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A small collection of bryophytes from the Seychelles

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Summary: 16 taxa of mosses and 4 taxa of hepatics have been identified from a recent collection of Seychelles bryophytes. *Isopterygium subleptoblastum* C.Müller is new to the Seychelles. *Ectropothecium squarrifolium* (Broth.) Nishimura is new to Africa 3 sensu Index Muscorum, but the identification is somewhat uncertain.

The junior author (LK) visited the Seychelles in April 1990 for environmental policy discussions with the Government of the islands. On this occasion he collected a number of bryophytes, mainly from the island of Mahé.

The senior author (GE) determined the bulk of the mosses, using information and tools that have been assembled for the identification of mosses in collections from the Mascarenes. Two moss specialists have been consulted, i.e., Sándor Orbán (*Calymperaceae*) and Philip Sollman (*Pottiaceae*). All the hepatics have been identified by Tamás Pócs. We are very grateful for all their help.

All specimens have been deposited in herbarium S and have been recorded in its databank.

Mosses

Acanthorrhynchium papillatum (Harvey) Fleischer

Mahé: 400 m, on tree 2 m above ground (S006), 300 m, damp forest near brook, on stones (S020), 2000 ft., on trees in humid situation, leg. 1948-04-13 Eriksson #3, det. Bartram (1950: 272) as

A. decolor (Besch.) Fleischer (RM468).

O'Shea (1997) has shown that *Acantho-rrhynchium papillatum* is the valid name for this taxon, a development that was predicted by Bartram (1950: 272). It seems to be common in the Seychelles judging from the number of specimens examined in the O'Shea paper.

Aerobryidium subpiligerum (Hampe) Cardot

Mahé: 300 m, damp forest near brook, on stones (S011, S012)

Aerobryopsis wallichii (Bridel) Fleischer

Mahé: 400 m, on tree 2 m above ground (S007), 300 m, damp forest near brook, on stones (S011, S012, S013), 1400 ft. on the ground in shade, leg. 1948-04-11, John Eriksson #18, det. Bartram (1950: 272) as *A. crispicuspis* (Besch.) Fleischer (RM543).

Bartram (1950: 272) wrote about *Aerobryopsis crispicuspis* that 'Without much doubt this is one of the innumerable forms of *Aërobryopsis longissima* (Doz. & Molk.) Fl.' O'Shea et al. (1997: 177-178) have found that *A. wallichii*, first described from Nepal, is an earlier name for the same taxon.

Calymperes erosum C.Müller

Mahé: 300 m, damp forest near brook, on stones, det. Orbán (S005B, dupl. in herb. EGR).

Calymperes pallidum Mitten

Mahé: 300 m, damp forest near brook, on stones, det. Orbán (S003B, dupl. in herb. EGR)

Calymperes tahitense (Sull.) Mitten

Mahé: 300 m, damp forest near brook, on stones, det. Orbán (S019, dupl. in herb. EGR)

Ectropothecium Mitten

According to our knowledge only 2 species of *Ectropothecium* have been recorded from the Seychelles. They are *E. regulare* and *E. seychellense*. The first of these, which has a very wide distribution, has 3 specific synonyms. These are very low figures for this difficult and very split genus.

All our samples come from the same very small and limited locality and have almost the same habit, but the normal procedure of identification has led to 3 different names. This can also be interpreted as an indication that all the samples belong to the same species. Nevertheless we have decided to report our findings in 3 separate parts.

One separating character is the denticulation of the leaves. Thus we quote from respective original descriptions:

regulare - apice denticulata
seychellarum - omnia serrulata
squarrifolium - no denticulation

We do not have the resources to go any further with the *Ectropothecium* identification work.

Ectropothecium regulare (Bridel) Jaeger

Mahé: 300 m, damp forest near brook, on stones (S010, S011, S013A).

Stem leaves mostly denticulate near apex only, but some leaves on the same stem are entire throughout.

Ectropothecium seychellarum Besch.

Mahé: Altitude 300 m, damp forest near brook, on stones (S002, S009).

Ectropothecium regulare in the Mascarenes was discussed in some detail by Een (1997: 25). The characteristic feature was described as: 'the very large hyaline alar cells. They are usually two, one short but bent, and one straight and decurrent. Together they give the impression of

a boot.' This feature is not present in these 2 specimens.

Ectropothecium seychellarum was described by Bescherelle (1880: 177). The rather short description contains nothing that disagrees with the above determination. See also Renauld & Cardot (1915: 452-453 + pl. 113:3). No herbarium material is available in S.

* *Ectropothecium squarrifolium* (C.Müller in Broth.) Nishimura

Mahé: 300 m, damp forest near brook, on stones (S008) - Afrique, Lubigou, leg 1930-10-15 ? #5057, det. Potier de la Varde as *Ctenidium s.* (C.Müller) Broth. (Herb. P, herb. S, RM416)

This taxon was transferred from *Ctenidium* to *Ectropothecium* by Nishimura (1985: 75).

The two specimens cited above match well. Both have stem leaves entirely without denticulations. A curious fact is that the stem in both specimens is very dense and does not transmit any light under the microscope, making it very difficult to observe alar cells and stem surface cells.

I have been unable to find where in Africa Lubigou is situated. Johannes Enroth suggested that it may be identical with Mbighou in Gabon. G. Le Testu collected there from 1924 to 1934 and the mosses where determined by Potier de la Varde (1936). This species is mentioned on page 250.

New to Africa 3. Previously known only from West Africa, i.e. Africa 2 sensu Index Muscorum.

Fissidens reflexus Hampe

Fregate: 100 m, on small boulder, det. M.A. Bruggeman-Nannenga (S001, dupl. in herb. U).

Hyophila involuta (Hooker) Jaeger

Mahé: 300 m, damp forest near brook, on stones, det. Ph. Sollman (S017, dupl. in herb. Sollman).

Isopterygium Mitten

Two species of *Isopterygium* have previously been recorded from the Seychelles, i.e., *I. boivinii* Besch. and *I. gracile* Ren. & Cardot. A further 24 taxa, belonging to this genus, have been reported from other parts of Africa 3 sensu Index Muscorum. It is highly probable that many of them can be reduced to synonyms. Some may belong to other genera. Compare, e.g., the study by Iwatsuki (1987).

Isopterygium gracile Ren & Cardot

Mahé: 300 m, damp forest near brook, on stones (S005A) - La Digue: Raccourci sous Roche Bois, sol du sentier sous bois, leg. 1983-07-20 De Sloover #39.055, det. De Sloover, Herbier Bryologique 19: 464 (RM422).

The match between the two specimens cited above is not perfect. The basal cell walls in RM422 are thicker than those of S005A - 4 µm as compared with 1 µm. The ratio of leaf length over leaf width is 3.60 and 2.74 respectively.

I have looked at a specimen of *Isopterygium boivinii* Besch. (Ile Denis, leg. 1982-04-07 de Sloover #36.370, det. de Sloover, RM529). It has one or two rather large hyaline alar cells, which stick to the stem when the leaf is pulled off, a feature which is lacking in our plant. The ratio of leaf length over width is 2.76

* *Isopterygium subleptoblastum* C.Müller in Besch.

Mahé: 300 m, damp forest near brook, on stones (S003A) - Comores: Mayotte, leg. 188? Marie, det. ? (RM426).

In their discussion of *Isopterygium subleptoblastum*, Renauld & Cardot (1915: 460-461) pointed out that this species is close to *I. argyroleucum* C.Müller ex Besch. but "plus robuste, à feuilles plus grandes et plus allongées." This difference was mentioned also by Bescherelle (1880: 173-174). The latter species has been found in Mauritius and Madagascar. A

specimen of *I. argyroleucum* from Madagascar (Montagne d'ambre, forêt, leg. 1926-09-??P. de la Bathie, ex herb. Thériot, RM542) confirmed that this species is very similar but smaller.

Previously known from Madagascar and the Comores. New to the Seychelles.

Leucophanes angustifolium Ren. & Cardot

Mahé: 300 m, damp forest near brook, on stones (S016)

Octoblepharum albidum Hedwig

Mahé: 300 m, damp forest near brook, on stones (S004, S005, S021, S022)

Syrrhopodon mahensis Besch. var. *mahensis*

Mahé: 300 m, damp forest near brook, on stones, det. Orbán (S018, S023, S025 dupl. in herb. EGR,).

Hepatics

The following hepatics have been determined by Tamás Pócs. Duplicates of all specimens in EGR.

Arachniopsis diacantha (Mont.) Howe

Mahé: 300 m, damp forest near brook, on stones (S003C).

Cheilolejeunea serpentina (Mitten) Mizut

Mahé: 300 m, damp forest near brook, on stones (S005, S015, S024)

Heteroscyphus dubius (Gott.) Schiffner

Mahé: 300 m, damp forest near brook, on stones (S005)

Mastigophora diclados (Bridel ex F.Weber) Nees

Mahé: 300 m, damp forest near brook, on stones (S0014)

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