ALLOTHUNNUS FALLAI SERVENTY—A NEW RECORD FOR AUSTRALIAN WATERS

By

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ABSTRACT

The capture of two specimens of *Allothunnus fallai* Serventy in Pirates Bay, Tasmania, constitutes the first record of this rare tuna in Australian waters. Four of these tuna have been taken from waters within latitudes 43° and 44° S. Biometrical data are given of two fish.

INTRODUCTION.

In July, 1960, the first two tuna, while splashing in a distressed manner, were caught by hand in shallow water at the southern end of Pirates Bay, Tasman Peninsula. The first specimen, weighing about 30 lb., was eaten and the second (18.5 lb.) was made available for study.

In January, 1961, a third specimen was caught on a tow line off Pedra Blanca, a rocky islet about 20 miles off the southern coast of Tasmania. Captain R. J. Downie, formerly master, C.S.I.R.O. Fisheries Research Vessel "Derwent Hunter", who trolled the tuna, recognised it as different from other tuna he had seen and before dissecting it made a series of measurements of the tuna. He had no means of preserving the fish for later detailed study.

The fourth specimen was caught in a set net in four fathoms in Pirates Bay near the same locality where the first two tuna were caught just over a year earlier.

DESCRIPTION

Colour: In this respect Falla's tuna bears a superficial resemblance to the southern bluefin tuna *Thunnnus thynnus maccoyii* (Castelnau): the dorsal surface is dark-blue, and the ventral surface silvery. There is no evidence of any pattern.

A circular non-pigmented area, 1-1.5 cm. diameter, was present on the heads of the two tuna examined. This clear area lies in a median position immediately in front of the supra-occipital crest and the anterior edge is closer to the snout than the posterior edge of the eye. Immediately beneath the clear area is a fontanelle, an unossified part of the cranium. In the fresh state it was reported that this tuna had "a window on its brain".

The caudal keels are whitish in colour and appear semi-transparent.

Scales: The *corselet* is well defined in the pectoral region, the scales decreasing in size towards the dorsal caudal region. There were no signs of scales on the ventral caudal region of the 83 cm. fish.

In all other external characters there is close agreement with the original description given by Serventy (1948).

Internal Anatomy.

There was no swim bladder.

Pyloric caeca were numerous and extended approximately two-thirds of the length of the body cavity.

Gall bladder was thin walled, approximately 1 cm. diameter and extended about two-thirds of the length of the body cavity.

Stomach had only 13 prominent longitudinal ridges whereas the New Zealand specimen had 16 ridges.

Gonads (male) extended forwards into the posterior half of the body cavity; they were whitish in colour, firm in texture and mature.

Liver was folded around the alimentary canal, the left lobe being larger and longer than the right lobe. In the tuna caught by him, Captain Downie reported:—

Liver: Large with elongated dark lobe.

Stomach contents: Krill.

Pyloric caeca: Large.

No swim bladder apparent.

Sex: Female, stage 3.

Flesh: Greenish in colour, oily in texture.

After thawing following cold storage for over a year, oil was present on the surface of the 83 cm. tuna from Pirates Bay.

References

SERVENTY, D. L., 1948.—*Allothunnus fallai*. A new genus and species of tuna from New Zealand. *Rec. Cant. Mus. V.* (3): 131-135.

MEASUREMENTS (cm.) OF *ALLOTHUNNUS FALLAI* CAUGHT IN SOUTHERN TASMANIAN WATERS.

	1	2	3	4
Location of capture	Pirates Bay	Pirates Bay	Pedra Blanca	Pirates Bay
Date	July 1, 1960	July 1, 1960	Jan. 16, 1961	August 9, 1961
Person	R. Pettman	R. Pettman	R. J. Downie	C. Pettman
Method	Stranded	Stranded	Tow line	Set net
Total length	85	....	c. 76	96.5
Total weight	18.5 lb.	c. 30 lb.	c. 22 lb.	15 lb.
Sex	Male	....	Female	....
Fin formulae:—				
Dorsal	15, 12, 7	....	15, —, 7	....
Anal	14, 7	....	—, 7	....
Pectoral	25	....	—	....
Gill raker count: 1st arch	left 77, right 76	....	66 +	77
Length—				
Snout to caudal fork	80.0	....	....	
Head length	20.5	....	....	23.0
Origin of pectoral fin	21.5	....	....	....
Origin of 1st dorsal fin	24.2	....	....	....
Origin of 2nd dorsal fin	49.2	....	....	....
Origin of ventral fin	22.0	....	....	....
To anterior edge of vent	50.5	....	....	....
Hinder edge of pre-operculum	15.5	....	....	17.4
Anterior nostril	3.7	....	....	3.8
Posterior nostril	5.2	....	....	5.8
Anterior edge of eye	5.8	....	....	6.5
Anterior edge of median non-pigmented area	6.5	....	....	8.0
Posterior edge of median non-pigmented area	7.5	....	....	9.5
Diameter of eye	3.0	....	....	3.3
Inter-orbital diameter	5.5	....	....	7.0
Inter-axillary diameter	12.0	....	....	....
Length of pectoral fin	8.0	....	....	....
Length of pectoral fin alongside body	9.5	....	....	....
Length of maxillary	7.2	....	....	8.0
Length of mandible	7.0	....	....	8.0
Height of body at origin of 1st dorsal fin	17.0	....	....	....
Greatest height of body	18.0	....	....	....
Height of body at vent	16.0	....	....	....
Height of 1st dorsal fin	7.5	....	....	....
Height of 2nd dorsal fin	7.5	....	....	....
Height of anal fin	7.2	....	....	....
Height of upper caudal lobe	12.0	....	....	Head only available

L. G. SHEA, Government Printer, Tasmania.