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ON THE SPECIES OF *CLADONEMA RADIATUM* VAR. *MAYERI* PERKINS[1)]

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Medusae belonging to the genus *Cladonema*, which are very common in Japan, were reported as *Cladonema radiatum* var. *mayeri* Perkins by Uchida (1925 and '27 a, b) based on the structure of the medusa. In 1957, Hirai and Kakinuma succeeded to rear this variety in the laboratory of the Marine Biological Station at Asamushi, and reported on its developmental cycle and the structure of the hydroid. They discussed that the structure of the hydroid of this variety found at Asamushi is different from that of C. *radiatum* Dujardin and *C. mayeri* Perkins. In 1949, Rees compared his C. *myersi* Rees with C. *radiatum* var. *mayeri*, and stated "Unfortunatelly the full life history of the Japanese species remains unknown and I have no specimens to compare with the present species". From the newly found features in the developmental cycle of this variety, the present writer is inclined to consider that it represents a new species, for which he wishes to propose the new species name *Cladonema uchidai* n. sp.

Before going further, I thank Prof. Dr. Tohru Uchida for his valuable taxonomic suggestions given me during the course of my investigation.

DESCRIPTION

Uchida (1927a) described that the Japanese *Cladonema* medusa, *Cladonema radiatum* var. *mayeri* Perkins, is very common in Japan and agrees with the description and figures of C. *mayeri* as to the structure of the medusa. The *Cladonema* medusa which was found at Asamushi was also described as the same species (Uchida 192713). In 1957, Birai and Kakinuma investigated the developmental cycle of the species at Asamushi based on 30 colonies which were reared by them. and on three which were found in the sea and in the aquarium. In this investigation, they found that the hydranth of the form has typically four capitate tentacles but no filiform tentacles. When the structure of the hydranth was compared with that of C. *radiatum* and *C. may ri*, it became clear that the latter

1) Contributions from the Marine Biologic l Station of Asamushi, Aomori Ken, No 236

	C. myersi	*C. radiatum* var. *mayeri*
Hydroid, filiform tentacle		
Medusa, radial canals	5-7	8, 9
oral tentacles	6	6
tentacular appendages (at liberation)	2	1
tentacular appendages (adult)	3	3
ocellus	reddish	deep purple, nearly black
tentacle	much branched	much branched

C. *myersi* has seven, rarely five or six, unbranched radial canals, but the Japanese species has typically nine at the bell margin, and six of them at the origin, the alternate ones branching dichotomously (Uchida 1925 and '27a, b, Hirai and Kakinuma 1947a). This structure is visible also in the young medusa just liberated from the hydranth (Hirai and Kakinuma 1957a). In the Japanese species, rarely five to eight abnormal canals were observed in the reared materials, but the branching character of the radial canal hardly disappear except in very rare cases which had five or six canals. In the medusae collected in the sea, it was difficult to observe such abnormal radial canals as in the reared materials, but rarely the medusae which had eight canals were observed. Tentacular appendages of medusa at liberation of the Japanese species is always only one in each tentacle (Uchida 1927a, Hirai and Kakinuma 1957a), but *C. myersi* has two adaxial appendages. The tentacular appendage of the Japanese species terminates in a well developed knob of nematocyst, but that of C. *myersi* has a few nematocysts at the somewhat swollen tip. The ocellus of C. *myersi* is reddish, while that of the Japanese species is deep purple or nearly black in color.

As mentioned above the Japanese medusa resembles C. *myersi,* but is distinguishable from the latter in the structures of the medusa. As already described,

the Japanese species is also distinct from *C. radiatum* and *C. mayeri* in the structure of the hydroid. Therefore, the Japanese species is here considered to represent a new species rather than a variety of C. *radiatum*, for which the present writer proposes here the new species name C. *uchidai* n. sp.

CLADONEMA UCHIDAI N SP.

The species formerly described by Uchida (1925 and '27a, b) as *Cladonema radiatum* var. *mayeri* Perkins differs from C. *radiatum* Dujardin and C. *mayeri* Perkins mainly in the structure of the hydroid, and also from C. *myersi* Rees in the structure of the medusa.

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