

# ***Rhinobatos sainsburyi* n.sp. and *Aptychotrema timorensis* n.sp. —Two New Shovelnose Rays (Batoidea: Rhinobatidae) from the Eastern Indian Ocean**

PETER R. LAST

Marine Research Laboratories, Commonwealth Scientific Industrial Research Organisation,  
Castray Esplanade, Hobart TAS 7001, Australia  
peter.last@csiro.au

**ABSTRACT.** Two new shovelnose rays, *Rhinobatos sainsburyi* n.sp. and *Aptychotrema timorensis* n.sp., are described from the continental shelf off northwestern Australia. *Rhinobatos sainsburyi* belongs to an unresolved supraspecific complex that includes the type of the genus, *R. rhinobatos* (Linnaeus), and at least 9 other species that occur in the Indo-Pacific. *Rhinobatos sainsburyi* differs from these species by a combination of morphometry, squamation and colour. *Aptychotrema timorensis*, a third valid member of an endemic Australian genus, differs from its congeners in morphometry, and in having a narrower snout apex, fewer caudal vertebrae, and white spots on its dorsal surface.

LAST, PETER R., 2004. *Rhinobatos sainsburyi* n.sp. and *Aptychotrema timorensis* n.sp.—two new shovelnose rays (Batoidea: Rhinobatidae) from the eastern Indian Ocean. *Records of the Australian Museum* 56(2): 201–208.

In 1978 the Commonwealth Scientific and Industrial Research Organisation (CSIRO) initiated a decade long research program to investigate fish community structure off northwestern Australia to assist in the management of a Taiwanese trawl fishery in the area. As the fish fauna was poorly known at that time, the initial phase of the field-based program focused on describing the fauna and its distribution. An emphasis was placed on the consistent and accurate identification of species across all surveys. Specimens were photographed fresh and identifying features noted to produce dossiers for each species. Dossiers were assembled by family-group into durable 6 ring-bound folders for use at sea. This reference was used to refresh the identification skills of field staff before each cruise and was upgraded and enhanced as additional material was examined. This work led to the publication of a field guide to the main demersal shelf fishes of north and northwestern Australia (Sainsbury *et al.*, 1985). The program also led to

the discovery of many new fishes, including new elasmobranchs. Two new species of shovelnose rays (Rhinobatidae), caught during these surveys, are described and figured below.

## **Materials and methods**

Morphometrics follow a standard developed for the family at a recent FAO-funded workshop on batoid morphological and meristic techniques (Paris, March 2002) and explained in Last *et al.* (2004). Specific measurements of the nasal region of *Rhinobatos* include the three main circum-nasal structures: an anterior nasal flap (nasal valve of Norman, 1926) bordering the inner margin of the nostril; a posterolateral nasal flap originating along the lateral margin of the anterior (incurrent) aperture and extending variably along the lateral margin of the nostril; and a posterior nasal flap mainly bordering the posterior (excurrent) nasal