A JOURNAL ON TAXONOMIC BOTANY, PLANT SOCIOLOGY AND ECOLOGY

REINWARDTIA

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Published by
HERBARIUM BOGORIENSE
LEMBAGA BIOLOGI NASIONAL — LIPI
BOGOR, INDONESIA

Reinwardtia Vol. 9, Part 4, 377 — 479 31 March 1980

IO ISSN 0034 — 365X

REINWARDTIA
Published by Herbarium Bogoriense — LBN, Bogor
Vol. 9, Part 4, pp. 399 — 401 (1980)

THE IDENTITY OF USTILAGO AMADELPHA VAR. GLABRIUSCULA

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ABSTRACT

The host of this smut variety is identified as *Panicum repens* L. The fungus is considered conspecific with *Ustilago overeemii* Cif., which subsequently is reclassified as *Sporisorium overeemii* (Cif.) Rifai, *comb. nov.*

ABSTRAK

Tumbuhan inang varietas jamur api ini diidentifikasi sebagai *Panicum repens* L. Jamur tersebut dianggap sejenis dengan *Ustilago overeemii* Cif. yang selanjutnya direklasifikasi menjadi *Sporisorium overeemii* (Cif.) Rifai, *comb. nov.*

In 1933 Ciferri described several species of smuts forwarded to him by Dr. K.B. Boedijn from Java, including *Ustilago amadelpha* Syd. & Butl. var. *glabriuscula* Cif. the host of which was indicated as "..... in foliis Gramina indet., prob. Andropogonea, Archip. Ind., Insula Java, Hortus Bogoriensis, Coll. ?, IV. 1930; mis. Hortus Bogor., N. 12347 ....." Since 1961 I have been making observations on smuts growing on grasses and sedges in Bogor Botanic Garden and have been successful in collecting *Ustilago overeemii* Cif. on *Panicum repens* L., *Spacelotheca polytriadis* (Massee) Ling on *Polytrias amaura* (Buese) O.K., *Sphacelotheca ischaemicola* Ling and *Sphacelotheca tanglinensis* (Tracy & Earle) Zundel on *Ischaemum timorense* Kunth, and *Cintractia axicola* (Berk.) Cornu on *Fimbristylis alboviridis* Clarke (Rifai, 1971). It has not been able so far to locate an andropogonaceous grass parasitized by a smut answering the description of *Ustilago amadelpha* var. *glabriuscula* in any part of Bogor Botanic Garden so that its very existence is questionable.

Careful examinations and comparisons of the abundant isotype collection of *Ustilago amadelpha* var. *glabriuscula* and numerous collections as well as the isotype specimen of *Ustilago overeemii* — both were described in the same paper by Ciferri (1933) — convinced me that their host plants are identical, namely *Panicum repens.* Dr. Soejatmi Soenarko Dransfield, formerly the agrostologist at the Herbarium Bogoriense, was

also of the opinion that the former type collection represented undeveloped inflorencenses of *Panicum repens*. The fact that macroscopically and microscopically *Ustilago amadelpha* var. *glabriuscula* and *Ustilago overeemii* cannot be distinguished whatsoever bears out this view.

This smut species is very common on the populations of *Panicum repens* in Java, where the grass probably represents an introduced but now widely spread and much feared weed (Backer & Bakhuizen van den Brink 1968, Soedarsan & Rifai 1975). The fungus produces characteristic sori on its inflorescences so frequently in such a way that flowering *Panicum repens* can be seen only rarely. In Javanese older literatures the fungus has been called *Ustilago digitariae* Kunze (Backer & van Slooten 1924, Backer 1928), a species now commonly referred to as *Sphacelotheca digitariae* (Kunze) Clinton and apparently restricted to members of the genus *Digitaria* Heist. ex Fabricus.

As has been remarked by Ciferri (1933) this Javanese fungus is probably identical with *Ustilago digitariae* Kunze f. *panici-repenti* Kühn. *Sorosporium formosanum* Sawada from Taiwan — redescribed later as *Ustilago formosanum* (Sawada) Tanaka by Tanaka (1922) based on collections from *Panicum proliferum* Lam. but said to be growing also on *Panicum repens* by Ciferri (1933) and Zundel (1953) — may provide an earlier name for the present species. Since their respective type specimens have not been available for comparison it is not possible to ascertain their identity. The Javanese fungus, however, can hardly be referred to *Sorosporium* Rudolphi, because it is only when examined on a dry glass slide do the freshly collected sori produce some irregular conglomerations of ustilospores — a term introduced by Donk (1973) to denote the smut spores (or "Brandspore") commonly but unjustifiably called chlamydospores. These loose ustilospore aggregations break up completely when mounting media are applied on them. The presence of columella, fibrous tissue and false membrane of fungal tissue suggest that this species should be included in *Sporisorium* Ehr. as this genus is understood by Langdon & Fullerton (1978).

Based on the foregoing consideration the nomenclator of this species is presented below.

Sporisorium overeemii (Cif.) Rifai *comb. nov.*

Ustilago overeemii Cif. *in* Nuovo G. Bot. ital. **40**: 254. 1933 (ut *overeemii* sphalm. — basionym).

Ustilago amadelpha Syd. & Butl. var. *glabriuscula* Cif. *in* Nuovo G. bot. ital. **40**: 255. 1933.

?*Ustilago digitariae* Winter f. *panici-repentis* Kühn *in* Hedwigia **15**: 5. 1876.

REFERENCES

BACKER, C.A. (1928). *Onkruidflora der Javasche Suikerrietgronden.* Java Suikerind. Proefst., Pasoeroean.

BACKER, C.A. & BAKHUIZEN VAN DER BRINK JR, R.C. (1968). *Flora of Java. III.* Noordhoff, Groningen.

BACKER, C.A. & VAN SLOOTEN, D.F. (1924). *Javaansche theeonkruiden.* Ruygrok & Co., Batavia.

CIFERRI, R. (1933). Ustilaginales esotici nuovi o rari. I. *In* Nuovo G. bot. ital. **40**: 252 - 268.

DONK, M.A. (1973). The Heterobasidiomycetes: a reconnaissance IV. *In* Proc. K. Ned. Akad. Wet. C. **76** (2): 109 - 125.

LANGDON, R.F.N. & FULLERTON, R.A. (1978). The genus *Sphacelotheca* (Ustilaginales): criteria for its delimitation and consequences thereof. *In* Mycotaxon **6**: 421 - 456.

RIFAI, M.A. (1971). Dua djenis djamur api jang baru untuk flora Indonesia. *In* Ber. Biol. **1** (3): 19 - 20.

SOEDARSAN, A. & RIFAI, M.A. (1975). *50 gulma di perkebunan.* BPPB, Bogor.

TANAKA, T. (1922). New Japanese fungi. Notes and translation. XI. *In* Mycologia **14**: 81 - 89.

ZUNDEL, G.L. (1953). *The Ustilaginales of the world.* Penn. State Coll., Pennsylvania.

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Printed by ARCHIPEL, Bogor, Java