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THE GENUS ACTINICEPS BERK. & BR.

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(With five Text-figures)

The genus *Actiniceps* Berk. & Br. is shown to be a Basidiomycete. *Wiesnerina* Höhn. and *Dimorphocystis* Corner are regarded synonymous. The type species *A. thwaitesii* Berk. & Br. is redescribed with *D. capitatus* Corner as synonym. The following new combinations are proposed: *A. horrida* (Höhn.) Boedijn, *A. secunda* (Höhn.) Boedijn, *A. laevis* (Corner) Boedijn, and *A. subcapitatus* (Corner) Boedijn.

The genus *Actiniceps* was described by Berkeley & Broome in 1877 for a fungus which they called *A. thwaitesii*, and which was collected on dead coriaceous leaves in Peradeniya, Ceylon. They placed the genus in the Deuteromycetes, family Stilbaceae, as the stipe of the fructification, consisting of parallel hyphae, supported a subglobose head which produced what they thought to be conidia.

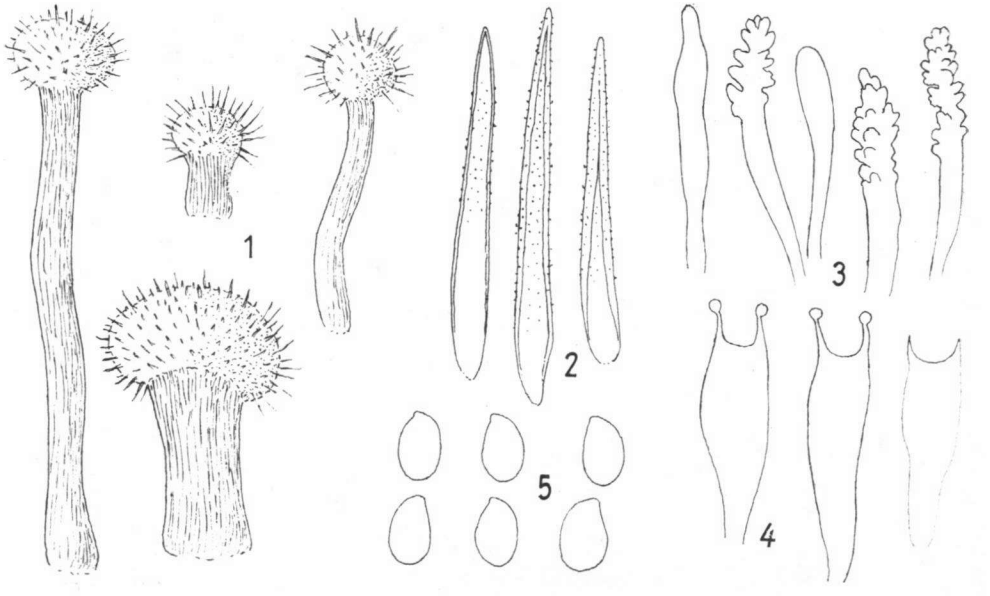
Afterwards *A. thwaitesii* was collected on decaying plant material in the Botanic Gardens, Bogor, West Java. It was mentioned and depicted by Penzig and Saccardo (5) in 1904. A further find on dead leaves of *Ficus elastica* was listed in 1907 by Koorders from Purworedjo, East Java. Finally, another specimen was brought by my former assistant Miss Sri Sabani who collected the fungus on the decaying spatha of a palm in the Botanic Gardens at Bogor.

Superficial determination led to the present species, but a more thorough study revealed the fact that it is no Deuteromycete at all. It is a true Basidiomycete. In order to be quite certain it was felt that a re-examination of the original specimen was needed. This was made possible through the kindness of the Director of the Herbarium at Kew. Renewed study of the type brought to light that (i) the fungus from Bogor is identical with the type specimen of *A. thwaitesii*, (ii) the genus *Actiniceps* belongs to the Basidiomycetes, and, on account of the anatomical characters, to the family of the Thelephoraceae.

Very small thelephoraceous fungi have been described by von Höhnel (3, 4) who placed them in the genus *Wiesnerina* Höhn. On comparing this genus with *Actiniceps*, it appears that they are practically the same. The spines, a very conspicuous character in *Actiniceps*, are an equally striking feature in *Wiesnerina* where they were called cystidia by von Höhnel. The only difference is in the fact that the two species of the last-named genus are either sessile or attenuate at the base, but I can attribute no weight to this difference, since specimens of *A. thwaitesii* with a very short stalk are not rare.

Another genus with which *Actiniceps* should be compared is *Dimorphocystis* Corner (2), to which Dr. M. A. Donk kindly drew my attention. As may be gathered from both the description and drawings, this genus is fully identical with *Actiniceps*. Of the three species described by Corner I assume *D. capitatus* to be the same as *A. thwaitesii*. The description agrees very well with our material except for the basidia which are said to be 4-spored, whereas those in the Bogor specimen were found to be 2-spored. In the latter, basidia were rather scarce, so it may have been purely accidental that there were only found 2-spored ones. It is a well-known fact, after all, that in the Thelephoraceae 2-spored and 4-spored basidia frequently occur in the same specimen.

On the strength of the above considerations both *Wiesnerina* and *Dimorphocystis* are here regarded as synonyms of *Actiniceps*, of which an emended diagnosis is given. Apart from the type species, of which also a redescription will follow, the genus contains at present four more species. Another species, *A. besseyi* Mac Millan, which was found growing on the rind of *Citrus* fruits in North America, seems to be a true stilbaceous fungus, but since no material could be examined, no further comment can be given.



Figs. 1–5. *Actiniceps thwaitesii* Berk. & Br.: 1—various fructifications; 2—cystidia; 3—paraphyses and acanthophyses; 4—basidia; 5—basidiospores.

ACTINICEPS Berk. & Br.

Actiniceps Berk. & Br. *in* J. Linn. Soc., Lond. (Bot.) **15**: 85. 1877. — Type species: *Actiniceps thwaitesii* Berk. & Br.

Wiesnerina Höhn. *in* Denkschr. Akad. Wiss. Wien **83**: 7. 1907. — Type species: *Wiesnerina horrida* Höhn.

Dimorphocystis Corner, Monogr. *Clavaria* 695. 1950. — Type species: *Dimorphocystis laevis* Corner.

Fructifications sessile, with attenuated base or stalked. Stalk composed of parallel hyphae. Head globose or subglobose, consisting of basidia, paraphyses and acanthophyses, and provided with numerous radiately projecting spine-like cystidia which are more or less thick-walled and incrustate. Sometimes there are also cystidia on the stem. Basidia 2–4-spored. Spores hyaline, ovoid to cylindrical. Acanthophyses hyaline, cylindrical or subventricose, with short outgrowths in the upper portion.

ACTINICEPS THWAITESII Berk. & Br.

Actiniceps thwaitesii Berk. & Br. *in* J. Linn. Soc., Lond. (Bot.) **15**: 85. 1877. — Type: K.
Dimorphocystis capitatus Corner, Monogr. *Clavaria* 695. 1950. — Type: not seen.

Fructifications short-stalked to very long-stalked. Stalk 90–720 μ long, 42–120 μ wide, but mostly 270–300 × 48–60 μ, composed of parallel hyphae, 5–6 μ wide. Head subglobose, sometimes flattened, bristling with spines placed in alle directions, at first white, afterwards pale yellowish, 114–240 μ diam., the spines not counted, but mostly 120–132 μ diam. Spines projecting far beyond the tissue of the head, 95–129 μ long, 9–13 μ wide at the base, tapering to a rather sharp point at the tip, at first thin-walled, with the cell-wall 1–4 μ thick, afterwards with the cell-wall thickened to 5 μ and incrustated with crystals, in old specimens even with the lumen nearly obliterated. Tissue of the head consisting of paraphyse-like hyphae, 4–6 μ wide, among which the basidia and acanthophyses are to be found. Basidia very delicate, subcylindrical, attenuated near the base, 18–22 μ long, 6–7 μ wide at the top, 2-spored. Sterigmata 3–4 μ long, 1–2 μ broad at the base. Spores colourless, ovoid, with indistinct lateral apiculus, 6–7.5 × 4–5 μ. Acanthophyses 3.5–5 μ broad, in the upper part densely beset with 1–2 μ wide outgrowths.

Known from Ceylon, Malaya, Java, on vegetable debris.

Briefly enumerated, the following species belong to *Actiniceps*, viz. **A. horrida** (Höhn.) Boedijn, *comb. n.* (basinym: *Wiesnerina horrida* Höhn. *in* Denkschr. Akad. Wiss. Wien **83**: 7. 1907), from Brazil, on dead plant material; **Actiniceps secunda** (Höhn.) Boedijn, *comb. n.* (basinym: *Wiesnerina secunda* Höhn. *in* Sitzber. Akad. Wiss. Wien **121**: 342. 1912), from Java, on dead palm leaves; **Actiniceps laevis** (Corner) Boedijn, *comb. n.* (basinym: *Dimorphocystis laevis* Corner, Monogr. *Clavaria* 695. 1950), from Malaya, on dead leaves of *Eugenia cerina*; **Actiniceps subcapitatus** (Corner) Boedijn, *comb. n.* (basinym: *Dimorphocystis subcapitatus* Corner, Monogr. *Clavaria* 695. 1950), from Malaya, on dead leaves of *Eugenia cerina.*

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