

Several mosses (Pottiales) new or rarely collected in Africa

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Abstract. Various remarkable records of Pottiales are reported. *Molendoa sublaevis* Demaret & P. Varde is regarded as synonymous with *Hymenostylium crassinervium* Broth. & Dix.

Over the last years the author identified various specimens of Pottiales from several herbaria. Some of these collections proved to be very interesting and are reported below. They are listed in alphabetical order. I have consulted O'Shea's checklist (1995) very often. If a taxon is not listed there for a specific country, I have concluded it as 'new for a country'.

Barbula consanguinea (Thw. & Mitt.) Jaeg.

Cape Verde Islands, Brava Ribeira da Faja da Agua, feuchter, sehr sandiger Böschung, W. exponiert, sterile, with gemmae, alt: 35-50 m, 28 Jan. 1995, leg. A. Lindlar 68 + 70, det. Ph. Sollman, 1997; herb. L.; Frahm.

Nigeria, Niger Prov., Bonu Abuja Distr., waterfalls on the river Gurara, on hard steep rocks in dry channels that carry water in times of flood, sterile, s. alt, 19 April 1958, coll. E.W. Jones 994-A, det. Ph. Sollman, 1997; herb. L.

Burundi, route de Bujumbura a Rumonge, pres

de Kitanza, mousse incrustante dans un tuf a bord de la route, sterile, with gemmae, alt: env. 800 m., 16 Sept. 1974, coll. J.L. de Sloover 19.200, det. Ph. Sollman, 1997; herb. L (in herb. as *Hydrogonium* spec.).

Till now, only known from SE Asia. The collections from the Cape Verde Islands were published as new for Africa, but with some hesitation (Sollman, in Frahm et al. 1996). Very recently, type material of *Barbula consanguinea* (Thwaites 67, BM!) has been studied. The collections cited above. agree well with each other and with the type material. Note that this concept follows the Asian floras of Bartram, Chen, Eddy, Fleischer and Gangulee. This species is well described, discussed and illustrated especially in Eddy (1990). Saito (1975, p. 495) is not correct in placing *Barbula consanguinea* as a new synonym below *Barbula javanica* Dozy & Molk. *Barbula javanica* is clearly another concept.

Barbula convoluta Hedw.

Rep. of S. Africa, Cape Prov., Kirstenbosch, Botanic Garden near Cape Town, on moist soil, exposed, sterile, both with rhizoidal tubers, alt: 50-200 m., 21 Aug. 1976, leg. B.O. van Zanten c.s., vZ. 76.08.25 + vZ. 76.08.27-A, det. Ph. Sollman, 1989; herb. L (in herb. as *Bryoerythrophyllum jamesonii* [Tayl.] Crum).

It is likely that this taxon is an introduction at this location. Not reported in O'Shea (1995) for this country.

Barbula eubryum C. Muell.

Comoros Archipel: Ngazidja (Grande Comore) Island, xeric vegetation with Aloe in Koimbani village, on lava rocks, sterile, alt: 380 m., 15 March 1991, coll. T. Pocs 9155/B, det. Ph. Sollman, 1996; herb. EGR, L.

Not reported for this territory in O'Shea (1995).

Bryoerythrophyllum ferruginascens (Stirt.) Giac.

Mentioned only very briefly for some African countries in Sollman (1993). Here reported in full. Ethiopia, Arussi Prov., circa 25 km SE of Asella, Mt Boruluccu, damp places in rock crevices, sterile, with rhizoidal tubers, alt: c. 4100 m., 3 Dec. 1965, leg. B.E.E. de Wilde-Duyfjes 11.578-C, 11.579-B+C, det. Ph. Sollman, 1990; herb. L. Ethiopia, Bale Mts, Wasana, afro-alpine Festuca-Pentaschistis grasslands on shallow and seasonally waterlogged soils, overlying solid rock, with crescent-forming *Andropogon pratensis*; secondary heathland and pasture, pioneer moss on open algae covered silt, la 6° 55' N, 39° 46' E, veg. record 14-A, sterile, alt: 3900 m., 3 Ja 1990, coll. G. & S. Miehe 415-A, 517, det. Ph. Sollman, 1992; herb Ethiopia, Bale Mts, below Gorba Guracha, Togona valley, ericaceous belt; *Philippia* woodlands and thicket *Philippia-Erica* scrub, regenerating after fire, on 30 NW facing slope; lat. 6° 52' N, 39° 49' E, veg. record 345, sterile, with rhizoidal tubers, alt: 3650 m., 27 Feb. 1990, coll. G. & S. Miehe 2899, det. Ph. Sollman, 1991; conf. R.H. Zander, 1993; herb. BUF, L.

Kenya, N. Nyeri Distr., Mt Kenya, on wet rock by the Sirimon Stream, sterile, alt: c. 3500 m., 4 April 1975, leg. C.C. Townsend 75/691, 75/697, 75/718, det. Ph. Sollman, 1991; herb. L; Townsend.

Kenya, Mt Elgon National Park, on the ESE slopes, E facing lava cliffs of Mt Chemwote, with arid subalpine vegetation, on dry lava rock, fruiting, alt: 3400 m., 12 Jan. 1992, coll. T. Pocs c.s. 9412/D, det. Ph. Sollman, 1996; herb. EGR, GRO, L.

Tanzania, Kilimanjaro Mts, Machame route, near Shira plateau, caves near Shira hut, on rocks covered with volcanic sand, sterile, alt: c. 3800 m., 9 Aug. 1986, leg. B.O. van Zanten & T. Pocs, v.Z. 86.08.530-A, det. Ph. Sollman, 1990; conf. R.H. Zander, 1993; herb. BUF, L.

Tanzania, Kilimanjaro Mts, Machame route, near Shira hut, on Shira plateau, on dry shaded rocks, sterile, with rhizoidal tubers, alt: c. 3800 m., 9 Aug. 1986, leg. B.O. van Zanten & T. Pocs, v.Z. 86.08.526-A, det. Ph. Sollman, 1990; herb. L.

Bryoerythrophyllum recurvum (Griff.) K. Saito

Kamerun, sterile, 10-11.000 ped., s.d., leg. J.A. Jungner 130, det. Ph. Sollman, 1997; herb. H-Broth. R 4764-A. (separated from *Bryoerythrophyllum campylocarpum* (C.Muell.) Crum s.str.).

Tanzania, Kilimanjaro Mts, along Marangu route, rocky gorge, with giant *Senecio* along streamlet, 2 km E of Horombo Hut, on the SW ridge of Mawenzi, on irrigated soil, sterile, alt: 3480 m., 16 June 1988, coll. T. Pocs c.s. 88.127/AN, det. Ph. Sollman, 1995; herb. EGR, L.

Not listed for these countries in O'Shea (1995). In Zander (1993) this taxon is removed from the genus *Bryoerythrophyllum* and placed in *Bellibarbula*.

Didymodon maschalogenae (Ren. & Card.) Broth. (*Didymodon michiganensis* [Steere] K. Saito)

Ethiopia, Prov. d' Addis Abeba, Lac Debre Zeit, sur la terre rocheuse, d'une foret d'Eucalyptus, sterile, with gemmae, alt: 1800-2600 m., 9 March

1968, coll. D. Balazs, in 16.231-D (type of *Tortula toutonii* Bizot), det. Ph. Sollman, 1993; herb. M. Bizot, PC.

In Een (1993) only mentioned very briefly, here given in full.

Hymenostylium crassinervium Broth. & Dix.

Molendoa sublaevis Demaret & P. Varde, Bull. Jard. Bot. Bruxelles 26: 268 + fig. 73. 1956. *syn. nov.* Type: Zaire, Prov. Lubero, Parc Nat. Albert, Kalonge Distr., Lacs Edward et Kivu, cascade de la Nyamwamba, rocher humide, a 3 m de la chute, exp. au nord, sterile, lat. 00 12' S, 29 12' E, alt: 2010 m., 11 May 1953, coll. F. Demaret 5037; herb. BR, holo!

Type material has been studied. This collection agrees well with material studied from East Africa named: *Hymenostylium crassinervium*. The last species is well described in the original literature, shortly discussed in Magill (1981) and illustrated in Zander (1993, p. 125, *H. 'crassi-nerve'*). Another collection was seen as follows: Somalia (British Somaliland), Siradleh Mountain, on hanging limestone cliff, sterile, alt: 1760 m., 1930, leg. W.A. Macfadyen 7-A, det. Ph. Sollman, 1996; herb. BM-Dixon, BR, L. Not listed in O'Shea (1995) for the last country.

Leptodontium flexifolium (Dicks.) Hampe

Southern Africa, Kingdom of Lesotho, campsite near Pass of Guns, in alpine heath-grassland, on dry open earth, shaded, sterile, with gemmae, alt: 3200-3300 m., 17 Sept. 1976, leg. B.O. van Zanten c.s., v.Z. 76.09.930, det. Ph. Sollman, 1988; herb. L. Southern Africa, Kingdom of Lesotho, campsite near Pass of Guns, on shaded, peaty soil at base of basaltic rocks, sterile, with gemmae, alt: 3100-3200 m., 17 Sept. 1976, leg. B.O. van Zanten c.s., v.Z. 76.09.925-A, det. Ph. Sollman, 1988; herb. L.

Malawi, Sapitwa, Mt Mulanje, on a rock, sterile, alt: 2740 m., lat. 15 56' 39" S, 35 35' 31" E, 25 June 1991, coll. Z. Magombo M 4292-A, det. Ph. Sollman, 1994; herb. L. Malawi, Sapitwa, Mt Mulanje, on earth at base of grass tussocks,

associated with *Campylopus sp.*, sterile, alt: 2750 m., 25 June 1991, coll. R.D. Porley 246-A, det. Ph. Sollman, 1994; herb. L.

The Lesotho-collections were only very briefly mentioned in Sollman (1993), here given in full. This species is not listed for Malawi in O'Shea (1995).

Molendoa sendtmeriana (B.S.G.) Limpr.

Sudan, Djebel Uweinat, pres des falaises du plateau sommital (cote Karkur Murr) point d'eau, sur terre humide, sterile, sans alt, 12 Nov. 1968, coll. J. Leonard 4861-A+B, det. Ph. Sollman, 1997; herb. BR, L.

Southern Africa, Kingdom of Lesotho, Mokhotlong, Upper Sehonghong valley, sandstone cliffs, on vertical rock, under overhang on sandstone cliff, lat. 29 27' S, 29 9' E, sterile, alt: 2600 m., 21 Jan. 1995, coll. J.G. Duckett c.s. 3408-A, det. Ph. Sollman, 1996; conf. R.H. Zander, 1996; herb. BUF. L.

Not reported for these countries in O'Shea(1995).

Tortula amphidiacea (C. Muell.) Broth.

Uganda, Kampala, Makakere University campus, on branch of *Theveta peruviana* with *Pterogonium gracile* and *Fabronia*, sterile, with gemmae, s. alt, 22 Jan. 1996, coll. R.D. Porley U 5-A, det. Ph. Sollman, 1997; herb. L: Porley, v. Zanten.

Not reported for this country in O'Shea (1995).

Tortula norvegica (Web.) Lindb.

Rep. of S. Africa, Orange Free State, Sentinal, Mont-aux-Scources area, rocks below cliffs at Sentinal grassland, sterile, 8500 ft, 24 Jan. 1978, leg. L. Smook 1106, det. Ph. Sollman, 1994; herb. L. (in herb. as *Tortula schmidii* (C. Muell.) Broth.). Southern Africa, Kingdom of Lesotho, Maloti Mts, Moteng Pass (West), between Butha Buthe and Mokhotlong, along stream in pass, alpine heath-grassland on basalt boulder in shade of bush, sterile, alt: c. 2600 m., Feb. 1987, leg. J. van Rooy 3094, det. Ph. Sollman, 1993; herb. L

(in herb. as *Tortula ruralis* [Hedw.] G.M. & S.). In Kramer (1988) and O'Shea (1995) not listed for Orange Free State.

Weisiopsis cf nigeriana (Egun. & Olar.) Zand.

Ivory Coast, Mt Niangbo, auf Unterseite eines Granitfelsens, fruiting, alt: 570 m., 8 Sept. 1992, leg. S. Porembski 397, det. Ph. Sollman, 1997; herb. L.

This species is well-illustrated in Zander (1993). Not listed for this country in O'Shea (1995).

Weissia unguiculata (Mitt.) Crundw. & Nyh.

Malawi, Mt. Mulanje, path from Thuchila Hut to Lukulezi, sandy soil in open *Brachystegia* woodland, fruiting, alt: 1800 m., lat. 15° 52' 50" S. 35° 36' 36" E. 23 June 1991. coll. R.E. Longton M 8335-A+B, 8336-A, det. Ph. Sollman, 1997; herb. L.

Ivory Coast, Granitfelsen (Nr. P17), zwischen Boundiali und Madinani, auf Erde über Granit, fruiting, alt: 470 m., 29 Aug. 1992, leg. Porembski 372, det. Ph. Sollman, 1997; herb. L; v. Zanten.

Identified with the aid of the following literature: Crundwell & Nyholm (1974), Magill (1981) and Townsend (1981). Not listed for Ivory Coast by O'Shea (1995).

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