

# *Danio dichromatus*, a new species of sexually dimorphic and dichromatic danio from the Malay Peninsula in Myanmar (Teleostei: Cyprinidae: Danioninae)

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*Danio dichromatus* is described on the basis of specimens from Myanmar in streams in the lower Tanintharyi River basin near Myeik and Palaw, and the Dawei River drainage near Dawei. It has been marketed as an ornamental fish under the names ‘Yellow Hikari’ and ‘Blue Hikari’. *Danio kerri* and *Danio dichromatus* are similar in body shape, mensural and meristic data, and pattern of tubercles on the lower jaw and infraorbital ossicles. The male *D. dichromatus* is unique in the genus in the abbreviated P stripe. *Danio kerri* is reported from islands in the Phang Nga bay, Kra Buri, and the Palian River drainage in Thailand; and the Langkawi Island in Malaysia.

## Introduction

Sexually dimorphic keratinised nuptial tubercles occur throughout the cypriniform order. In most species the tubercles are concentrated to the head and anterior part of the body, and may be restricted to the male (Wiley & Collette, 1970). Tubercles were reported from several species of danionin cyprinids – the genera *Danio* Hamilton, 1822, *Devario* Heckel, 1843, and *Betadevario* Pramod, Fang, Rema Devi, Liao, Indra, Jameela Beevi & Kullander, 2010. In most of these species, tubercles are present on the lower jaw in both sexes whereas tubercles on the dorsal face of the pectoral fin are found in the male only (e.g. McMillan et al., 2013; present paper). Species of *Danio* and *Sundanio* Kottelat & Witte, 1999 (*incertae sedis*

in Danioninae) are characterised by a projection of the dentary supporting an anterolateral fleshy pad. Tubercles are present on the fleshy pad in both sexes but may be relatively larger in the male than in the female (Fang, 2001, 2003; Conway et al., 2011; Rodriguez, 2013). There are few published observations of sexual dichromatism among species of *Danio*. Field observations do not note live colours and observations published in aquarium literature typically describe the male and refer to the female as less colourful (e.g. Sterba, 1959; Meinken, 1961).

*Danio kerri* Smith, 1931, is a small species only recorded from offshore islands in southern Thailand. It has been noted for sexual dimorphism in the profuse development of tubercles on the head of the male (Smith, 1931, 1945). *Danio* ‘Hikari’, is

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with a maximum at 17 ka, when sea levels were down to 120 m lower than present (cf. Voris, 2000).

Because the Tanintharyi coast has similar archipelagoes as the adjacent Malay Peninsula, we predict that *Danio dichromatus* will also be found on islands. The only other island occurrences of *Danio* have been identified as *Danio albolineatus* and recorded from Koh Samui off Surat Thani in Thailand, Koh Chang in the Gulf of Thailand (Chitrakarn & Indrabarya, 1932; Smith, 1945), and Lankawi Islands (Amirrudin & Lim, 2006).

Besides the species listed above, the only other species of *Danio* reported from Sundaland is *Danio tweediei* Brittan, 1956. It has been recorded with certainty only from the type series, collected near Penang (Brittan, 1956). Brittan's photograph and description of the colour pattern suggest that *D. tweediei* is a synonym of *D. albolineatus* or *D. pulcher* (paratypes of *D. tweediei*, examined, USNM 163996 and CAS 48131, are small and decoloured, and not informative with respect to discriminating chromatic characters). Kottelat et al. (1993) synonymised *D. tweediei* with *D. albolineatus*. *Danio albolineatus* was described from southeastern Myanmar and has been reported from Thailand, Laos, Cambodia, Malaysia, and Sumatra in Indonesia (Weber & de Beaufort, 1916; Mohsin & Ambak, 1983; Kottelat et al., 1993; Rainboth, 1996). The identity of the Sumatran *Danio* has not been confirmed, however.

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