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Coeloplana echinicola n. sp.

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With Plate XIX

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Coeloplana is a peculiar animal; it is a flat-worm in shape in spite of its true ctenophorean structure. Since the first type, *Coeloplana metschnikowii*, was brought to our scientific knowledge by a Russian zoologist A. KOWALEVSKY (1880), other types of the same animal have been discovered one after another in Japan as well as on the pacific coast of French Indo-China. For the sake of brevity the character and habitat of those known species may be summarized as in the table.

Besides these I have mentioned in the preceding paper the existence of one more species at Seto. It may be named *Coeloplana echinicola*, since this form was discovered on the test of an echinus *Toxopneustes pileolus* LAMARCK.

In size it is 1–3 cms. in length and 0.2–0.5 cm. in breadth. In colour the more central aboral part including the subpharyngeal and tentacular areas is yellowish brown, while the rest and the more peripheral part are pale green. In this respect of complex colouration the present species resembles rather closely *Coeloplana perrieri* DAWYDOFF but of course not exactly, since in the latter the peripheral part is very narrow and yellowish green instead of wide and green. Moreover the peripheral zone of *Coeloplana echinicola* is characterized by the presence of white spots arranged in a ring as in *Coeloplana willeyi* ABBOTT. On the ventral surface there is no particular colouration and it is uniformly greyish white.

Turning now to the dorsal protuberances we count the greatest number in this species, represented by two types, larger and smaller.

NAME	NUMBER OF DORSAL PROTUBERANCES	COLOUR AND PATTERN	SIZE	HABITAT
C. metschnikowii KOWALEVSKY		grey on dorsal surface.	4–6mm.	Red Sea, coast of Tor; on Alcyonium sp.
C. willeyi ABBOTT	20—30	colour variable (orange, pink, red, purple etc.) with white spots arranged in a ring.	1–6 or 7cm.	Misaki Japan; on sea-weeds and rocks.
C. mitsukurii ABBOTT	10—20	yellowish brown without white spots.	1–6 or 7cm.	Misaki Japan; on sea-weeds and rocks.
C. bocki KOMAI	no pro.	more than ten lines parallel to the tentacular direction; colour variable, without spots.	0.5–1.5 or 3cm.	Misaki Japan; on Alcyonaria g. *Dendronephtya.*
C. gonoctena KREMPF	14	milky white with brownish spots uniformly distributed.	l. 1–6cm. s. 0.5–1cm.	Nha-trang Bay, Annam; on *Alcyonium krempfi* HICKSON.
C. astericola MORTENSEN	14	mottled red and white.		Amboina; on *Echinaster luzonicus* GRAY.
C. perrieri DAWYDOFF		deep olive green with brownish sepia spots, tentacles clear yellowish brown; with narrow peripheral part of yellowish orange; ventral uniformly milky white.	l. 6–8mm. s. 2–3mm.	Siam Bay, French Indo-China; on *Posidonia.*
C. agniae DAWYDOFF	6—16	colour clear but variable, sometimes milky white sometimes pearl grey more or less with yellowish, violet or brownish shade but no spots in any case.	l. 5.6–6cm. s. 1.5–2.5cm.	Nha-trang Bay, Annam; on *Alcyonium* sp.
C. duboscqui DAWYDOFF		orange vermilion? tentacles without colour.	l. 0.5–1cm. s. 0.2–0.5cm.	Ainsi, Chanthabum, Siam Bay; on *Pteroeides.*

In all there are 32 protuberances which can be divided into 8 larger and 24 smaller. As to their distribution the larger one is always found on either side of each tentacular sheath; these 4 protuberances belong to the tentacular canals. Next, each subtentacular canal bears on each side 2 small protuberances, and each subpharyngeal canal has also on each side one larger and 4 smaller ones. Of these the larger protuberances are always situated very near the aboral sense-organ,

and, therefore, in a dorsal view the median sense-organ is observed to be surrounded by 4 large protuberances at each equi-distant point, and from each of them a number of smaller ones follow distally in a curved line turning inwards at the end like a hook.

As from its colouration as well as the number and distribution of its dorsal protuberances *Coeloplana echinicola* is thus easily distinguished from any other known species of Coeloplana, it surely represents a definite species.

In this species there is also observed the phenomenon of asexual reproduction by means of laceration, first mentioned by KREMPF (1921) in his *Coeloplana gonoctena*. This process takes place especially during night, and so far as my own experience goes, most vigorously in the early summer when the water temperature has risen to 22°–29°C. One fairly large individual for example produces more than 10 lacerated pieces in a week, but, as I have already mentioned, there is no more laceration after the middle of August, and in September the Coeloplana disappears completely from the littoral zone.

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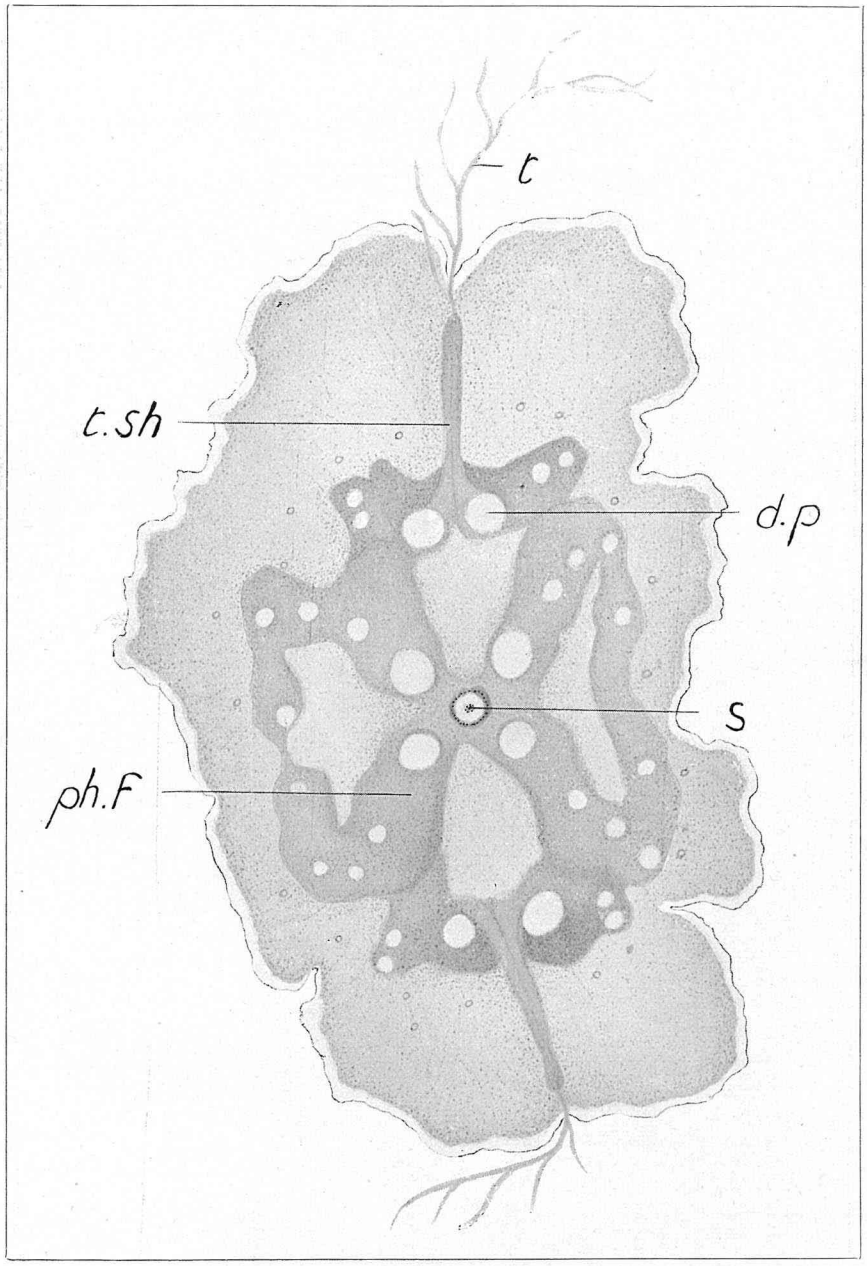

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