2012).

Material and methods

Measurements were taken to the nearest 0.05 mm. Ratios of body proportions in the description below were rounded to the nearest 0.05. Unless specified otherwise, the length of specimens listed throughout this paper is the

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TABLE 6. Mean uncorrected sequence divergences, expressed as percentages, and ranges (in parentheses) from the 16S rDNA gene region among the *Siphamia* species included in the genetic study. Intraspecific divergences for taxa where more than one individual were included are presented on the diagonal.

Species	*S. argentea*	*S. jebbi*	*S. papuensis*	*S. stenotes*	*S. tubifer*
Siphamia argentea	4.2				
Siphamia jebbi	15.3 (15.1– 15.5)	–			
Siphamia papuensis	8.1 (7.6–9.4)	15.3 (15.0– 15.4)	3.7 (0–6.9)		
Siphamia stenotes	12.6 (12.0–13.2)	13.6	14.2 (14.1– 14.6)	–	
Siphamia tubifer	16.0 (14.5– 17.2)	15.4 (15.2– 16.0)	16.4 (15.4– 17.6)	15.4 (14.3– 16.1)	8.2 (5.4– 10.0)

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