

# Calostoma sarasinii from Malaya

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The genus *Calostoma* Desv. comprises a small group of puff-balls (Gasteromycetes) that are not familiar to many. Although the genus is widely distributed, the species may be divided into two natural groups characterised by the form of the spores: an eastern group with globose spores, and a western group with elliptical spores (Massee, 1888-89). Massee (1888-89) distinguished these species with their areas of distribution as follows — six eastern species: *C. berkeleyi* Massee, Ceylon, *C. insignis* (Berk.) Massee, Ceylon, *C. junghuhnii* (Schlechtend. et Müller) Massee, Ceylon, Java, Sikkim Himalayas, Sumatra, *C. orirubra* Cooke (*orirubrum*), Larut in Perak, Malaya Peninsula, *C. pachystelis* (Ces.) Massee, Borneo, Ceylon, and *C. viridis* (Berk.) Massee, Sikkim Himalayas, Sinchal, Tonglo; four western species: *C. cinnabarinum* Desv., Massachusetts to Carolina, New Granada, *C. fusca* (Berk.) Massee, S. Australia, Tasmania, *C. lurida* (Berk.) Massee, Australia, and *C. ravenelii* (Berk.) Massee, mountains of Carolina. Burnap (1897) and Webster (1899) described three species found in America, *C. cinnabarinum*, *C. lutescens* (Schw.) Burnap and *C. ravenelii*, and of these, *C. lutescens* is the only western species described as having globose spores.

Boedijn (1938) who studied the Malaysian materials in the herbarium at Buitenzorg, distinguished six species: *C. berkeleyi*, *C. insignis*, *C. junghuhnii*, *C. orirubra*, *C. retisporum* Boedijn and *C. sarasinii* (Henn.) van Overeem. These were recorded from the following regions — Borneo, Celebes, Java, Moluccas, New Guinea and Sumatra. All six species possess globose spores.

Thus, among the species mentioned in literature, only *C. orirubra* was recorded from the Malay Peninsula and was included in Saccardo's compilations (1891). The description given for this species does not fit the specimens collected recently from Maxwell's Hills, Perak, Malaya. However, the collection in external morphology and spore size and form matches closely the excellent account and drawings given by Boedijn (1938) for *C. sarasinii*. The only slight difference lies in the spore warts which were described by Boedijn as 'strongly truncate at the apex' but which in the recently found specimens, did not appear quite as truncate. Since in all other details the fungus resembles the material studied by Boedijn, it is suggested that the recent Malayan collection belongs to *C. sarasinii*. This is a new record of the species for Malaya.

The specimens were found growing on the ground in primary jungle, at 4,000 ft. altitude, in Maxwell's Hills, Perak, in August 1967. Nine fruiting bodies of varying ages and sizes, occurred in a clump. This appears to be an uncommon fungus and has not been observed again in spite of several return visits.

It is of interest that with this report, only two species of *Calostoma* are thus recorded for Malaya and both were collected from the same district, Larut, in the State of Perak.

#### REFERENCES

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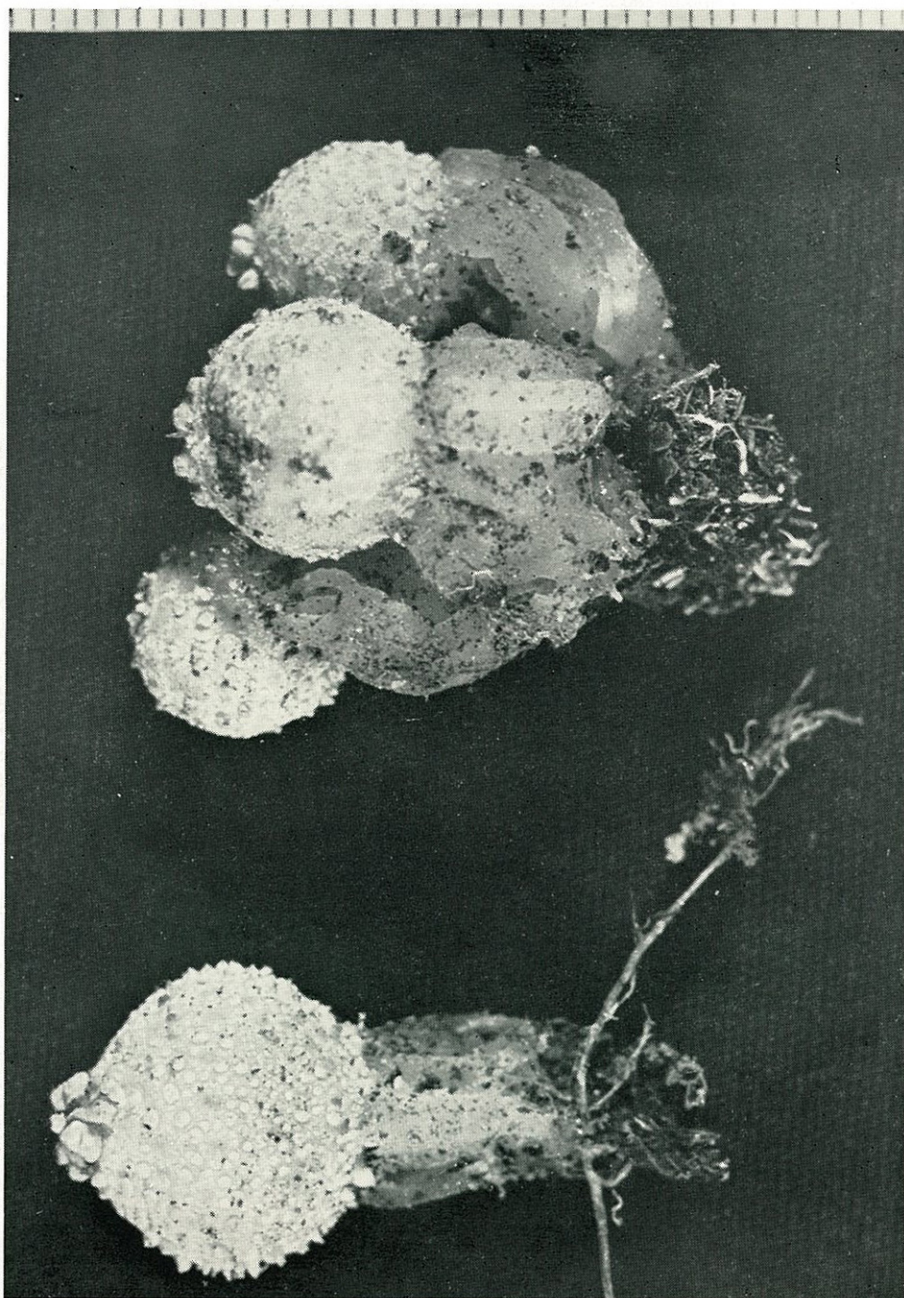


Plate 1. Mature fruit bodies.

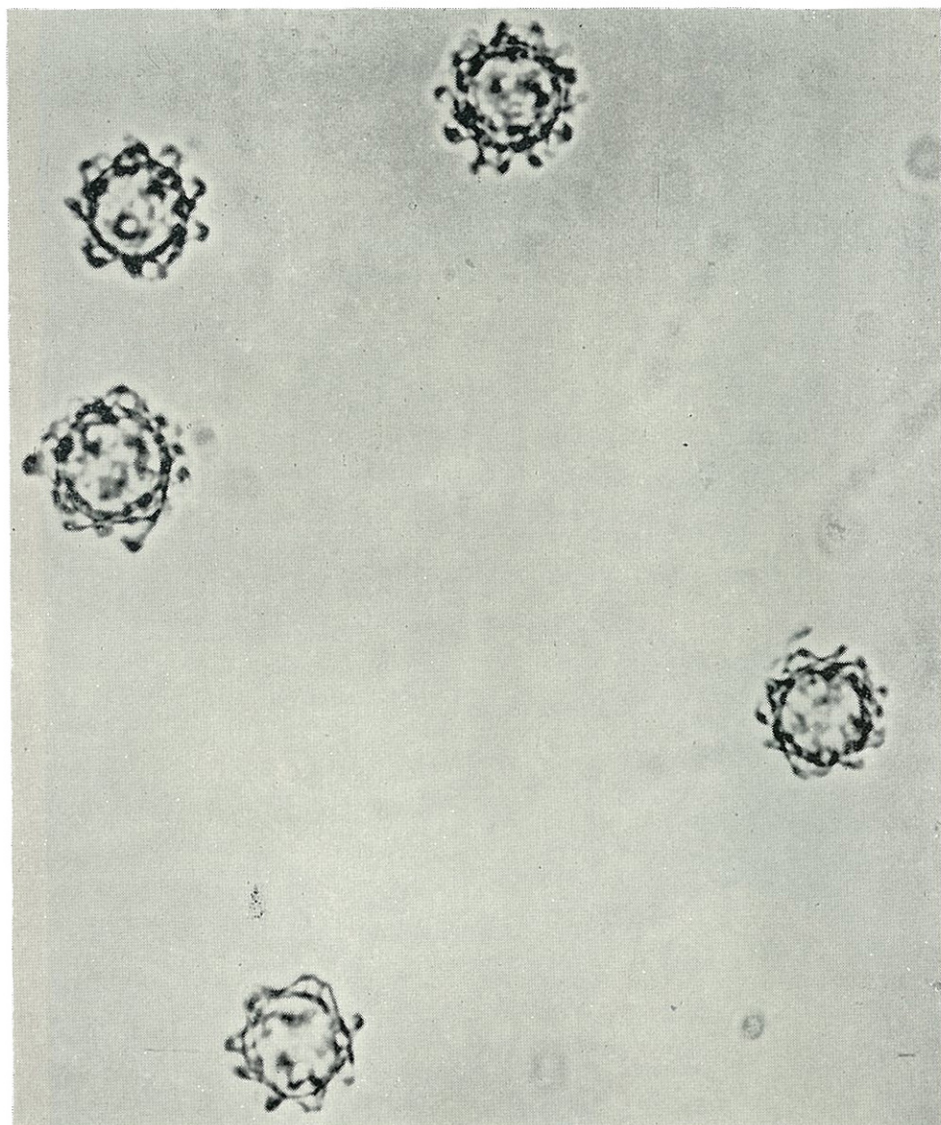


Plate 2. Globose, warty spores. x 765.