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Redescription of the eagle rays *Myliobatis hamlyni* Ogilby, 1911 and *M. tobijei* Bleeker, 1854 (Myliobatiformes: Myliobatidae) from the East Indo-West Pacific

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Abstract

The eagle rays *Myliobatis hamlyni* Ogilby, 1911 and *Myliobatis tobijei* Bleeker, 1854 are redescribed based on museum specimens and new material from Australia, Indonesia, the Philippines, Taiwan and Japan. These two species are closely related to *Myliobatis aquila* (L.) from the eastern Atlantic and can be distinguished from each other by a combination of their coloration, meristics, depth preferences and subtle morphometric characters. *Myliobatis hamlyni* was previously considered to be an Australian endemic, but its distribution is herein extended northward to Taiwan and Okinawa. *Myliobatis tobijei* was considered to occur southwards from Japan to Indonesia, but its distribution is herein restricted to the western North Pacific, primarily Japan.

Key words: taxonomy, Japan, Australia, nomenclature, *Myliobatis*

Introduction

The taxonomy of the eagle ray family Myliobatidae remained relatively unchanged for many decades. However, more recently, a number of taxonomic papers have redefined existing taxa, described new taxa, or resurrected old names as valid species (see White *et al.*, 2010, 2013; Ruocco *et al.*, 2012; White & Moore, 2013). Since eagle rays are often morphologically conservative, it can be difficult to find good interspecific differences between species. In recent years, the advancement of molecular species identification techniques has provided an additional tool which has enabled the taxonomy of some closely related groups to be better understood. For example, Richards *et al.* (2009) used molecular techniques to show that the cosmopolitan *Aetobatus narinari* (Euphrasen, 1790) is likely to be a species complex. White *et al.* (2010) subsequently used morphological, parasitological and molecular data to resurrect *Aetobatus ocellatus* (Kuhl, 1823) as the Indo-West & Central Pacific species in this complex. Integration of molecular, morphological, meristic and other techniques (e.g. parasites) into taxonomic studies is critical, especially for morphologically conservative groups such as the eagle rays, but also devil rays (Mobulidae) and cownose rays (Rhinopteridae).

The genus *Myliobatis* Cuvier, 1816 comprises 10 valid species (White, 2014), three of which occur in the East Indo-West Pacific Oceans. *Myliobatis australis* Macleay, 1881 was previously considered an Australian endemic species, but (White, 2014) confirmed that it is a junior synonym of *M. tenuicaudatus* Hector, 1877 which was thought to be a New Zealand endemic species. The focus of this paper is on the two other species occurring in this region, *M. hamlyni* Ogilby, 1911 and *M. tobijei* Bleeker, 1854. *Myliobatis hamlyni* was described from a single juvenile specimen from Cape Moreton in Queensland and has been considered to be an Australian endemic. It is currently known from only limited records off eastern and Western Australia (Last & Stevens, 1994; 2009) and some authors have considered it possibly conspecific with *M. tobijei* or even *M. aquila* (L.) (e.g. Compagno & Last, 1999). *Myliobatis tobijei* was described from a single juvenile specimen from off Nagasaki in Japan and is

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