

Tropical Bryology 8: 51-52, 1993

Taxonomic Results of the BRYOTROP-Expedition to Zaire and Rwanda

5. Anthocerotae

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Key to the genera and the species:

1 Thallus solid. Jacket of antheridial body composed of irregularly arranged small cells. Spores yellow (*Phaeoceros*).....2

1 Thallus cavernous. Jacket of antheridial body composed of four tiers of cells. Spores dark brown to black (*Anthoceros*).....3

2 Distal surfaces of spores densely papillate to spinulate throughout.....

..... *P. carolinianus*
2 Distal surfaces of spores densely papillate, with scattered small lamellae consisting of several papillae united at the base.....
..... *P. fulvisporus*

3 Thallus-margin densely dissected into narrow-rectangular, truncate lobules. Spores large (50-60 μm in diam.), distal surfaces covered with baculate to spinate, long outgrowths (up to 4 μm long).....

..... *A. myriandroecium*

3 Thallus-margin remotely or somewhat pinnately dissected into broad-rectangular lobes.

Spores small (34-42 μm in diam.), distal surfaces covered with spinulate outgrowths (less than 3 μm long) often united at the base.....

..... *A. sambesianus*

Abbreviations:

** New record for Rwanda viz. Zaire

KB: Kahuzi-Biega (Zaire)

Ka: Karisimbi (Rwanda)

Ny: Nyungwe Forest (Rwanda)

Ak: Akagera region (Rwanda)

Ki: Kigali region (Rwanda)

100-171, number of collecting site.

For locality data and a description see the contribution by E. Fischer on the vegetation of the study area in this volume (*Tropical Bryology* 8: 13-37, 1993)

Anthoceros L.

for the species from Europe and North-Eastern Africa see Proskauer (1958) and Sérgio (1987); for the species from South Africa see Sim (1926) and Arnell (1963).

A. myriandroecium Steph.

Since Stephani (1911, 1916) described this species from “Kiwu See” in “Ruanda”, no records of the species have been published. This is the second record for the species. *A. myriandroecium* is easily recognized by its deeply forked, strap-shaped thallus whose margins are densely dissected into narrow-rectangular lobules, and its globose, large spores whose distal surfaces are covered with numerous, long baculate outgrowths. It occurs on roadcut in Ericaceous heath on the drier slopes of valley at about 2500 m altitude. **Ny:** 102, *Pócs 6040*.

**A. sambesianus* Steph.

The present little known species was described from Zambezi River, Boroma by Stephani (1916). Thereafter no reports on the species have been published except that Sim (1926) and Arnell (1963) suggested the occurrence of the species in Usambara, Tanzania. I examined the type specimen of *A. sambesianus* and confirmed that this species surely occurred also in Rwanda. *A. sambesianus* resembles *A. mandoni* and *A. caucasicus* in the strapshaped thallus with remotely or somewhat pinnately lobed margins, and the proximal surface of spore with more or less distinct smooth area along the triradiate mark, but differs in the much smaller spore (34-42 μm vs. 45-65 μm) with less distinct smooth area along the triradiate mark. In Rwanda it occurs on trailside in montane evergreen forest at about 2400 m altitude. **Ny:** 110, *Pócs 6401*.

Phaeoceros Prosk.

for the species from Europe and North Africa see Proskauer (1958); for the species from South Africa see Sim (1926) and Arnell (1963).

**P. carolinianus* (Michaux) Prosk. (*Phaeoecos laevis* [L.] Prosk. subsp. *carolinianus* [Michaux] Prosk.)

This world-widely distributed species commonly occurs also in Rwanda. All the specimens examined have mature capsules. It grows on roadcut or bank of ditches in montane rainforest between 2100 and 2500 m altitude. **Ny:** 103, *Pócs 6144*, *Pócs 6155*; 112, *Frahm*

6458, *Frey & Kürschner 91-492*. **Ka:** 169, *Pócs 8058*.

**Phaeoceros fulvisporus* (Steph.) Hasegawa, comb. nov. [*Anthoceros fulvisporus* Steph., *Hedwigia* 52: 306 (1912)]

The present species is very closely related to *P. carolinianus*, and may be considered to be merely a form of the latter. At present, however, I regard it as an autonomous species, because it is clearly distinguished from the latter by its characteristic surface ornamentation of spores, i.e. the distal surface has several semicircular lamellae scattered among densely distributed papillae. *P. fulvisporus* was originally described from Mt. Kilimanjaro, and Rwanda is the second station for this species. In Rwanda it was collected on roadcut in *Erica rugegensis* heath at 2450 m altitude.

Ny: 101, *Fischer 6010*.

Acknowledgements

I thank Prof. J.-P. Frahm for giving me a chance to examine the specimens listed above, and the director and curator of Conservatoire et Jardin botaniques, Genève (G) for the loan of type specimens of many African anthocerotale species.

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