

## NOTES

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### ON THE OCCURRENCE OF *RASTRELLIGER FAUGHNI* MATSUI IN THE INDIAN WATERS

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This is the first record of the mackerel, *Rastrelliger faughni* from the Indian ocean. The characters that clearly distinguish this species from others of *Rastrelliger* are the few and short gill rakers, more slender body, shorter head, maxillary and mandible.

Matsui (1967) described a new species of *Rastrelliger*, viz., *R. faughni* from Taiwan and Philippines and considered *Scomber australasicus* de Beaufort (1951) (*nec* Cuvier 1831) and *Pneumatophorus australasicus* Manacop (1956) (*nec* Cuvier 1831) as synonyms. The distribution of *S. australasicus* though given by de Beaufort as "Buton, North Celebes, Ambon, Misool, Coasts of Australia, Tasmania and New Zealand" will need reappraisal. Present records indicate that *R. faughni* is known only from Taiwan, Philippines and Indonesian waters (Western Pacific) (Matsui, 1967). Hitherto only two species of mackerel, namely *R. kanagurta* and *R. brachysoma* have been reported from the Indian seas (Jones and Silas, 1964; Matsui, 1970; Rao, 1970). In December 1965 a few specimens of mackerel were obtained by the author at Madras which differed markedly from *R. kanagurta* and *R. brachysoma*. The subsequent description of *R. faughni* by Matsui (1967) indicated that the specimens in the collection were identical with it. More recently the author has been able to collect additional material of *R. faughni* of the size range 68-198 mm (standard length) from shore seines, gill nets and trawls operated off Madras, particularly during the months February to May 1971. This report thus represents the first record of this species from the Indian Ocean.

A comparison of the body proportions in percentage of standard length between the present material and those given by Matsui (Table 1) reveals remarkable similarity. Only slight differences appear to be there in head length, snout, body depth and diameter of eye which show a higher value in the present specimens than those observed by Matsui. The characters in which the present material distinctly differ from *R. kanagurta* obtained along with *R. faughni* in Madras is presented in Table 2. The distinguishing characters of *R. faughni* may be said to be as follows: body is

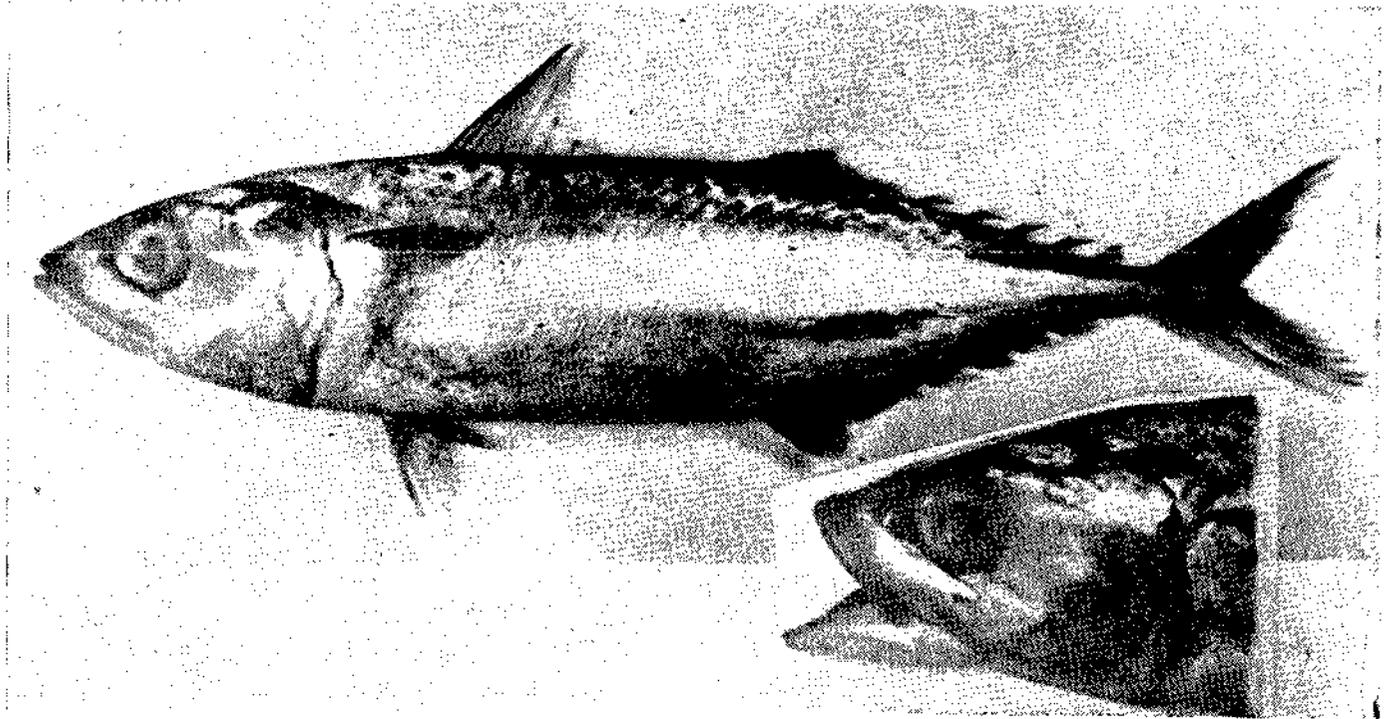


FIG. 1. *Rastrelliger Faughni* from the Indian waters. Head with mouth kept open to show the absence of feather-like gill rakers.

TABLE 1. Comparison of measurements in percentage of standard length of *Rastrelliger faughni* Matsui from Taiwan and Philippine waters and *R. faughni* Matsui from Indian waters

Characters	<i>Rastrelliger faughni</i> (Matsui, 1967)			<i>Rastrelliger faughni</i> (Indian waters)		
	Range	Mean	Number	Range	Mean	Number
1. Standard length (in mm)	92.5-204	180.0	33	68-198	152.7	33
2. Head length	25.2-28.0	26.5	33	27.6-30.5	28.9	33
3. Snout length	6.6-8.7	7.7	33	7.4-9.5	8.3	33
4. Maxillary length	9.7-11.0	10.4	33	9.7-12.0	11.7	33
5. Mandible length	13.3-16.3	15.1	33	14.0-17.6	15.7	33
6. Space between first dorsal fin groove and second dorsal fin	7.0-11.8	8.6	33	6.1-11.5	8.4	33
7. Length first dorsal fin groove	16.8-22.6	19.7	33	17.2-22.1	20.0	33
8. Basal length second dorsal fin	11.8-16.2	12.8	33	12.9-15.4	14.1	33
9. Snout-pelvic fin distance	30.1-36.6	32.6	33	30.6-34.5	32.0	33
10. Pelvic anal distance	29.7-36.3	32.7	33	31.0-34.4	33.2	32
11. Pectoral fin length	11.2-14.7	13.0	33	11.9-15.0	13.2	33
12. Length 2nd spine of first dorsal fin	11.3-15.5	13.4	27	12.5-16.5	14.5	33
13. Eye diameter	5.4-7.5	6.8	33	7.1-10.6	8.2	33
14. Body depth at:						
Operculum	18.7-22.0	20.8	33	20.3-23.7	22.2	33
1st spine of 1st dorsal	20.5-24.4	22.4	28	22.0-26.2	24.6	31
7th spine of 1st dorsal	19.5-26.9	23.9	25	22.0-26.3	24.7	31
Anal fin	18.9-23.0	21.7	33	20.5-25.0	23.3	32
15. Length of longest gill raker	3.8-5.6	5.1	33	4.2-6.7	5.4	33
16. Number of gill rakers	11-14/22-25			12-14/21-25		33

more slender; head shorter; mouth short with the mandible extending not beyond the hind border of eye and the maxillary extending near to the middle of eye and stopping at about  $3/4$  the length of maxillary sheath or lacrimal; teeth absent in vomer and palatine; gill rakers very few and short, not visible like feathers when the mouth is opened. In live specimens the dorsal surface is bluish green with two rows of black spots on either side extending from the hind end of skull to caudal peduncle. Silvery with yellowish tinge below; black spot present on the body behind the pectoral base. Dorsal fins, finlets and pectorals greyish at the outer margin. Internally the lining of the body cavity has scattered melanophores appearing greyish in young juveniles and practically colourless in specimens above 150 mm.

In osteological features the present material agrees with the details as given for *R. faughni* by Matsui (1967). In the number of vertebrae, the shape and number of

TABLE 2. Comparison of *Rastrelliger kanagurta* and *R. faughni* from Indian waters

Characters	<i>Rastrelliger kanagurta</i>	<i>Rastrelliger faughni</i>
1. Gillraker counts	17-23/34-42	11-14/22-25
2. Longest gill raker	8.4—12.2	4.2—6.7
3. Head length	30.4—32.2	27.6—30.5
4. Body depth:		
at operculum	23.8—26.1	20.3—23.7
at 1st spine of 1st dorsal fin	26.2—29.2	22.0—26.2
at 7th spine of 1st dorsal fin	26.2—29.2	22.0—26.3
at anal fin	24.2—26.6	20.5—25.0
5. Maxillary length	13.8—17.0	9.7—12.0
6. Mandible length	18.8—23.0	14.0—17.6
7. Snout length	8.4—9.9	7.4—9.5

Note: Characters 2-7 in percentage of standard length.

interhaemal and interneural bones *R. faughni* shows similarity to *R. kanagurta*. However, they differ in other characters such as the structure of the lateral bones of the skull and the hyoid and branchial arches.

Matsui (1967) found the length of gut of *R. faughni* to be much shorter than that of *R. kanagurta* and *R. brachysoma*. The gut lengths of the present material too appear to be much shorter than that of the Indian mackerel, *R. kanagurta* but more data are required to lay emphasis on this character.

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