

East African Bryophytes XXXII. Campylopoideae Records

JAN-PETER FRAHM †
Edited by TAMÁS PÓCS¹

¹ *Institute of Biology, Eszterházy Károly University, Eger, Hungary; pocs.tamas33@gmail.com*

Abstract: Frahm, J.-P.; Pócs, T. (ed.) (2021): East African Bryophytes XXXII. Campylopoideae Records. *Frahmia* 22:1-4.

More than 30 years ago, J.-P. FRAHM prepared a manuscript about African Campylopoideae collected by the editing author. As his comments are valuable till today and due to current studies on African Campylopoideae by the editing author, this manuscript is more or less unchanged published in its original form.

1. Introduction

During his stay in Africa, T. PÓCS regularly sent his and JACK SHARP's Campylopoideae collections first to Maurice BIZOT and after his death to JAN-PETER FRAHM for identification and revision. A part of these collections made until 1973 were published in Frahm's monograph of African Campylopus (FRAHM [1985a]). From another part he prepared a small paper and sent the manuscript to T. PÓCS for publication, just when T. PÓCS went back to Africa for another four years. On the base of FRAHM's letter PÓCS felt authorized to edit this paper, which is published below. He updated the nomenclature based on PADBERG & FRAHM (1985) and STECH (1999). It was otherwise unchanged and represents the text provided by FRAHM in 1985.

Datum

26.9.85

Dear Tamás,
after I have sent you the list of identifications of the african specimens of Campylopus to Hungary I compiled a list with some taxonomic and geographic remarks (see enclosed) in the style of the East African Bryophytes. Perhaps you may include it in one of the further continuations of this series.
With all best wishes for a good stay in Tanzania!



The facsimile of the letter of Jan-Peter Frahm

The duplicate specimens gathered by PÓCS and his colleagues between 1985 and 1996 were also sent to FRAHM, but his unexpected death prevented him to identify them. The material went later

to the herbarium of the Botanic Garden and Botanical Museum Berlin-Dahlem (B). Pócs is currently working on the identification of those, as the original specimens are deposited in the Eger Herbarium (EGR) and intends to publish the results. Therefore he thinks that it is necessary to publish Jan-Peter Frahm's manuscript in advance.

2. Jan-Peter Frahm's identifications and comments

Abbreviations used:

- KIL: Mt. Kilimanjaro
- MER: Mt. Meru
- S-ULU: Southern Uluguru Mountains
- T: Tanzania
- UKA: Ukaguru Mountains
- ULU: Uluguru Mountains
- W-US: West Usambara Mountains

1. *Campylopus arctocarpus* (Hornsch.) Mitt. *ssp. madecassus* (Besch.) J.-P. Frahm
T: W-US: Mtumbi Forest Reserve (Borhidi 8542/AA)
The palaeotropic race of *C. arctocarpus*. It had been first reported for Africa a few years ago by FRAHM (1982) as *C. arctocarpus*, but recognised as a variety because of small, but distinct anatomical characters (FRAHM, 1985).
2. *Campylopus aureo-nitens* (Müll.Hal.) Jaeg.
T: S ULU: near the waterfall of Mgeta 2330–2380m (Pócs et al. 6822/V); * Zambia: Serenje Distr., Kundalila Falls Nat. Mon. (Kornaś BR-0018).
This new record fills a gap in the range, which covers South Africa, Malawi, Mauritius, Tanzania, Kenya, Madagascar, Angola and Zimbabwe.
3. *Campylopus aureus* Bosch & Lac.
Zambia: between Unda-Unda and Rufunza 125km E of Lusaka, 1200m (Pócs & Kornaś 6621/T).
This is the first record of *C. aureus* on continental Africa. *Campylopus aureus* has primarily been known from SE-Asia, but has also been recorded from western North America (FRAHM, 1980), Hawaii (FRAHM, 1985b), where it has been erroneously named *C. introflexus* (Hedw.) Brid., and recently also from Reunion, Comores and Madagascar, where it had been described under several other names (FRAHM, 1985a).
4. *Campylopus flavicoma* Müll.Hal. ex Broth.
Syn.: *Bryohumbertia flavicoma* (Müll.Hal. ex Broth.) J.-P.Frahm, *Bryohumbertia metzlerelloides* P.de la Varde & Thér., *Campylopus metzlerelloides* (P.Varde & Thér.) Biz.
T: W-US: around Kilungala summit 1900–1980m (Borhidi 8538/H); ULU: Kinazi Peak 1950-60m (Pócs & Mwanjabe 6838/L).
A third specimen also referable to the genus *Bryohumbertia* (ULU: S-ridge of Mt. Kifuru 1875-1980m, Pócs 6914/C) shows interruptedly foliate stems. It has been determined as *C. flageyi* Ren. & Card. described from Malagasy, a species, which was regarded as *Campylopus filifolius* (Hornsch.) Mitt. Syn.: *Bryohumbertia filifolia* (Hornsch.) J.-P.Frahm known from the Neotropics (FRAHM, 1982a).
Without detailed studies it can not be decided whether *Campylopus flageyi* is a proliferating form of *Bryohumbertia flavicoma*, or has to be placed to *B. filifolia*. For also unproliferated forms exist of *Bryohumbertia filifolia* [var. *humilis* (Mont.) J.-P.Frahm], ultimately *B. filifolia*

and *B. flavicoma* may be conspecific. A third species of *Bryohumbertia*, *B. walkeri* (Mitt.) J.-P.Frahm, resembling much *B. flavicoma*, occurs in SE-Asia, which may also ultimately be conspecific.

5. *Campylopus dicranoides* Thér. & Nav.*
KIL: along Umbwe Route 2850-2900m, on bark (Pócs 6788/T).
This species had been known from only 8 localities in Zaire, Uganda and Kenya and is reported here for the first time outside the Central African Mountains.
6. *Campylopus flaccidus* Ren. & Card.
Syn.: *C. ampliretis* (Müll. Hal.) Par. MER: rim of Meru Crater 8200 ft. c.spor. (Sharp et al s.nr.), a submuticous (fo. *epilosa* Biz.?) form (Sharp et al. 7804) ; * Zambia: Serenje Prov., Kundalila Falls Nat. Monument. 1500m (Kornaś BR-0015); Malawi: near Blantyre 4150 ft., on rock (Crundwell 332).
Range: South Africa, Madagascar, Tanzania, Malawi, Sudan and the Azores.
7. *Campylopus fragilis* (Brid.) Bruch, Schimp. & W.Gümbel
KIL: along Umbwe Route 3330m (Pócs 6791/Q); trail from Mweka to Kibo peak 9800–10200 ft. (Sharp et al. 739/B, 7529/A); MER: trail from Kitoto to Meru Crater Rim 8000–8500 ft. (Sharp et al. 20, 460/A); Malawi: Zomba Plateau, Mlungusi River 4850 ft. (Crundwell 264).
8. *Campylopus hildebrandtii* (Müll.Hal.) A.Jaeger
MER: Kitoto near Meru Crater 8000 ft., on trunk (Sharp et al. 609, 665/B, 668/B, 667/B, 666/D, 670/C).
Nr. 665/B shows hyaline leaf tips, which were not yet known in this species. *Campylopus hildebrandtii* was hitherto known from only about a dozen localities, but seems, according to its wide range from South Africa to Kenya and the Comores to Cameroun - to be an overlooked or misidentified species.
9. *Campylopus incacorrallis* Herz.
Syn.: *C. subperichaetialis* Biz. & Kilb.
T: ULU: above Morogoro 1700m (Pócs et al. 6069/N); top of Bondwa 2130m (Pócs & Crosby 6846/B); W-US: peak between Kwagoroto summit and Mazumbai village 1850m (Pócs 8404); summit of Mt. Kwekulunge 1750-1840m (Pócs 8430/N); Kilimandegé summit 1780m (Pócs 8508/G); Kwagoroto summit 1850-1950m (Pócs 8406/AV).
An afro-montane-andine species occurring from Venezuela to Bolivia and in Tanzania, Zaire, Uganda and Mauritius.
10. *Campylopus jamesonii* (Hook.) Jaeg.
Syn.: *C. procerus* (Müll.Hal.) A.Jaeger
KIL: trail from Mweka to Kibo Peak 8600 ft. (Sharp et al. 7318, 7295, 7292/D); Machame Route 3000 3600 m (Pócs 6978/A) ; Umbwe Route 2800-2950m (Pócs 6985/G) ; UKA: Mamiwa Ridge, 2200m (Mabberley 1385/B, det. Pócs) ; W-US: Mabweni summit range 2050-2150m (Pócs 8550/S).
11. 11. *Campylopus johannis-meyeri* (Müll.Hal.) Par.*
MER: Meru Crater area, 8400 ft., on decaying branch (Sharp et al. 7891/A); * T: UKA: N of Kilosa town 1550m (Pócs et al. 6590/F c.spor.).
A species described from the Kilimanjaro and hitherto known from a dozen localities in Cameroun, Zaire and Kenya. *Campylopus johannis-meyeri* is very similar to *C. pilifer*, but

lacks the long lamellae on the dorsal side of the costa and has symmetric capsules.

12. *Campylopus leucochlorus* (Müll.Hal.) Par.
KIL: trail from Mweka to Kibo Peak 7000-8600 ft. (Sharp et al. 7284a); KEN: west slope of Mt. Kenya 2000m (Pócs & Faden 6605/D as *C. stramineus*); W-US: W of Mazumbai village 1900m (Pócs 6956/B as *C. stramineus*); E-slope of Mabweni 1850-2050m (Pócs 8549/D); Shume-Magamba forest reserve 1950-2150 m (Pócs 8450/M); E summit of Baga 1800m (Pócs 8419/AD).
Range: Zaire, Uganda, Kenya, Tanzania, Malawi.

13. *Campylopus nivalis* (Brid.) Brid.
Syn.: *C. chrismarii* (Müll.-Hal.) Mitt., *C. stramineus* (Mitt.) Jaeg.
KIL, MER: frequent in the alpine and subalpine region, descending down on open habitats to 3100m, recorded from 9 collections. ULU: Bondwa peak 2120m (Pócs 6869/BP); Southern Highlands of Tanzania, Mt. Rungwe (Pócs & Swai 6766/P); Mbeya Region, Rungwe volcano (Pócs 6504/V, 6507/N); W-US: Shume-Magamba 1950-2150m (Pócs 8450/0).
Pócs 6718/CR and 6978/N have microphyllous branches in the axils of the upper leaves (as in *Orthodicranum montanum* or *Campylopus flexuosus* and others), which were not yet known from this species.

14. *Campylopus perichaetialis* P.de la Varde & Thér.*
T: W-US: E side ridge of Kilimandegge 1730m (Borhidi & Hedrén 8414/V, 8414/W); Matundsi - Mashindei ridge 1200-1400m (Pócs 8533/A); Baga II F.R. 1950 - 2000m (Pócs 8407/B); West of Mazumbai village 1900m (Pócs 6959/B as *C. chrismarii*); Mazumbai forest reserve, 1750-1880m (Jones & Pócs 6372/BL).
This specimen has been described by Bizot as *Campylopus procerus* (C.Muell.) Par. nov. var. *integrifolius* Biz. *Campylopus perichaetialis* was not yet recorded from Tanzania but known only from Kenya, Zaire and UGANDA.

15. *Campylopus pilifer* Brid.
A common species in Tanzania, represented by 21 collections.

16. *Campylopus praetermissus* J.-P. Frahm*
MER: Meru Crater Park, little falls on Jekukumia River (Sharp 7773).
A rare species, known only from five localities in South Africa, Gabun, Kenya, Tanzania and Mauritius, which was formerly named erroneously as *C. leptotrichaceus* (Müll.Hal.) Paris (cf. BIZOT & KILBERTUS 1979) and recently described as new (FRAHM, 1985a).

17. *Campylopus robillardei* Besch. Syn.: (Müll.Hal.) Par.)
Tanzania: Kigoma Region, Kasoje (Norikoshi 146). Recorded *C. inchangae* only once before from Tanzania.
A species closest related to *C. savannarum* and differing nearly only by the different transverse section of the costa with ventral hyalocysts, which may be regarded as ecological vicariant of *C. savannarum* on moister habitats.

18. *Campylopus savannarum* (C. Muell.) Mitt.
Tanzania: 13 records especially from open, quartzitic sandy soil in elevations between 800 and 1800m.
A species widespread in tropical America and tropical Africa. From Africa it has been described under 23 different names (FRAHM, 1985a).

19. *Metzleria alticaulis* Broth. in Mildbr.
Syn.: *Atractylocarpus alticaulis* (Broth.) Williams, *Atractylocarpus capillifolius* Dix., *A. flexifolius* Dix. and *A. naveauanus* (Thér.) P.de la Varde.
KIL: along Umbwe Route 2850–2900m (Pócs 6788/Y, 6788/CY); Above Mweka, Arusha Nat. Park (Sharp & Ludanga 7034).
The only species of *Metzleria* in continental Africa (PADBERG & FRAHM, 1985).

3. Acknowledgment

TAMÁS PÓCS wishes to express his gratitudes to the late Prof. JAN-PETER FRAHM for identifying and commenting the African Campylopoideae collections.

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