

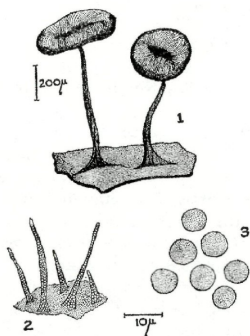
## Some Slime-Moulds from Southern India — X

By V. Agnihotrudu\*)

61. *Physarum rigidum* (G. Lister) G. Lister in A Monograph of the Mycetozoa, 3rd ed., p. 36, 1925; as *Physarum viride* var. *rigidum* G. Lister, Mycetozoa 2nd ed., p. 56, 1911; Martin, G. W. North American Flora, Fungi, Myxomycetes, p. 124, 1948.

Plasmoidium not noticed. Sporangia, gregarious, stipitate, typically lenticular with a deep umbilicus on the top, dull, dirty yellow when fresh iridescent; stalk slender upto 1 mm long, up to 160  $\mu$  wide at the bottom and 40  $\mu$  at the top, dark yellow containing plenty of refuse matter. Capillitium consisting of long yellow calcareous tubes, enclosing lime granules. Spores 6—7  $\mu$  (mostly 7.0  $\mu$ ).

On decaying wood of undetermined shade tree, Lingapur Estate, Hassan District coll. V. Agnihotrudu, 17—8—1964, Herb. T. F. R. No. 9 (Figures 1—3).

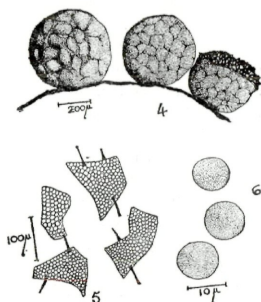


Figs. 1—3: *Physarum rigidum* (G. Lister) G. Lister (Herb. T. F. R. 9)  
 Fig. 1: The typically stipitate, umbilicate sporangia.  
 Fig. 2: The peridial wall and the tubular capillitium.  
 Fig. 3: Spores.

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This species is different from *Physarum viride* (Bull.) Pers. in having rigid capillitium. The collection under report has spores which are smaller than those described for the type species.

62. *Physarum luteolum* Peck in Ann. Rep. N. Y. State Mem. 30, p. 50, 1878; as *Physarum virescens* Ditmar var. *nitens* Lister, A Monograph of the *Mycetozoa*, 3rd ed., p. 64, 1925; as *Physarum*



Figs. 4—6: *Physarum luteolum* Peck. (Herb. T. F. R. 10)  
 Fig. 4: Sporangia.  
 Fig. 5: Capillitium.  
 Fig. 6: Spores.

*luteolum* Peck/Martin, G. W. North American Flora. Fungi, Myxomycetes, p. 106, 1948.

Only one specimen is preserved. No plasmodium was noticed. The sporangia are sparse, scattered, typically spherical, sessile, mostly 0.5 mm in diameter (upto 0.8 mm) rugulose, bright chrome yellow, peridium membranous, brittle, dehiscing in small flakes; capillitium a net work of hyaline threads bearing numerous small, angular, deep yellow, calcareous nodes; spores brown in mass, pale lilac in transmitted light, almost smooth mostly  $10.8 \mu$  in diameter.

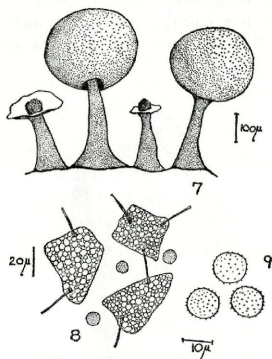
Hab. collected on decaying leaves of coffee, Karadibetta Estate, Hassan District, coll. V. Agnihotrudu, 18—8—1964. Herb. T. F. R., No. 10 (Figures 4—6).

63. *Physarum leucopus* Link. Ges. Nat. Freunde Berlin Mag. 3, 27, 1809, Lister G. as *P. bullatum* Link. in Ditm. Sturm Deutsch. Fl. Pilze, 45, p. 28; as *Didymium leucopus* Fr. Syst. Myc. 3, 121, 1829; Martin G. W., North American Flora, Fungi, Myxomycetes 1, pp. 116, 117, 1948. Agnihotrudu, V., J. Indian Bot. Soc., 38, 467, 1959.

Plasmodium not observed. The sporangia are sparse and scattered measuring upto 1 mm in height. Sporangia globose, egg white, upto

0.5 mm in diameter, typically stipitate, membranous, containing dense, clusters of lime granules, stipe white, smooth, upto 250  $\mu$  thick, rigid, brittle, broad below, somewhat tapering above, appearing chalk white in cross section, enclosing dense clusters of calcareous granules. In some sporangia a distinct hypothallus is seen. Capillitium consists of delicate, hyaline branching threads, connecting irregular white calcareous nodes. Spores 8—10  $\mu$  in diameter, violet brown and distinctly spinulose.

The egg white sporangial head, the chalk white smooth, rigid, stipe



Figs. 7—9: *Physarum leucopus* Link (Herb. T. F. R. 11)  
 Fig. 7: Sporangia and stipes, showing the columella.  
 Fig. 8: Capillitium nodes.  
 Fig. 9: Spores.

distinguishes *Physarum leucopus* from *P. nutans*. The latter has typically nodding sporangia with the stipe enclosing plenty of refuse matter.

In the specimens collected in Assam, the stipe is distinctly furrowed, but in the collection under report, the stipe is smooth.

Hab. on dead coffee leaves, coll. V. Agnihotrudu, Cananadoo Estate, (C. C. E.) Coorg District, 12—7—1965. Herb. T. F. R. No. 11 (Figs: 7—9).

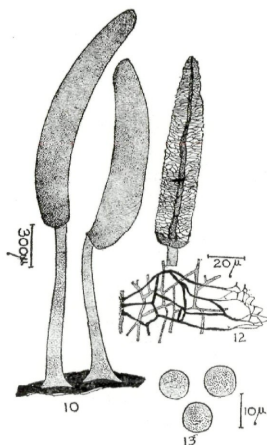
64. *Diachaea leucopodia* (Bulliard) Rost. Sluzow Cow (Mycetozoa), Monograph p. 1, 90, 1874. As *Diachaea leucopodia* Rost. G. Lister, A Monograph of the Mycetozoa, p. 101, 1925; Martin G. W., as *Diachaea leucopodia* (Bull.) Rost. in North American Flora, Fungi, Myxomycetes, p. 70, 1948; Agnihotrudu, V., J. Indian bot. Soc. 38, 433—435, 1959.

The stipe is 1 mm long, 320  $\mu$  wide below and 100  $\mu$  at the top. The sporangia are cylindrical slightly curved, measuring upto 1 mm long and 300  $\mu$  wide. The columella is long, tapering, reaching to the apex

of the sporangia. The spores are  $7.2 \mu$  in diameter, dull violet brown and almost smooth.

This particular form is different from the hitherto described species in having cylindrical stalks which are as long as the sporangia. The sporangial head is peculiar in being slightly curved and the spores are smaller and almost smooth.

The form was collected by Mr. C. C. Chinappa on decaying coffee leaves at Central Coffee Research Institute, Balehonnur, Chickmagalur district. No plasmodium was noticed. The sporangia are in dense clusters measuring upto 2 mm in height. The columella is characteristic in reaching the apex of the sporangium (Herb. T. F. R. No. 12) (Figs: 10—13).



Figs. 10—13: *Diachaea leucopodia* (Bull.) Rost. (Herb. T. F. R. 12)

Fig. 10: Sporangia.

Fig. 11: A dehiscent sporangium showing the columella and capillitium.

Fig. 12: Capillitial net work.

Fig. 13: Spores.

#### Acknowledgements

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