

## Biodiversity Record: Sabah grouper at Sisters Islands Marine Park

Tay Wei Lin Natasha<sup>\*1</sup>, Tan Heok Hui<sup>1</sup> & Low Kok Yuan Emir Rayyan

<sup>1</sup>Lee Kong Chian Natural History Museum, National University of Singapore, Singapore 117377  
Email: [nata.tay@nus.edu.sg](mailto:nata.tay@nus.edu.sg) (\*corresponding author)

**Recommended citation.** Tay WLN, Tan HH & Low KYER (2025) Biodiversity Record: Sabah grouper at Sisters Islands Marine Park. Nature in Singapore, 18: e2025073. DOI: 10.26107/NIS-2025-0073

**Subject:** Sabah grouper, *Epinephelus lanceolatus* × *Epinephelus fuscoguttatus* (Teleostei: Perciformes: Epinephelidae).

**Subject identified by:** Tan Heok Hui.

**Location, date and time:** Singapore Strait, Sisters Islands Marine Park; 13 April 2025; around 1115 hrs.

**Habitat:** Marine. Coral reef. On reef slope at a depth of approximately 7 to 10 m.

**Observers:** Tay Wei Lin Natasha and Low Kok Yuan Emir Rayyan.

**Observation:** An individual of about one metre total length was spotted near the substrate some 2–3 m away from the observers. It seemed unperturbed by the divers and swam around them continuously (Figs. 1, 2). Close to the end of the dive, about 35 minutes later, apparently the same grouper was seen again in the area where it was first observed.



Fig. 1. Lateral view of the Sabah grouper in-situ with its caudal fin blocked by rocks (Photograph by: Tay Wei Lin Natasha).

**Remarks:** The Sabah grouper is an artificial hybrid that is bred for food. This fish is very popular in aquaculture due to its fast growth rate, high larval survival rate, and is highly esteemed for its good taste (Tan, 2015; Shapawi et al., 2019; Das et al., 2022). Examples of the Sabah grouper have been noted in the wild state in Singapore waters in 2015, and apparent courtship behaviour between two fish have been observed (Cabrera et al., 2015 as *Epinephelus* sp.; Tan, 2015). However, it is not known if they have successfully bred. The subject herein featured appears to be thriving without human interference. Its origin is a mystery that invites speculation. Did it escape from an aquaculture farm? Was it deliberately released for a religious ritual? Was it an offspring of hybrid groupers that have managed to breed in the wild?

Elsewhere, this hybrid fish has apparently established a wild population in the coastal waters of Hainan, China, raising concerns over potential negative ecological impacts such as interspecies competition, disease transmission and genetic pollution, on the indigenous fishes (Zhang et al., 2024). There is yet no evidence that a wild population of Sabah grouper is established in Singapore waters.



Fig. 2. Lateral view of the Sabah grouper (head pointing to the left) swimming about (Photograph by: Low Kok Yuan Emir Rayyan).

**Acknowledgement:** This sighting was recorded during a dive conducted as part of the Comprehensive Marine Biodiversity Survey 2 funded by National Parks Board and the National University of Singapore.

**Literature cited:**

Cabrera B, Ong D & Siti Maryam Y (2015) Probable breeding pair of grouper. Singapore Biodiversity Records, 2015: 154–155.

Das SK, De M, Noor NM, Bakar Y, Cob ZC & Ghaffar MA (2022) Cross effects of diets and rearing temperatures on gastrointestinal evacuation and growth performance in adult Sabah groupers (*Epinephelus fuscoguttatus* × *E. lanceolatus*). Animals, 12(22): 3172.

Shapawi R, Abdullah FC, Senoo S & Mustafa S (2019) Nutrition, growth and resilience of tiger grouper (*Epinephelus fuscoguttatus*) × giant grouper (*Epinephelus lanceolatus*) hybrid – a review. Reviews in Aquaculture, 11(4): 1285–1296.

Tan HH (2015) Sabah grouper in Singapore. Singapore Biodiversity Records, 2015: 197–198.

Zhang X, Li J, Chen S, Yang Q, Ji F, Luo H & Ding S (2024) The Hulong hybrid grouper (*Epinephelus fuscoguttatus* ♀ × *Epinephelus lanceolatus* ♂) has invaded the coastal waters of Hainan Island, China. Frontiers in Marine Science, 11: 1438895.