

## A new *Physoderma* from Rajasthan, India

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With plate IV

During mycological collections, a leaf spot disease of *Pancratium triflorum* Roxb. was observed at Sahelion Ki Bari, Udaipur in the month of September, 1966. The diseased leaves showed circular to oval spots, which were brick-red to brown in colour surrounded by a faint white zone (Fig. 1). Microscopic examination of diseased lesion revealed the presence of resting sporangia of *Physoderma* not recorded on this host before (Fig. 2). The diagnostic features are stated below.

***Physoderma pancratii* sp. nov.** Pathak, Prasad and Shukla.

Infection foliicolous, spots amphigenous, circular to oval in shape, isolated as well as in groups, initially brick-red in colour, gradually changing to brown, surrounded by a faint white zone, variable in dimensions, measuring 4—20 × 3—11 mm. Spores smooth, yellowish brown, thick-walled, measuring 20—25.6 × 17.6—24  $\mu$ , flattened on one side where the outline of the lid or cap is visible. Zoospores hyaline, oval, uniflagellate measuring 2—3.5 × 1.25—2.0  $\mu$ .

On living leaves of *Panocratium triflorum* Roxb. at Sahelion Ki Bari, Udaipur on September 15, 1967, leg. Pathak and Shukla; specimen deposited in herbarium, C. M. I., Kew, England (IMI 127416).

*Physoderma pancratii* sp. nov. Pathak, Prasad and Shukla.

Maculae amphigenae, orbiculares vel ovaes, solitariae vel greges formantes, primum obscure cinnabariniae, postea zonula albida tenui cinctae, quoad magnitudinem variabiles, plerumque 4—20 × 3—11 mm sporae leves, luteo-brunneae, crassiuscule tunicatae, 20—25 × 17.6—24  $\mu$  ad operculorum lineamenta planae; zoosporae ovoideae, hyalinae, uniflagellatae, 2—3.5 × 1.25—2  $\mu$ .

Ad folia viva *Panocratium triflorum* Roxb. Sahelion Ki Bari, Udaipur 15, Septembris, 1967, leg. Pathak and Shukla (IMI 127416).

Pathogenicity of the fungus was confirmed by introducing the sporangial suspension in the innerwhorl of the plant, which was kept under high humidity for 48 hours. Brown spot of maize (*Physoderma maydis*) is also observed in the month of September in Udaipur. However, attempts to cross inoculate *Panocratium* with Maize-*Physoderma* failed. The fungus represents an undescribed species of *Physoderma*.

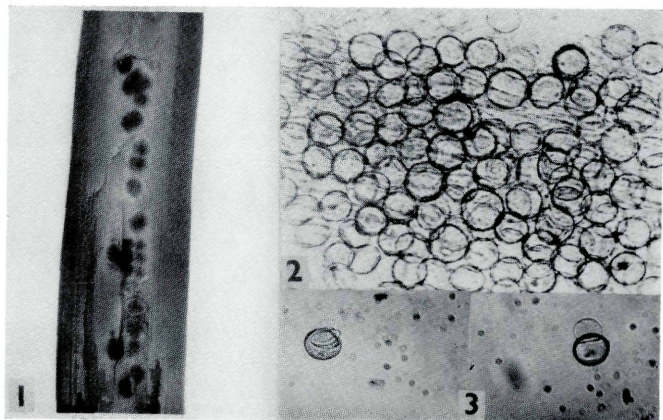
Germination studies were carried out by placing sporangial suspension (obtained by crushing leaf spots in tap water) in humid atmosphere under 9" bell jar. Since sporangia completely failed to germinate in total darkness, a source of constant light (100 Watt electric bulb) was provided at one foot distance, which also helped in maintaining proper temperature for germination, it fluctuated between 25—28° C. Sporangia germinated after 72 hours by developing crevices on the surface. A lid opened in a single door like fashion permitting the liberation of several uniflagillate zoospores (Fig. 3).

The pronounced influence of light on germination suggested further investigations on the effect of different colours of light. This was done by using filters of different colour for 72 hours. Blue light was most favourable (64% germination), white ranged next (60%) and in green, yellow and red, the germination percentages were 28, 3 and 2 respectively.

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Plate IV

Fig. 1. Host leaf showing brown spots. — Fig. 2. Sporangia of *Physoderma pancratii*. — Fig. 3. Germination of sporangium.



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