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Short Communication

Westerdykella globosa, a proposal for a new combination

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The surface ornamentation of ascospores of *Preussia globosa* was compared in an isolate from paddy soil in Japan and a culture derived from the holotype. The ascospores of two cultures were characterized by the surface ornamentation of a single, semicircular spiral ridge. This new finding strongly suggested that the fungus should be transferred to the genus *Westerdykella*. Therefore, the morphological and cultural characters of the fungus were re-examined, and the new combination *Westerdykella globosa* is herein proposed.

Key Words——*Preussia globosa*; *Pseudeurotium globosum*; soil fungus; *Westerdykella globosa*.

Rai and Tewari (1962) originally described and precisely illustrated the species *Pseudeurotium globosum* Rai & Tewari (described as "*Pseudoeurotium*") having multisporous asci and large globose ascospores. They soon transferred this species to *Preussia globosa* (Rai & Tewari) Rai & Tewari (1963) because the ascospore cells are readily separable at maturity. Other species in the genus *Preussia* Fuckel, however, have transverse septa and obvious germ slits as described by Cain (1961) and Arx and Storm (1967).

During an ecological study of Japanese soil fungi, a strain isolated from paddy soil was first identified as *P. globosa* (IFO 32630).

The Japanese isolate and a culture derived from the holotype of *Preussia globosa* (IFO 32588=IMI 082625) were recently compared in their morphology. It was found that their ascospores have a single, semicircular spiral ridge on the surface. Furthermore, their asci were confirmed to contain 32 ascospores by dissecting with a Skerman-type micromanipulator.

The above characteristics of *Preussia globosa* were identical with the generic concept of *Westerdykella* (Stolk, 1955), the type species *Westerdykella ornata* Stolk, which produces 32 ascospores in an ascus which are ornamented on the surface with a spiral ridge. We concluded, therefore, that *Preussia globosa* should be transferred to the genus *Westerdykella*.

Westerdykella globosa (Rai & Tewari) T. Ito & Nakagiri, comb. nov. Figs. 1-4

≡*Pseudeurotium globosum* Rai & Tewari, Mycopathol. Mycol. Appl. **16**: 90. 1962.

≡*Preussia globosa* (Rai & Tewari) Rai & Tewari, Proc. Indian Acad. Sci. B **57**: 53. 1963.

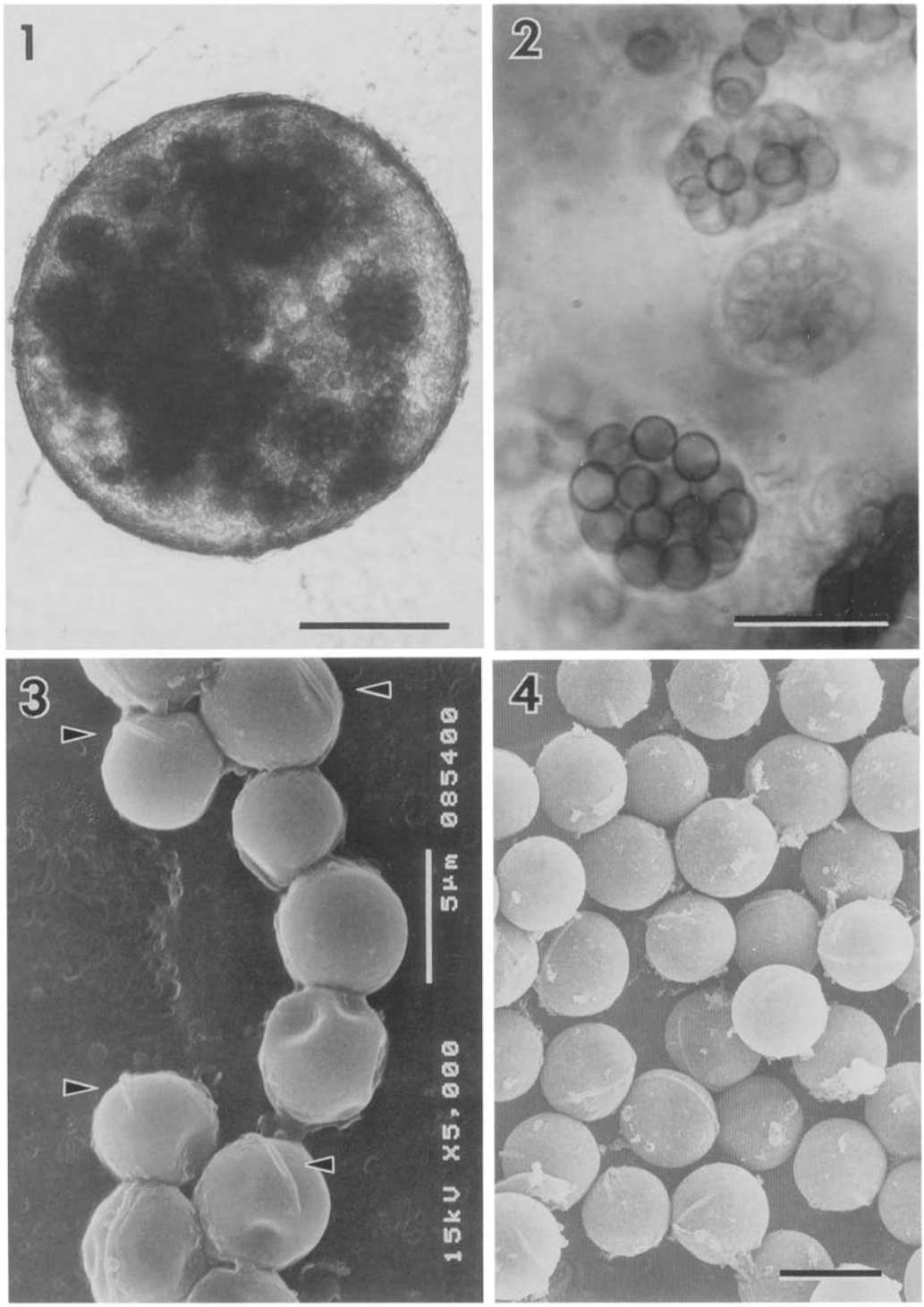
Colonies on oatmeal agar growing rapidly, attaining a diameter of 90 mm within 3 weeks at 24°C, velvety, thin, partly immersed, pale olive-buff (Rayner, 1970); reverse pale olive-buff. Ascomata discrete or confluent, non-ostiolate, maturing within one month, globose to subglobose, 90–260 μm in diam, carbonaceous, dark brown; peridium 1–2-layered, consisting of brown, thick-walled, pseudoparenchymatous cells; ascomatal initials appeared in the form of intercalary segments of the vegetative hyphae, consisting of thick-walled, dictioid cells. Asci in short chains, 32-spored, subglobose to ovoid, 20–24×14–17 μm, evanescent. Ascospores bound together in groups at first, becoming separate at maturity, dark brown, globose to subglobose, 4–6 μm in diam, thick-walled, smooth, with a single, semicircular spiral ridge on the surface.

At 37°C, growth is nil.

Cultures examined: IFO 32630 (T. Ito H2-3-5-20), a culture isolated from paddy soil, Ikeda, Osaka, Japan, April 1990 and a culture derived from the holotype of *Preussia globosa* (IFO 32588=IMI 082625).

Colonies on the following media after three-week incubation at 24°C: On potato-carrot agar growing rapidly, attaining a diameter of 90 mm, velvety, thin, partly immersed, hyaline; reverse uncolored. Ascomata are produced abundantly on the surface or submerged in the medium. On malt extract agar growing rapidly, attaining a diameter of 80 mm, velvety, thin, immersed, pale olive-buff; reverse pale olive-buff. On yeast phosphate soluble starch agar growing rapidly, attaining a diameter of 80 mm, floccose, white to pale gray at the center; reverse pale olive-buff to gray or mouse gray. Abundant ascomata are produced on the surface or submerged in the medium.

The fungus was first isolated from soil of a stream bank in India by Rai and Tewari. The Japanese isolate was found in paddy soil in Osaka as mentioned above. Recently, two strains (T. Ito H6H24-106-2, H645-114-5; 19 Oct. 1994) were isolated from paddy and pasture soils at Iriomote Isl. in Okinawa. Places where these



Figs. 1–4. *Westerdykella globosa* (IFO 32630). 1. Ascoma. 2. Asci. 3. Ascospores with a single, semicircular spiral ridge (arrows). 4. Ascospores of the strain derived from the holotype (IFO 32588). Bars: 1=50 μm, 2=20 μm, 3 and 4=5 μm.

strains have been detected belong to the tropical, subtropical and temperate zones, respectively. The fungus seems to be of worldwide distribution.

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