

NEW AUSTRALIAN FISHES. PART 14.
TWO NEW SPECIES OF *DASYATIS* (DASYATIDIDAE)

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Abstract

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Two new stingrays, *Dasyatis leylandi* sp. nov. and *D. annotatus* sp. nov., are described. These species resemble the widely distributed and sympatric *D. kuhlii* (Müller & Henle) but differ in colour pattern and external morphology. Unlike *D. kuhlii* the new species lack blue spots on the dorsal surface of the disc. *D. annotatus* is uniformly dull green dorsally and has a distinctive medial series of thorns on the tail. *Dasyatis leylandi* has a dorsal coloration consisting of a network of dark yellowish or brownish reticulations superimposed on a paler background and lacks tail thorns.

Introduction

The genera and species of stingrays (Family Dasyatididae) are currently under review. The genus *Dasyatis* Rafinesque presently contains several species complexes, each of which may be distinct at the generic level. Osteological studies in progress indicate that a complex of species, similar to the widely distributed *D. kuhlii* (Müller & Henle), may be referable to *Amphotistius* Garman, considered by recent authorities to be a junior synonym of *Dasyatis* (Compagno and Heemstra, 1984; Masuda et al., 1984). To avoid further confusion of the nomenclature, however, two new species described herein from north-western Australia are tentatively referred to *Dasyatis*.

Bracketed morphometrics provided in the diagnoses represent values for the holotypes. Material is lodged in the collections of CSIRO Division of Fisheries Research, Hobart, and the Museum of Victoria, Melbourne (NMV).

Dasyatis

Dasyatis Rafinesque, 1810: 16.

Type species. Dasyatis ujo Rafinesque, by monotypy.

Dasyatis annotatus sp. nov.

Figure 1

Dasyatis sp. 1. Gloerfelt-Tarp & Kailola, 1984: 37.

Amphotistius sp. 1. Sainsbury, Kailola & Leyland, 1985: 48, fig on opposing page.

Material examined. Holotype: Western Australia, Northwest Shelf, M. Baron, 1984, CSIRO T449 (male, 212 mm disc width).

Paratypes: Northern Territory, north of Vansittart Bay (13°25'S, 126°19'E), 62 m, trawled, FRV "Soela", 26 Jun 1980 (stn S05/80/18), CSIRO CA1248 (immature male, 191 mm disc width); north of Groote Eylandt, prawn trawl, 28 Jun 1981, CSIRO CA2404 (female with pup, 196 mm disc width).

Arafura Sea, 46 m, trawled, M. Baron, 11 Nov 1983, CSIRO T691 (female, 242 mm disc width) and T695 (male, 209 mm disc width); 09°47'S, 136°20'E, 50 m, trawled, "Pao Yuan No. 1", M. Baron, 22 Feb 1982, CSIRO T694 (female, 220 mm disc width) and T696 (female, 234 mm disc width); M. Baron, Mar 1983, CSIRO T697 (male, 212 mm disc width).

Diagnosis. Disc moderately flat, rhomboidal, width 1.12-1.28 (1.21) times length; pectoral apices narrowly rounded; preorbital snout broadly triangular, margin slightly concave, tip pointed. Disc surface largely naked, denticles confined to separate, single series on disc and tail; denticles on disc small, retrorse, closely spaced, 4-13 (9) (number proportional to size) on midline behind spiracles; 0-4 (3) (rarely absent) similar denticles situated on midline of tail before sting. Eyes small, size not sexually dimorphic; distance from anterior margin of eye to posterior apex of spiracle



Figure 1. *Dasyatis annotatus*, paratype, CSIRO CA 1248.

cle 2.05-2.39 (2.27) in preorbital snout length. Mouth small, 2 elongate papillae on floor; labial furrows and lower labial folds prominent, internasal flap skirt-shaped, papillose, margin fringed; overlapped laterally by inner lobe of nostril; connected anteriorly by narrow membrane. Pelvic

fins moderately large, lateral apices extended. Tail slender, length variable but longer than disc when undamaged; slightly depressed to rounded in cross-section anteriorly, tapering quickly after sting insertion; generally with 2 stings; ventral cutaneous fold low, elongate; dorsal fold short,

situated behind sting, subequal in height to ventral fold. Reaches a total width of at least 242 mm.

Dorsal surface mostly uniform dull green; slightly darker transverse bars situated immediately before eye, through eye and across snout angle; pair of small dark patches situated either side of midline behind spiracles. Tail with variable black and white bands behind sting; apex dark in undamaged specimens; ventral cutaneous fold pale (rarely dusky). Ventral surface pale. Preserved colour: dorsal surface brownish, darker bars and patches often indistinct, tail banding persistent; ventral surface whitish or yellowish.

Distribution. Timor and Arafura Seas, off northern Australia, at depths of 46-62 m.

Etymology. From the Latin combination *an-* (not) and *-notatus* (marked) in allusion to the lack of distinct ocelli, spots or blotches.

Remarks. This species is a member of the *Dasyatis kuhlii* species complex. Unlike sympatric congeners, *D. kuhlii* and *D. leylandi*, *D. annotatus* lacks a distinctive pattern of spots or reticulations on the dorsal surface but has a prominent medial series of thorns on the tail.

Dasyatis leylandi sp. nov.

Figure 2

Amphotistius sp. 2. Sainsbury, Kailola and Leyland, 1985; 48, fig on opposite page.

Material examined. Holotype: Western Australia, north of Forestier Island (19°28'S, 118°24'E), 54 m, bottom trawl, FV "Soela" (stn S02/82/1), 26 Mar 1982, CSIRO CA2806 (male, 189 mm disc width).

Paratypes: Western Australia, north of Dampier Archipelago (20°17'S, 116°25'E), 11 May 1983, CSIRO T674 (female, 213 mm disc width), CSIRO T675 (pup of T674); north-west of Port Hedland (20°00'S 117°55'E), 34m, trawled, FV "Soela" (stn S04/82/89), 22 Aug 1982, CSIRO CA3246 (male, 191 mm disc width); north-east of Monte Bello Islands (19°49'S 116°05'E), 70 m, trawled, FV "Soela" (stn S05/82/12), 23 Sep 1982, CSIRO CA4282 (immature male, 146 mm disc width); west of Dampier Archipelago (19°51'S 116°56'E), 62 m, trawled, FV "Soela" (stn S04/82/57), 16 Aug 1982, CSIRO CA3232 (immature male, 199 mm disc width); north of Port Walcott (19°44'S 117°12'E), 68 m, mesh wing trawl, FV "Soela" (stn S04/80/21), 2 Jun 1980, CSIRO CA1249 (female, 218 mm disc width); north of Dampier Archipelago (20°07'S 116°04'E), 50 m, trawled, "Charng Sheng", 6 May 1982, CSIRO T683 (female, 242 mm disc width), T681

(female, 252 mm disc width) and T676 (female, 190 mm disc width); north-west of Dampier (20°10'S 116°04'E), 60 m, otter trawl, collected by M. Gomon and N. Sinclair, 9 Mar 1981, NMV A1869 (immature male, 197 mm disc width).

Diagnosis. Disc moderately flat, rhomboidal, width 1.13-1.26 (1.26) times length; pectoral apices narrowly rounded; preorbital snout broadly triangular, margin straight or slightly concave, tip feebly pointed to rounded. Disc surface largely naked, single series of 1-9 (2) small, retrorse, closely spaced denticles situated on midline behind spiracles; no denticles on tail. Eyes moderately small, size not sexually dimorphic; distance from anterior margin of eye to posterior apex of spiracle 1.94-2.31 (1.94) in preorbital snout length. Mouth small, 2 elongate papillae on floor; labial furrows and lower labial folds prominent. Internasal flap skirt-shaped, papillose, margin fringed; overlapped laterally by inner lobe of nostril; connected anteriorly by narrow membrane. Pelvic fins moderately large, lateral apices extended. Tail slender, length variable but longer than disc when undamaged; slightly depressed to rounded in cross-section anteriorly, tapering quickly after sting insertion; generally with 2 stings; ventral cutaneous fold low, elongate; dorsal fold short, situated behind sting, subequal in height to ventral fold. Reaches a total width of at least 252 mm.

Dorsal surface pale brown or yellowish, superimposed with a network of darker reticulations; sometimes with light scattering of pale speckles; pattern slightly darker in sub-, pre- and interorbital areas; pair of small faint patches sometimes situated either side of midline behind spiracles. Tail with variable black and white bands behind sting; apex pale in undamaged specimens; ventral cutaneous fold pale with dark margin. Ventral surface pale. Preserved colour: dorsal surface pale brown, darker network distinct although sometimes faint; tail banding persistent; ventral surface whitish or yellowish.

Distribution. Western Australia, off Dampier at depths of 34-70 m.

Etymology. Named in honour of Mr Guy Leyland who was responsible for supplying most of the Australian material to be used in a revision of this genus.



Figure 2. *Dasyatis leylandi*, specimen from type locality (Sainsbury et al., 1985).

Remarks. This new species closely resembles *Dasyatis kuhlii* but, in addition to having a yellowish brown network pattern on the dorsal surface of the disc rather than an array of large blue spots, the new species has a relatively longer snout and smaller eye.

Acknowledgements

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