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NOTES ON FISHES RECENTLY RECORDED FROM TASMANIAN WATERS

by

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(with one plate)

Abstract

*Acanthidium moller*i Whitley 1939 and *Torpedo macneilli* Whitley 1932 are recorded for the first time from Tasmanian waters. Details and figures are given for specimens of *Mendosoma allporti* Johnston 1881 and the second Tasmanian specimen of *Tetraodon firmamentum* Temminck and Schlegel 1850.

INTRODUCTION

Following the pattern of earlier communications, Andrews (1968 and 1970) specimens received at the Tasmanian Museum for identification which are found to be previously unrecorded are listed with notes.

A recent revival of interest in longline fishing by both amateur and professional fishermen has enabled areas to be sampled, towards the edge of the continental shelf, which previously were largely inaccessible. Consequently the range of some non-commercial deepwater species previously known only from the Australian mainland has been extended to Tasmanian waters, suggesting an oceanic rather than coastal distribution.

More recently surveys have been made of both commercial and non-commercial species with a view to wider exploitation of oceanic rather than purely coastal commercial fisheries, see Scott (1969, 1970, 1971) and Harrison and Scott (1969).

Registration numbers listed are those of the Tasmanian Museum, Hobart. Measurements tabled are in millimetres.

Order SQUALIFORMES

Family SQUALIDAE

Genus ACANTHIDIUM Lowe, 1839

*Acanthidium moller*i Whitley, 1932

A specimen 393 mm in length taken by longline in 450 fathoms, 23 miles due east of Eddystone Point 24.vii.71, constitutes the first record of this deepwater species from Tasmania. The distribution of the species is given by most Australian authors as New South Wales, South and Western Australia and the Great Australian Bight in depths ranging from 130 to 450 fathoms. Smith (1950, p. 59) records the species from South

Africa and gives the distribution as 'widespread in the Indo-Pacific'. As the present specimen was taken from the edge of the continental shelf the species appears to have a wide range of distribution and its discovery in Tasmanian waters is not unexpected.

Some authors, notably Smith (*loc. cit.*) and Munro (1956), treat this species as a synonym of *Etmopterus lucifer* Jordan and Snyder, 1902 from Japan. In describing the species however, Whitley (1939), states that the two genera are separated by *Acanthidium* having—

- (i) the first dorsal fin noticeably smaller than the second.
- (ii) the ventral fins terminating before the origin of the second dorsal.

Reference to the figure provided by Jordan and Snyder (1902, p. 79) in their description of *Etmopterus lucifer* however would seem to indicate that both these conditions are fulfilled by that species, but only the second feature is mentioned in the text.

The Tasmanian specimen differs from Jordan and Snyder's species in the following:—

- (i) The more posterior insertion of the dorsal fin relative to the pectoral fin.
- (ii) The more posterior insertion of the mouth relative to the eye.
- (iii) The different shape of the pectoral fin.

Agreement with Whitley's (1939) description and figure however is excellent. In the most recently available listing, Scott (1962), the species is figured as *Acanthidium moller*i Whitley, 1939.

TABLE 1

Measurements of *Acanthidium moller*i
Reg. No. D1010.

Total length	393.7
Head length	88.9
Depth (max.)	31.8
Snout length	25.4
Eye diameter	19.0
Snout width	30.2
Interspiracular width	25.4
Snout tip to mouth origin	41.1
Snout tip to 1st dorsal	133.3
Snout tip to 2nd dorsal	247.6
Snout tip to ventral origin	219.5

Length 1st dorsal base	19.0
Length 2nd dorsal base	28.4
Length ventral base	33.3
Length caudal peduncle	44.5
Length gill slits	19.0
Height gill slits	6.4

Colour:—Uniform dark greyish-black on upper and lateral surfaces, abdominal surface noticeably darker. Body entirely covered with short unbranched claw-like spines which are arranged in longitudinal rows on the dorsal and lateral surfaces but randomly and densely distributed on the abdominal surface which is sharply demarcated from the rest of the body, both in colour and spine pattern.

Teeth:—Three rows of teeth in the upper jaw, each with a prominent central cusp with two smaller cusps on either side. A single row of flattened teeth in the lower jaw with the points directed laterally on either side.

Both dorsal fins preceded by spines, a single spine on the first dorsal and two on the second, all spines triangular in section. Nostrils and spiracles large, no anal fin, vertical and paired fins thin in section and sparsely pigmented. Bases of all fins not noticeably thickened. Fine gill slits, small in section commencing mid-way between the angle of the mouth and pectoral origin and terminating immediately anterior to the pectoral base.

Order **TORPEDINIFORMES**

Family **TORPEDINIDAE**

Genus **TORPEDO** Houttuyn, 1764

Torpedo macneilli (Whitley), 1932

The specimen was taken in a crab tangle-net set on 25.i.70 in 84 fathoms due east of Cape Pillar, south-east Tasmania. When the net was hauled on 27.i.70 at 1750 hrs it was found to contain the ray together with fish of several other species. As the ray appeared to be dead it was laid out flat on the deck of the boat, dorsal surface uppermost. However when Mr D. C. Wolfe of the Sea Fisheries Division inadvertently allowed a length of damp rope he was holding to rest across the dorsal surface of the fish it demonstrated its vitality by dealing Mr Wolfe a severe electric shock which threw him several feet across the deck. The specimen was deep frozen and later forwarded to the Museum by Mr Wolfe where it was preserved in 10% formalin.

The presence of this species in Tasmanian waters is not altogether surprising as the distribution is given by both Munro (1956) and McKay (1966) as New South Wales, Victoria, South Australia and southern Western Australia. The species is considered by some authors, notably Whitley (1940), to be doubtfully distinct from the evidently closely allied *T. fairchildi* Hutton, from New Zealand. According to McKay (1966) the principal difference separating the two species appears to be the point of termination of the base of the first dorsal fin which is stated to be posterior to the end of the pelvic fin base in

T. macneilli and level with this point in *T. fairchildi*. In the Tasmanian specimen, which considerably exceeds the size recorded for the Australian species by both Whitley (1940) and Munro (1956), the distance between the end of the pelvic fin base and the end of the first dorsal base is 25.4 mm equal to 2.3% of the total length.

The specimen has been added to the Tasmanian Museum collections, reg. No. D1013.

TABLE 2

Measurements of *Torpedo macneilli* No. D1013

Total length (Mid anterior edge of disc to posterior extremity of caudal)	1122.0
Max width of disc	784.1
Mid anterior edge of disc to:—	
1st dorsal origin	777.8
2nd dorsal origin	867.0
Anterior border eye	66.5
Anterior border spiracle	108.4
Anterior border nostril	57.9
Origin of vent	694.9
Length of disc	637.5
Max. width ventral fins	376.1
Interorbital width	70.1
Internasal valve width	44.6
Posterior border internasal valve to anterior border mouth	19.1
Width of mouth	76.5
Length of vent	38.2
Length of 1st dorsal base	63.8
Length of 2nd dorsal base	38.2
Dorsal length of caudal peduncle ..	63.8
Max. height of caudal fin	232.2
Max. height of 1st dorsal	82.8
Max. height of 2nd dorsal	63.8

Colour:—Dorsal surface uniform dark-brown, ventral surface creamy white.

Teeth:—A rounded band of small fine teeth in each jaw approximately 7.00 mm wide.

Five pairs of gill slits, all apparently functional.

Sex:— Female.

Order **PERCIFORMES**

Family **LATRIDAE**

Genus **MENDOSOMA** Gay, 1848

Menosoma allporti Johnston, 1881

(Plate I)

The distribution of this little-known and evidently comparatively rare species has so far been listed by Johnston (1881) and McCulloch (1929) as the Derwent Estuary, Tasmania. Lord and Scott (1924) note in addition that the species 'frequents the moderately deep water of the East Coast'.

The present specimen (Pl. I) was taken by net at Fortescue Bay, Tasman Peninsula (1.iii.68) and appears to be the southernmost locality recorded for the species which has so far only been recorded from Tasmania.

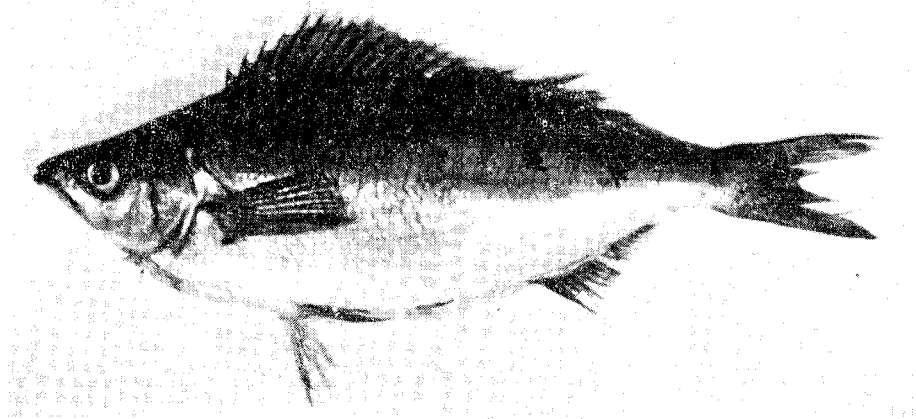
PLATE 1.—*Mendosoma allporti*.

TABLE 3

Measurements of *Mendosoma allporti*

Reg. No. D945

Total length to caudal fork	245.0
Head length	55.0
Max. depth of body	78.0
Snout tip—	
Dorsal origin	58.0
Ventral origin	84.0
Anal origin	156.0
Posterior edge of dorsal	197.0
Posterior edge of anal	195.0
Eye origin	17.0
Eye diameter	7.0
Eye height	6.0

Body proportions:—(figures in square brackets are data from Johnston's description):—

Head in L.C.F.	4.4	[5.0]
Head in depth	1.4	
Depth in L.C.F.	3.1	[3.25]
Eye in head	7.8	
Fin count:—D.	xxiii/23.	[23/i/25].
A.	ii/19.	[iii/18].
P.	16.	[16].
V.	i/5.	[i/5].
L. lat.	73.	[76].
C.	17.	[?].

Colour:—Dark olive green above, yellowish silver below with several irregular dark blotches on upper surface near the soft dorsal. Mouth conspicuously oblique and extendable.

Order **TETRODONTIFORMES**Family **TETRAODONTIDAE**Genus **TETRAODON** Linne, 1758

Tetraodon firmamentum Temminck and Schlegel, 1850

A specimen 415 mm total length found drifting alive in Norfolk Bay, south-east Tasmania by Mr T. Jenkins constitutes the second record of this species from Tasmania. For an earlier record and the distribution of the species see Scott (1965).

The present specimen agrees with the description provided by Scott (*loc. cit.*) with the exception of the larger size and the caudal fin which is uniformly dark in colour. An X-ray photograph of the specimen was made to determine osteological characteristics.

McCulloch (1929), and Scott (1965) treat *T. gillbanksii* Clark, 1897 as a synonym of this species, a procedure not adopted by Whitley (1968) who refers *T. gillbanksii*, treated as a distinct species, to the genus *Boesemanichthys* Abe, 1952.

TABLE 4

Measurements of *Tetraodon firmamentum*
Reg. No. D1014.

Total length	415
Standard length	330
Snout tip to dorsal origin	242
Snout tip to anal origin	248
Length head	110
Length dorsal base	32
Length anal base	32
Length pectoral fin	50
Min. depth caudal peduncle	32
Eye diameter	16.5
Interorbital width	59

D. 14., A. 14., P. 15., C. 9., Vertebrae: 20.
Body spines all two-rooted.

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