

An unlikely Singapore record of the bannerfish, *Heniochus diphreutes*

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Subject: Schooling bannerfish, *Heniochus diphreutes* (Teleostei: Chaetodontidae).

Subject identified by: Kelvin K. P. Lim.

Location, date and time: Singapore Island, purchased at fish market; 1935.

Habitat: Unknown.

Observers: Author.

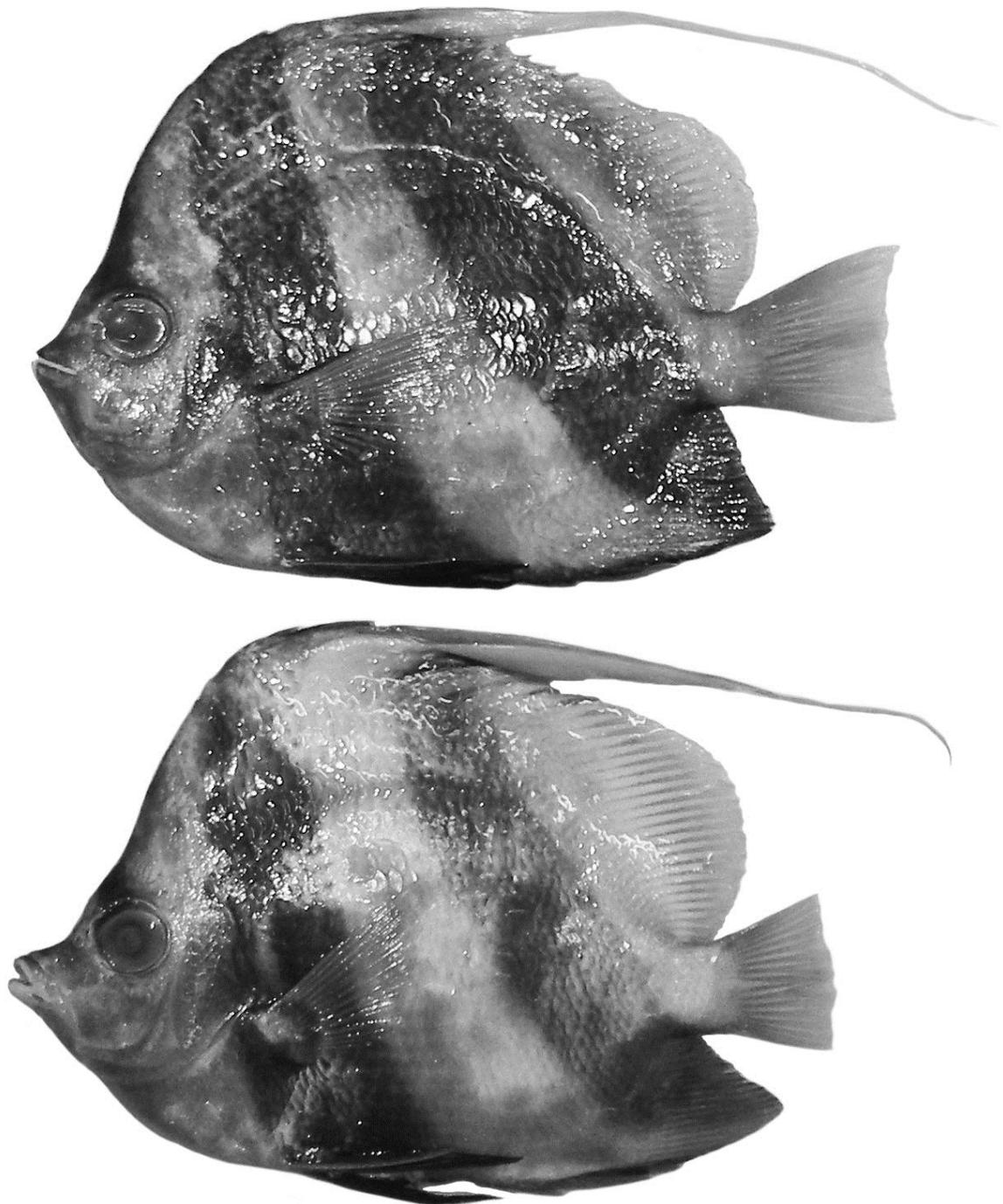
Observation: In the Zoological Reference Collection (ZRC) of the Lee Kong Chian Natural History Museum at the National University of Singapore, the lot ZRC 2558 containing four specimens of bannerfish was re-examined. The lot was obtained at a fishmarket in Singapore in 1935. According to the labels tied to the specimens, all were identified by J. F. Hardenberg in 1935 as '*Heniochus macrolepidotus* (*Heniochus acuminatus*)' and published by Tweedie (1936: 27) as *Heniochus acuminatus*. Present examination, however, reveals the presence of two species. One specimen of 116.5 mm standard length* [upper fish in the accompanying picture] is identified as *Heniochus diphreutes* (schooling bannerfish). The other three of between 120.0 and 159.5 mm standard length [including lower specimen in the accompanying picture] are confirmed as *Heniochus acuminatus* (longfin bannerfish).

Remarks: The longfin bannerfish, *Heniochus acuminatus*, is known to occur in Singapore (see Fowler, 1938: 179; Tan & Lim, 2015), but the schooling bannerfish, *Heniochus diphreutes*, was not. Although herein presented as a probable Singapore record, it is highly unlikely for *Heniochus diphreutes* to be naturally present there. In the Southeast Asian region, it has only been confirmed to occur largely in oceanic coastal areas with cool upwelling, such as the Andaman Sea, and the Indian Ocean coasts of Indonesia (Allen et al., 1998: 189-190; Allen & Erdmann, 2012: 539). This, therefore, lends support to the cautionary remark by Tweedie (1940: 68) that specimens '... from the fishmarkets, while the majority probably come from the neighbourhood of Singapore, may have been caught five hundred miles and more away and should not, in (his) opinion, be included in any list of fishes from... the Malay Peninsula'.

The schooling bannerfish is widely distributed across the Indo-Pacific from the Red Sea to Hawaii, apparently being more common in subtropical localities. It frequently forms large aggregations and is mainly found at depths of 5-210 m along oceanic coasts. Although it appears very similar to the longfin bannerfish, with which it is often sympatric, *Heniochus diphreutes* is distinguished by its shorter snout, more rounded breast and second black band ending at corner of anal fin [compared to the band ending behind corner of anal fin in *Heniochus acuminatus*] (Allen et al., 1998: 189-190; Allen & Erdmann, 2012: 538-539).

References:

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- Tweedie, M. W. F., 1936. A list of fishes in the collection of the Raffles Museum. *Bulletin of the Raffles Museum, Singapore*. 12: 28.
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Two preserved specimens of *Heniochus* (ZRC 2558) from a fish market in Singapore in 1935: *Heniochus diphreutes* of 116.5 mm standard length (above) and *Heniochus acuminatus* of 120.0 mm standard length (below). Note the subtle differences in body shape and colour pattern. Photograph by Kelvin K. P. Lim

* standard length is measured from the tip of the snout to the base of the caudal fin.