

A NOTE ON A CLUB-SHAPED VARIETY OF  
*BOTRYDIUM GRANULATUM* (L.) GREV. VAR.  
*CLAVAEFORMIS* VAR. NOV.

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THIS interesting variety of *Botrydium granulatum* was collected by the author from the highly manured sides of a pond near village Bhadrassa, District Fyzabad, on 15th January 1939. The sides of this pond are frequented by villagers for answering the call of nature, and human faeces which is converted overnight by insects into loose and well-manured soil provides a suitable substratum for the growth of terrestrial algæ. A patch of this alga about 8 inches in width and 3 feet long was found in a drying water channel leading into the pond, which was well-shaded by a species of *Polygonum*. The elongated vesicles of the alga which grows gregariously, resemble the pointed leaves of young moss plants.

The young plants are almost filamentous in habit and are usually sinuous (Fig. 1). They have blunt apices, and unbranched rhizoidal part below, and are 16–24  $\mu$  in diameter. Slightly older plants are 25–84  $\mu$  in diameter, and their rhizoidal parts show a tendency towards dichotomous branching. The subaerial vesicles are usually cylindrical or club-shaped in appearance and are very much elongated. A tendency towards branching is seen in the subaerial parts of some of the younger plants (Fig. 2).

The mature plants are usually club-shaped and are pointed at the top (Figs. 3 and 4). The mature vesicles are 320  $\mu$  to 530  $\mu$  in diameter, their outer covering wall is fairly thin, and no encrustation of carbonate of lime was seen in any case. Rhizoids are very richly branched in mature specimens (Fig. 4). No cyst formation was observed.

**Affinities.**—This alga is undoubtedly a variety of *Botrydium granulatum* (L.) Grev. from which it differs in the shape of its subaerial vesicles, which are spherical in typical specimens of *B. granulatum*, which too was collected from drying puddles at Fyzabad in August and September 1938. Iyengar also collected a form resembling the present alga in 1924 from Nandi Hills in Mysore; however, he gave no figures. In his brief preliminary description of that form he observes, "The second *Botrydium* mentioned above seems to be

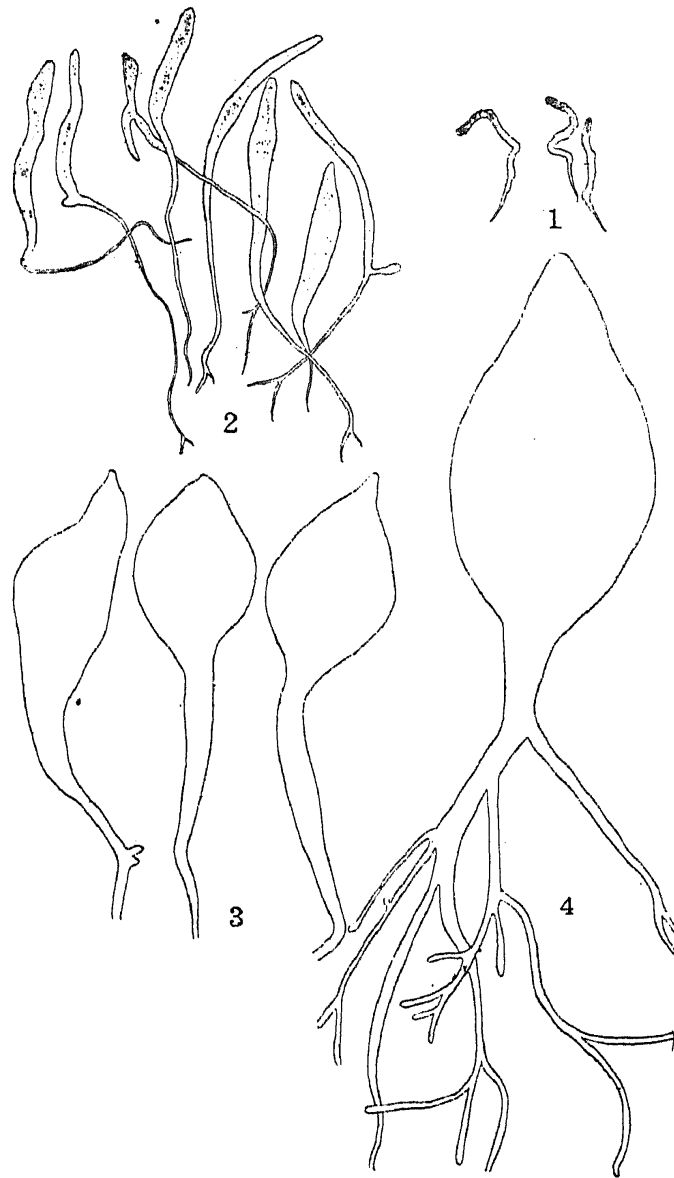


FIG. 1

*Botrydium granulatum* (L.) Grev. var. *claviformis* var. nov.

Fig. 1.—Three young plants. Fig. 2.—A group of young plants. Mark the tendency towards branching seen in some of the plants. Fig. 3.—A group of middle-sized plants showing the subaerial portion only. Fig. 4.—A mature plant showing the club-shaped elongated subaerial part and branched rhizoidal part. All  $\times 40$ .

a variety of *B. granulatum* and was collected by the author last December on the Nandi Hills in the Mysore Province. Its upper green portion is somewhat elongated and very broadly conical at the top; the top portion ended though broadly in a point and is not rounded as in *B. granulatum*. The cysts are formed in a row but at longer intervals than in *B. granulatum*."

The present form resembles the form collected by Iyengar in all necessary details. Its persistent club-shaped appearance warrants its establishment as a new variety of *B. granulatum*.

*Botrydium granulatum* (L.) Grev. var. *clavæformis*, var. nov.

Mature plants club-shaped, apex pointed, 320–530  $\mu$  in diameter, outer wall thin. Young plants more or less filamentous, with subaerial parts occasionally branched.

Habit.—Found growing at the sides of a pond near village Bhadrassa, District Fyzabad, U.P., India, mixed with *Vaucheria geminata* on 15th January and 17th February, 1939.