

Descriptions of rajid egg cases from southeastern Australian waters

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Abstract

Egg cases from nine skate species occurring in Tasmanian waters were examined and measured. A species-specific identification key is provided for eight of these species. The key was developed primarily from fresh egg cases dissected from the oviduct, although specimens collected from the ocean floor or found dried on the beach were also used to test the key. Egg cases for the ninth species could not be included because the only egg case pair recovered was partially formed. A diagnosis of the posterior end of this egg case is provided.

Key Words: Rajid, egg case, fibroids, anterior, posterior, apron, lateral keel

Introduction

Skates (Family: Rajidae) are oviparous; a reproductive mode that enables females to encapsulate oocytes in morphologically structured shells that suit their environment. Generally, one oocyte from each ovary passes through the oviduct to the oviducal gland. The fertilised ovum then enters the egg case, which is generally one third to half formed. The remainder of the egg case then forms around the ovum. Two egg cases are produced (one in each oviduct) and deposited consecutively onto the substrate. The embryo develops inside the egg case and is nourished from the nutrients of the yolk until most of the yolk is absorbed. The neonate is then strong enough to leave the egg case (Hamlett and Koob 1999). In Australia, there are at least 43 skate species (10 genera) with most exhibiting a high level of endemism (Last and Yearsley 2002). Several nomenclature changes have occurred in the Australian skate fauna recently with some species remaining undescribed. This may result from rajids forming one of the largest groups of elasmobranchs and having a high species diversity along with morphological conservatism (McEachran and Dunn 1998).