NEW FISH RECORDS AND NOTES ON SOME UNCOMMON TASMANIAN SPECIES

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ABSTRACT

Biometrical data are given of the first adult *Centroscymnus waitei* (Thompson), *Scymnodon plunketi* (Waite) and female *Galeus boardmani* (Whitley) caught in Australian waters.

The following fish species are also new records for Tasmania:—*Parascyllium ferrugineus* McCulloch, *Halaelurus vincenti* (Zeitz), *Beryx decadactylus* Cuvier, *Neocyttus rhomboidalis* var. *gibbosus* McCulloch, *Anthias pulchellus* Waite and *Ophioclinus gracilis* Waite.

New place localities are given for:—*Diastobranchus danae* (Bruun), *Muraenichthys breviceps* Günther, *Paratrachichthys trailli* (Hutton), *Brama raii* (Bloch), *Arripis georgianus* (Valenciennes), *Gasterochisma melampus* Richardson, *Rexea solandri* (Cuvier), *Bovichthys angustifrons* Regan, *Petraites johnstoni* (Saville Kent), *Arenogobius bifrenatus* (Kner) and *Pataecus maculatus* Günther.

INTRODUCTION

The purpose of this paper is to record additions to the fish fauna and list extensions of localities for some uncommon fish. Biometrical data have been presented for some species.

During the past seven years commercial fishing operations have extended into waters beyond the continental shelf and as a result, fish previously unknown from Australia, have been caught.

Strange fish are being made available for identification by fishermen so much more readily now that they are able to hold specimens for long periods under refrigeration. Previously they had experienced difficulty in preserving such fish. It has been possible to make these additions to the fish fauna list only through the interest of fishermen and the use of freezer storage.

NEW AUSTRALIAN AND TASMANIAN RECORDS

Family SQUALIDAE

Centroscymnus waitei (Thompson, 1930). Waite's deep-sea dogfish.

This species was known previously only from the holotype, a juvenile male 318 mm. total length, taken on a long line in deep water off Kaikoura, New Zealand, August, 1928 (Garrick, 1955).

Both Tasmanian specimens listed here were caught on long lines on the continental shelf slope in 400-500 f. off the east coast of Tasmania.

Scymnodon plunketi (Waite, 1910). Lord Plunket's Shark.

One male, 1310 mm. and one female, 1370 mm., both mature, were taken under similar conditions to the previous species.

On the basis of the capture of these fish, Munro (1956) listed these species, Nos. 81 and 82 in his Handbook of Australian Fishes. Cowper and Downie (1957) referred to the catching of more specimens of these species.

Measurements (mm.) of both *C. waitei* and the female *S. plunketi* are as follows:—

	Centroscymnus waitei		*Scymnodon plunketi*	
	female	female	female	male
Snout tip to outer nostril	18	9	33	....
Snout tip to eye	46	29	60	....
Snout tip to spiracle	101	71	150	....
Snout tip to 1st gill	134	99	227	....
Snout tip to 2nd gill	144	104	236	....
Snout tip to 3rd gill	149	109	245	....
Snout tip to 4th gill	159	113	250	....
Snout tip to 5th gill	167	116	—	....
Snout tip to base of pectoral fin	180	116	274	....
Snout tip to base of 1st dorsal fin	347	189	270	....
Snout tip to base of pelvic fin	643	331	765	....
Snout tip to base of 2nd dorsal	726	360	835	....
Snout tip to base of lower caudal fin	830	445	1,023	....
Snout tip to base of upper caudal fin	875	455	1,070	....
Total length	1,070	588	1,370	1,310
Trunk at pectoral origin breadth	—	90	200	....
height	—	50	175	....
Colour	Dark-brown	Light-grey	Light grey-brown	....
Locality	Cont. slope Maria Is.	15m. N.E. Wineglass Bay	Cont. slope Maria Is.	400 f. Maria Is.
Date	10. v. 51	9. vii. 52	10. v. 51	16. vi. 53

C. waitei. 1st dorsal origin behind posterior insertion of pectoral base. Distance between origins of 1st dorsal and pelvic fins approximately twice total length of dorsal fin. Origin of second dorsal fin behind pelvic origin. Distance between inner corners of nostrils 1/22 length of body. Horizontal diameter of eye 2⅔ vertical diameter. 1st dorsal origin approximately half way between 2nd dorsal and snout. 2nd dorsal origin 2/3 distance from snout to distal margin of caudal. Pectoral 1/5, and pelvic 3/5 distance from snout to distal margin of caudal. Placoid scales: The hollowed out upper surface of the blade, plus the lack of ridges, denticulations and other sculpture are very characteristic of the genus *Centroscymnus* (Garrick, 1955). Female 1070 mm.—the two uteri each contained 6-12 recently ovulated eggs; liver lobes extended full length of body cavity, the left one was the longer.

S. plunketi.—1st dorsal origin slightly in front of pectoral origin. Thirteen embryos, five males and eight females averaging about 12 cm. were removed from the uteri. Two yolk sacs measured 45 x 50 mm. and 55 x 40 mm.

NEW TASMANIAN RECORDS

Family ORECTOLOBIDAE

Parascyllium ferrugineum McCulloch, 1911. Rusty Catshark.

Both catsharks were caught during March, 1952, in graball nets off the Forestier Peninsula, East Coast.

Family SCYLIORHINIDAE

Halaelurus vincenti (Zeitz, 1908). Gulf Catshark.

Previously this species of catshark was only known from South Australia and Victoria, but in May, 1951, a specimen was caught in a graball net in George Bay, near St. Helens. Biometrical data (mm) have been compared with those of two *Halaelurus analis* (Ogilby). For convenience similar data have been listed in the same table for the two specimens of *P. ferrugineum* Waite.

	P. ferrugineum		*H. vincenti*	*H. analis*	
Total length	825	784	462	574	614
Snout tip to 1st dorsal	420	390	215	260	277
Snout tip to 2nd dorsal	580	540	305	380	403
Snout tip to origin of pectoral	130	....	78	96	97
Snout tip to origin of ventral	315	..	...	208	224
Snout tip to origin base anal	520	510	266	320	338
Snout tip to base lower caudal	665	630	354	445	466
Clasper length (to outer edge of membrane)	...	..	67	43	46
Snout to anterior edge of pectoral	130	115	78	96	...
Snout to anterior edge posterior insertion of pectoral	150	144	98	119	120
Snout to anterior edge of ventral	315	290	166	208	...
Snout to anterior edge posterior insertion of ventral	365	338	202	254	255
Sex	Mature female	Mature female (ova 30 mm.)	Mature male	? male	Mature male
Length of gill opening 1	11	9	8	13	13
Length of gill opening 2	13	10	7	12	12
Length of gill opening 3	12	11	6	11	11
Length of gill opening 4	10	10	4	9	9
Length of gill opening 5	28	27	3	5	4
General colour	Light grey-brown with grey bands	Grey background, very dark brown band	Very dark-brown	Light grey brown	Light grey-brown
Spots	Very dark-brown	Very dark-brown	Creamy white	Dark-brown	....
Size of spots (diam. mm.)	5-8	5-8	....	2-5	2-5

Galeus boardmani (Whitley, 1928). Sawtail Shark.

This species was previously known only from males and the female caught on 2. vii. 52 in 300 f. off Maria Island is the 1st record of its sex of this species. Details of measurements (mm.) are as follows:—

Snout tip to anterior edge of eye	30
Snout tip to posterior edge of eye	48
Snout tip to spiracle edge of eye	54
Snout tip to 1st gill slit	68
Snout tip to 5th gill silt	87
Snout tip to base of pectoral	85
Origin of vent	200
Base of 1st dorsal	285
Base of 2nd dorsal	330
Base lower caudal fin	390
Total length	503
Weight	¾ lb.

There were 14 transverse bands of dark colour on the dorsal surface, the anterior band extended between the eyes.

There is a latex cast in the National Museum, Melbourne, the carcase has been lost.

Family BERYCIDAE

Beryx decadactylus Cuvier, 1829.

This fish was caught on a long line set on 17.1.52 in 300 f. off Maria Island. Previously its southern limits were over 100 f. in north-eastern Bass Strait.

Family ZEIDAE

Neocyttus rhomboidalis var. *gibbosus* McCulloch, 1914. Spiky Dory.

This fish was caught during July, 1951, on a long line in 100 f. off Maria Island. The first record of this species was made by the F.I.S. "Endeavour" during the 1912-13 operations in the Great Australian Bight. There are only three anal spines present in this specimen. Dimensions (mm.):—

Length of head to operculum	123
Depth of body at origin of 1st dorsal	192
Length to caudal fork (LCF)	340

Family OPHIOCLINIDAE

Ophioclinus gracilis Waite, 1906.

This blenny was present in the gut contents of juvenile school sharks caught on 26.viii.50 in George Bay (St. Helens). It is a common food fish for the small sharks in this estuary.

Family ANTHIIDAE

Anthias pulchellus Waite, 1899. Orange Perch

A single specimen was trapped in a net-covered craypot attached to a long line set on 21.x.50 in 200 f. west of King Island.

NEW PLACE LOCALITIES

Family SYNAPHOBRANCHIDAE

Diastobranchus danae (Bruun, 1937). Basket-work Eel.

The adults of this eel were first caught on a long line set on 10.vii.51 in 100 f. off Maria Island. The writer sent a gravid female, 1225 mm. to Sydney for identification and the species was recorded by Whitley (1952). Since then more eels have been caught on a long line on 8.v.53 in 600 f. west of King Island.

Biometrical details (mm.) are as follows:—

	Maria Island 100 f.		King Island 600 f.		
	1	2	1	2	3
Snout tip to anterior edge of eye	43	55	40	42	33
Snout tip to posterior edge of eye	65	75	62	61	48
Snout tip to origin pectoral	147	170	134	130	102
Snout tip to vent	252	290	235	205	175
Snout tip to origin dorsal	335	430	345	326	233
Maximum depth (end of pectoral)	73	83	75	75	...
Snout to nostril	10	17	14	13	11
Total length	1,085	1,225	1,005+	985	777
Sex	....	female (mature)	female (mature)	male	?
Weight (lb.)	$2\frac{3}{4}$	$4\frac{1}{4}$	$3\frac{3}{8}$	3 1/16	$1\frac{1}{4}$

Family ECHELIDAE

Muraenichthys breviceps Günther, 1876. Short-headed worm eel.

This eel occurs along the silty foreshore between Middleton and Gordon, D'Entrecasteaux Channel, where it is recognized by the reddish-brown colour it reflects from underwater lights. A specimen, T.L. 494 mm. was speared in this area on 22.x.57 by Mr. T. Wolfe.

Family TRACHICHTHYIDAE

Paratrachichthys trailli (Hutton, 1876). Sawbelly or Sandpaper fish.

This species is generally considered as a deep-water inhabitant and usually is caught by trawling. On 28.iv.53, several were caught in a graball at Freestone Point, Spring Bay. Two specimens brought in for identification measured L.C.F. 200 mm. and 185 mm. Another specimen L.C.F. 140 mm. was caught on 15.i.57 in a graball at Pilot Bay Beach, Cape Sorell.

Family BRAMIDAE

Brama raii (Bloch, 1791). Ray's Bream or Pomfret.

As *Lepidotus squamosus* (Hutton, 1875) the first Tasmanian occurrences of Ray's bream were reported by Scott (1955) from Temma (July, 1953) and later the same year on a long line set on 20.x.53 in 250 f. E.S.E., Tasman Peninsula. A short time after this second report three more were caught, one at Port Davey (1954) and two in Storm Bay (2 and 12.iii.54), and another at Coles Bay (April, 1955).

With the exception of the Coles Bay specimen which was caught by hand in shallow water, the others were hooked on tow lines. Measurements (mm.) of both Storm Bay specimens are as follows:—

	2.iii.54	12.iii.54
Snout to caudal fork (L.C.F.)	273	284
Snout to operculum	69	67
Depth of body at 1st dorsal origin	112	116

The classification of Ray's bream is most contentious and because both Storm Bay specimens (the only ones available for study) had 57-59 transverse rows of scales (anterior to pectoral fin), a lateral line and scales with finely toothed edges these specimens have been reported under the above more widely known, but not necessarily correct, name.

Family ARRIPIDAE

Arripis georgianus (Valenciennes, 1831). Tommy Rough.

From specimens caught on 18.iii.37 at George Town, Scott (1939) was able to add this species to the Tasmanian fish fauna list. During August, 1952, a number of these fish were caught in a seine net at Port Sorell which is now a new place record for this species.

Total length	710
Length to caudal fork	632
Snout to anterior edge of eye	57
Snout to posterior edge of eye	72
Snout to operculum	141
Snout to anterior insertion of pectoral	157
Snout to anterior insertion of pelvic	150
Snout to anterior insertion of anal	400
Snout to 1st dorsal origin	68
Snout to 2nd dorsal origin	370
Length of pectoral fin	90
Length of pelvic fin	140 (damaged)
Depth of body	...
Depth of body { origin of 1st dorsal	160
Depth of body { origin of 2nd dorsal	150

Family GEMPYLIDAE

Rexea solandri (Cuvier, 1831). King Barracouta.

Formerly plentiful these fish are now taken mostly on long lines in deep water. On 12.i.56, a damaged living specimen was washed ashore on the Pilot Bay Beach, Cape Sorell.

Family BOVICTIDAE

Bovichthys angustifrons Regan, 1913.

This gurnard-like fish is known only from two specimens, one in the British Museum from Tasmania and the other in the Chatham Museum from an unknown locality. During April, 1950, a third fish was caught by Mr. S. E. Dale on a long line in 30 f. off South West Cape. It has been preserved in the collection of the C.S.I.R.O. Division of Fisheries and Oceanography, Cronulla, N.S.W.

Family CLINIDAE

Petraites johnstoni (Saville Kent, 1886). Weed fish.

Formerly, this fish was known only from the Tamar River but many specimens mostly between 200-300 mm. total length have been received for identification from south-east Tasmania. As the common name indicates it is found close inshore in seagrass and seaweed beds.

Family SCOMBRIDAE

Gasterochisma melampus Richardson, 1845. Butterfly Mackerel.

This rare oceanic species was first recorded in 1845 from New Zealand. It has been reported three times previously from Tasmanian waters (i) Bass Strait (1867), (ii) mouth of Derwent Estuary (T.L. 39 ins.), (iii) Storm Bay (1944). On 18.vi.50 the fourth record, T.L. 710 mm., L.C.F. 632 mm., was caught on a tow line off South East Cape and on 27.v.53) another fish L.C.F. 560 mm. was landed on a tow line in Spring Bay.

While spearing flounders on the night of 30.v.54 in 4 feet of water inside the entrance of Pittwater, Mr. K. Crome, Hobart, saw a school of 8-10 fish which used their large pectoral fins for brakes as they approached his underwater light. He speared two and submitted them for identification. They were butterfly mackerel and biometrical observations (mm.) of these and the South East Cape specimen are as follows:—

South East Cape	Pittwater 1	Pittwater 2
710	288	251
632	253	228
57	19	15
72	28	24
141	56	49
157	58	51
150	57	50
400	150	133
68	61	56
370	142	123
90	28	22
140 (damaged)	88	80
...	...	...
160	54	48
150	56	47

Family GOBIIDAE

Arenigobius bifrenatus (Kner, 1865). Bridled goby.

This viviparous goby, like *Ophioclinus gracilis* Waite mentioned earlier, forms a part of the diet of juvenile school sharks in George Bay (St. Helens). Specimens were collected in 1950 and identified by Mr. I. S. R. Munro, C.S.I.R.O. Division of Fisheries and Oceanography. Reference to their occurrence in George Bay was made earlier (Olsen, 1954). Whitley (1954) listed it as a new record for Tasmania from a specimen caught in West Arm, Tamar River.

Family PATAECIDAE

Pataecus maculatus Günther, 1861. Warty Prow Fish.

The presence of this fish in Tasmanian waters was not confirmed until 1936 (Scott, 1936). Specimen No. 890 in the Queen Victoria Museum is from Northern Tasmania, probably Tamar Heads. A second specimen 195 mm. was caught during April, 1954, in a graball net at Port Sorell.

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