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A SPECIES OF PRACINOCLADIUS FOUND ON THE PACIFIC COAST OF SOUTHERN CALIFORNIA

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The algae of the Pacific coast of the United States are very imperfectly known both as to the number of species and concerning the distribution of those that are known. Especially is this true of the smaller forms which have only been studied to anything like thoroughness in a very few limited areas.

REVIEW OF LITERATURE

To my knowledge the genus Pracinocladus has never been reported from the Pacific coast of the United States. Collins (1918) describes one species, *P. subsalsus*, found growing on rocks in marshes and the sheltered side of tide pools along the coast of Maine and Massachusetts. Newton (1931) gives one species, *P. lubricus*, found near Plymouth, England, and states that it is very rare. Our species very closely resembles this one and may prove to be the same. Setchell and Gardner, who have done a great deal of work with the Algae of the Pacific coast, do not report the presence of the genus Pracinocladus. Fritsch (1935) describes both *P. subsalsus* and *P. lubricus* but does not report their presence on the Pacific coast. He further states their presence in cultures, littoral zones and in brackish waters. Dr. Oltmanns (1922) describes the two species above mentioned but does not report their presence on our coast. Tilden (1935) who has worked much with the Algae makes no mention of it.

REASONS FOR THIS STUDY

From December 1934 to July 1935 Miss Marian Whedon and Mrs. Tema Clare working with *Haptrophycus canaliculatus* and *Petrospongium rugosum* made a number of collections of these species along the coast from Three Arch Bay to Whites Point. The two species under study were found growing on the rocks at the line of low tide level and in a few cases some specimens of Haptrophycus were taken from tide pools. In either case the plants were usually found growing in the shelter of Pelvetia and other forms of the larger Alga.

The specimens studied by Miss Whedon and Mrs. Clare when brought into the laboratory were thoroughly washed in salt water and then

put into sterilized sea water and placed in a refrigerator. Some time later a growth of green algae were noted in these cultures and was tentatively designated as Codiolum. It was from these specimens that the study was made.

EXPERIMENTAL PROCEDURE

During July, 1936, I began the study of the species of Chlorophyceae which appeared in the cultures made by Miss Whedon and Mrs. Clare, with the object of making a specific determination. Samples from fifteen of their collections, taken from Laguna and Whites Point, were carefully studied under the microscope and typical individuals were measured and drawn.

It is quite probable that the species under consideration were epiphytic upon Haptrophycus and Petrospongum, so far as the collections of Miss Whedon and Mrs. Clare are concerned, but it is also found upon other species of alga and probably grows upon such objects as stones and piling. I observed it growing upon a species of Ulva collected by Mrs. Elsie Rutledge on the pier of Playa Del Rey, at Santa Monica, on July 13, 1936. The result of my observations are listed below, giving the date and place of collections and the condition of the specimens noted.

NOTES ON THE SPECIMENS OBSERVED GROWING IN THE CULTURES OF HAPTROPHYCUS.

Collected December 20, 1934, at Laguna. No specimens found.

Collected December 20, 1934, at Laguna. Specimens showing signs of rather widely branching: more or less disintegrated; 10 to 12 microns in diameter, 16 to 18 microns long.

Collected March 17, 1935, at Laguna. No specimens found.

Collected April 15, 1935, at Laguna. Many in process of dividing; healthy condition; 10 to 14 microns in diameter, 18 to 20 microns long.

Collected June 15, 1935, at Laguna. Growing luxuriantly in quite large branched thalli; 12 microns in diameter by 18 microns long.

Collected June 15, 1935, at Laguna. Growing abundantly. Most plants in process of division; 10 microns in diameter by 18 to 22 microns long.

Collected June 29, 1935, at Laguna. Most plants in process of division; some appear to be conjugating; 11 microns in diameter to 18 microns long.

Collected July 9, 1935, at Laguna. Much disintegrated; cells nearly circular; 14 to 16 microns in diameter by 20 to 22 microns long.

Collected July 9, 1935, at Laguna. Thalli much disintegrated; cells circular; 12 microns in diameter by 20 microns long.

NOTES ON SPECIMENS OBSERVED GROWING IN THE CULTURES OF PETROSPONGIUM RUGOSUM.

Collected April 15, 1935, at Whites Point. Very large, usually thick-walled with cells nearly circular; 16 mu. in diameter by 22 to 24 microns long. This culture was sitting close to the bright light and may have had some effect on the size of the plants.

Collected April 27, 1935, at Laguna. Cells circular; thalli much disintegrated; longitudinal division common; 12 microns in diameter by 18 microns long.

Collected June 15, 1935, at Laguna. Specimens much branched and large; 13 to 14 microns in diameter by 20 to 22 microns long.

Collected June 15, 1935, at Laguna. Growing very abundantly; in process of division; 12 microns in diameter by 17 to 20 microns long.

CONCLUSION

After careful study over a period of five weeks, I am convinced that the plants discovered in those cultures belong to the genus Prasinocladus. It most nearly resembles the species *P. lubricus* but differs from it in the way the cells divide, being most generally horizontal and seldom vertical, which is reverse from the descriptions given for *P. lubricus*. It needs further study and observations on its method of reproduction to make a definite, specific determination. With this limited study, I, tentatively, consider it to be *P. Lubricus*—Kuck.

LITERATURE CITED

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