

Taxonomic Results of the BRYOTROP Expedition to Zaire and Rwanda

18. Calymperaceae

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Syrrhopodon Schwaegr.

The first species list of the examined countries was published by Demaret (1940,1946) and the revision of the *Syrrhopodon* species of this area were made by Demaret and Leroy (1947). Further additional data were published on the basis of the collection of S. Lisowski (Orbán 1987). The tropical African species of the genera were revised by the Author (Orbán 1981) and later the key for the species was prepared by Orbán and Reese (1986). This key is suitable to identify practically all tropical African taxa, therefore I do not supply a key here for the 7 species collected in Central Africa. The world ranges of *Syrrhopodon* species was given by Reese (1987).

Syrrhopodon armatus Mitt.

Typical paleotropical lowland forest element in Africa which is wide ranging from Nigeria to Tanzania and Madagascar-Mascarene Islands and in Asia (Pócs and Tixier 1967, Orbán 1985, Orbán and Reese 1986, Reese et al. 1986). It occurs in our area at 900 m alt.

*ssp. *insularum* (Biz. & Onraedt) Orbán & Reese
KB: 120, Frey & Kürschner 6590a.

**Syrrhopodon asper* Mitt.

Widespread Afromontane species known from Gabon to East Africa. New to Rwanda. It occurs in the montane rainforests from 1000 to 2500 m altitude (see map by Orbán 1985), in our area at 2300 m.

Ny: 111, Pócs 6405.

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). The specimens are deposited at the Botanical Museum Berlin as well as in the herbarium of the author (except for unicates).

**Syrrhopodon gardneri* (Hook.)Schwaegr.

Pantropical corticolous or rupicolous species which is widespread in tropical Africa from Sierra Leone to East Africa, Madagascar and the Mascarenes and occurs in submontane rainforests at an altitude of 500-2100 m (see map by Orbán 1985). New to Rwanda. In the examined area this species was found between 1300 and 2300 m alt. **KB:** 124, *Pócs* 6792; 125, *Fischer* 6722; 126, *Pócs* 6820; 152, *Frahm* 7566, *Pócs* 7790, 7834. **Ny:** 111, *Pócs* 6046, *Frey & Kürschner* 7904(91-435); 112, *Pócs* 6431, 6436, 6441, *Frahm* 6451; 113, *Pócs* 6479, 6480, *Frahm* 6483.

Syrrhopodon gaudichaudii Mont.

Afro-American species which is one of the commonest species in tropical Africa. It occurs in the East African islands, in entire tropical and South Africa, except dry areas (see map by Orbán 1985). It grows in submontane and montane rainforests on bark and rarely on rocks at an altitude from 1300 to 2700 m.

KB: 120, *Frey & Kürschner* 6590b(91-406); 125, *Pócs* 6633; 128, *Frey & Kürschner* 7333(91-261), *Pócs* 7612; 131, *Pócs* 7116; 135, *Pócs* 7227; 139, *Pócs* 7289, 7299; 144, *Pócs* 7745; 145, *Frey & Kürschner* 7501(91-371), *Pócs* 7764.

Syrrhopodon incompletus Schwaegr. var. *incompletus*

Disjunct species between America and Africa, its African distribution is restricted to few localities in Zaire and Tanzania (Reese and Orbán 1986). Corticolous species of lowland and submountain rainforests. It grows in our area at 1500 m altitude.

KB: 126, *Frey & Kürschner* 6708(91-11).

**Syrrhopodon lamprocarpus* Mitt.

Afromontane species which has two disjunct areas in West and East Africa (see map by Orbán 1985). New to Zaire. It grows in our area from 900 to 2000 m altitude.

KB: 120, *Pócs* 6832; 124, *Pócs* 6784; 125, *Pócs* 6719. **Ny:** 107, *Pócs* 6302, *Frahm* 6291; 155, *Pócs* 8014.

Syrrhopodon parasiticus (Brid.) Besch.

Widespread in tropical Africa from Guinea to East Africa and Madagascar. For the discussion of *Syrrhopodon* subg. *Calymperopsis* (C.Müll.) Broth. taxa attributed to Africa, see Tixier (1969) and Richards and Edwards (1972). It grows in our region in primary tropical rain forests at an altitude from 850 to 1300 m.

var. *disciformis* (C.Müll.) Florsch.

KB: 119, *Pócs* 6861; 125, *Pócs* 6737.

Calymperes Sw.

The revision of West Tropical African *Calymperes* was prepared by Edwards (1980) which deals with some specimens from Zaire. The list of *Calymperes* species of the region was published by Demaret (1940, 1946). In the examined area only 2 were found from the earlier published eleven species.

Calymperes afzelii Sw.

Typical lowland forest species which occurs in Africa from Cameroun and Nigeria to Zaire and in tropical Americas (Edwards 1980). It was found in the examined area in very wet rain forest at 900 m altitude.

KB: 122, *Pócs* 6800.

Calymperes erosum C. Muell.

This species occurs in lowland forests from Cameroun to Zaire and Angola in Africa and also occurs in Americas and Europe (Edwards 1980). In our area this species was found in primary tropical rainforest at 1100 m altitude on rotten wood.

KB: 123, *Pócs* 6571.

References

- Demaret, F. 1940.** Prodrôme des Bryophytes du Congo Belge et du Ruanda-Urundi. Bull. Jard. Bot. Bruxelles 16:21-104.
Demaret, F. 1946. Prodrôme des Bryophytes du Congo Belge et du Ruanda-Urundi. I. Musci, Supplément 1. Bull. Jard. Bot.

Bruxelles 18:7-66.

Demaret, F. & V. Leroy 1947. Contribution a l'étude des genres *Syrrhopodon* et *Thyridium* et révision des espèces congolaises. Bull. Jard. Bot. Bruxelles 18:207-230.

Edwards, S.R. 1980. A revision of West Tropical African Calymperaceae. I. Introduction and *Calymperes*. J. Bryol. 11:49-93.

Orbán, S. 1981. Studies on African Calymperaceae III. Conspectus of the African species of *Syrrhopodon* Schwaegr. Acta Bot. Acad. Sci. Hung. 27:169-177.

Orbán, S. 1985. Studies on African Calymperaceae IV. Distribution of the African species of *Syrrhopodon* Schwaegr. Abstracta Botanica 9 Suppl.2:99-107.

Orbán, S. & W. D. Reese 1986. Notes on the taxonomy of African *Syrrhopodon*. Abstracta Botanica 10:349-355.

Orbán, S. 1987. Studies on African Calymperaceae V. *Syrrhopodon* species collected by S. Lisowski in tropical Africa. Acta Acad. Paed. Agriensis 18:81-87.

Pócs, T. & P. Tixier 1967. On the ciliferous *Syrrhopodon* species in Asia. Ann. Hist.-Nat. Mus. Nat. Hung. Pars Bot. 59:125-134.

Reese, W.D. 1987. World ranges, implications for patterns of historical dispersal and speciation, and comments on phylogeny of *Syrrhopodon* (Calymperaceae). Memoires of the New York Botanical Garden 45:426-445.

Reese, W.D. and S. Orbán 1986. *Syrrhopodon incompletus* var. *incompletus* (Musci: Calymperaceae) disjunct between the Americas and Africa. Bryologist 89:213-214.

Reese, W.D., T. Koponen and D.H. Norris 1986. Bryophyte flora of the Huon Peninsula, Papua New Guinea. XIX. *Calymperes*, *Syrrhopodon* and *Mitthyridium* (Calymperaceae, Musci). Acta Bot. Fennica 133:151-202.

Richards, P.W. and S.R. Edwards 1972. Notes on African mosses V. Journ. Bryol. 7:47-60.

Tixier, P. 1969. La genre *Calymperopsis* (C.M.) Fleisch. (Calymperaceae). Rev. Bryol. Lichénol. 35:265-302.

