

CENTRAL AFRICAN HEPATICAE COLLECTED BY M. ASSEL

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ABSTRACT: 54 species of Hepaticae listed, of which the records of 32 species are new for the Central African Republic and 19 for the flora of the Republic of Congo. Interesting extension of the known distribution of West African species towards NE direction in the gallery forests of the Central African Republic, as that of *Plagiochila africana*, *P. salvadorica*, *Lopholejeunea obtusilacera*, *Archilejeunea autoica* and *Cheilolejeunea newtonii*. Occurrence at relatively low altitude of a few afro-montane elements, as *Schiffneriolejeunea pappeana*, *Taxilejeunea pulchriflora* and *Strepsilejeunea brevifissa*. Records of the rare *Schiffneriolejeunea occulta*, *Archilejeunea jonesii* and *Caudalejeunea yangambiensis*.

The late professor MAURICE BIZOT (Université de Dijon, France) kindly submitted me for elaboration the liverwort part of bryophyte collections of his friend, rev. M. ASSEL, who also passed away in the meantime. M. ASSEL gathered these bryophytes during his teaching activity from 1960 to 1973, in the Central African Republic, in the Republic of Congo (Brazzaville) and finally in Ivory Coast. M. BIZOT himself, with his assistant intended to identify the Musci and published the first part, the collections made in the Central African Republic (BIZOT—DURY 1970). He sent me from time to time, in instalments, the liverworts selected from ASSEL's material, since 1968 to his death in 1979. The present publication contains the Hepaticae collected by M. ASSEL in the Central African Republic, during the period from September 1960 to May 1963 and in the Republic of Congo (Brazzaville) between October 1963 and February 1967. The more voluminous material gathered in Ivory Coast will be identified and published later.

The great significance of M. ASSEL's collection is, that it originates from very undercollected areas. Both from the Central African Republic and from the Republic of Congo only about 20—20 liverwort records are known, while both countries, at least a great part of them, have relatively wet climate, i. e. good conditions for bryophyte vegetation. The studied area of République Centrafricaine is covered mostly by wet savanna woodland, where the bryophytes are concentrated in the riverine gallery forests. These riverine forests (galerie forestière) enable the lowland rain forest elements to penetrate deep north-eastwards in a woodland region otherwise not rich in bryophytes. Such elements in ASSEL's collection from this region are *Plagiochila africana*, *P. salvadorica*, *Archilejeunea autoica*, *Lopholejeunea obtusilacera* and *Cheilolejeunea newtonii* — all known previously only from West African countries. Rare species previously known only from Nigeria or Gabon are here *Archilejeunea jonesii* and *Lopholejeunea gabonensis*. Although all specimens were collected on the low part of the Central African Plateau at altitudes between 300 and 700 m, a few montane elements occur, as *Schiffneriolejeunea pappeana*, *Taxilejeunea cf. conformis* and *Taxilejeunea pulchriflora*.

The other collecting area in the Republic of Congo lies mostly in the lowland rain forest belt, in higher rainfall area. The gatherings contain new occurrences

of rare species, as *Caudalejeunea yangambiensis*, and the West African *Schiffneriolejeunea occulta*. *Lophocolea difformis* and the montane *Strepsilejeunea brevifissa* were known previously only from East Africa and South Africa. Many of the records from both countries are new (marked by! before the abbreviation of countries) and fill the gap of their known range.

The Author expresses his gratitudes towards his late friend, professor M. BIZOT, for sending ASSEL's material, towards professor C. VANDEN BERGHEM and Dr. E. W. JONES for revising the specimen of *Caudalejeunea yangambiensis* (Vanden Berghen) E. W. JONES. All other specimens listed below were identified by T. PÓCS. A few records from ASSEL's collections are already identified and published by the concerned specialists of different genera, as *Jungermannia* by J. VÁNA (1974), *Acrolejeunea* by S. R. GRADSTEIN (1975), *Frullania* by C. VANDEN BERGHEM (1976), *Radula* by E. W. JONES (1977), finally *Cylindrocolea* records will be published again by J. VÁNA.

In the list below the Central African Republic (République Centrafricaine) is abbreviated by CA, the Republic of Congo (Brazzaville) is abbreviated by RC. After the abbreviation of the country follows the abbreviation of known substrata, as

ct: corticolous te: terricolous
ra: ramicolous li: lignicolous
ru: rupicolous P: on palm trunk

The locality data are copied from ASSEL's handwritten labels, and the collecting numbers are also his. The numeration of specimens starts in each country again, and refers to the paperbags used in the collection. In many cases he collected more than one bag from one locality and many times one bag contains more than one species. In the latter case I gave letters to each species within one number (e.g. CA 292A, 292B, 292C). The sequence of genera follows SCHUSTER's (1979:72—78) new classification.

A complete set of Hepatic specimens enumerated below is deposited in the Herbarium of the Ho Si Minh Teachers' College, Eger Hungary (EGR), while a selection of duplicates is sent, according to the will of prof. M. BIZOT, to the Laboratoire de Cryptogamie, Muséum Nationale d'Histoire Naturelle, Paris, France (PC).

ENUMERATION

1. SPRUCELLA SUCCIDA (MITT.) STEPH.! CA: te, ra — Bangui, collines derrière camp du Kassai (140); Bangui, forêt du Kassai (202); Boutili, route vers chute de la Boali (309); Damara, Lac du Sorcier (343); Galerie forestière de la Ligala (619); Bérébérati (1179).! RC: te, ct — Landamambok (229), Chute de la Foulakari (255), Makaya (306), Matala (409), Forêt de Montota (959). Tropical West African species known from Guinea to Uganda.

2. SPRUCELLA UBANGIENSIS (STEPH.) FULF. et J. TAYL.! CA: te — Bangui, sommet du Kassai, paroi d'un terrier (1186).! RC: te — Bord de Nswélé (8, 9, 11, 13); M'Bamou, sur berge d'un rivier (23); Landamambok (212, 232); Makaya (298), M' Bamou (360, 270); Entre Kamou et la Congo

(341); Rivière M'Bote (442, 447); Rivière Gamampoko (497, 498), Rivière N'Gamimpe (516); Bas fond de Getamayanon, sur paroisse de glaisière (711, 721, 725, 746, 751); Ravin de Kibongui (764, 767, 785); Forêt du Montota (952, 960); Rivière Louinui (988); Près de Kimpila (984), Mvoula (1014); Taba (1101); Bamboma (1068); Chute de Foulakari (249). Tropical West African species distributed from Cameroon and from Angola to East Zaire.

3. *LOPHOCOLEA CONGOANA* STEPH. CA: ct, li — Bangui, collines du Kassai (142A); Galerie forestière de la Nguitou (695); Galerie forestière de la Lobaye (742); Galerie forestière de Kassogon (955).! RC: ct, li — M'Bamou (362); Rivière N'Ganimpe (519); Bas fond de Getamayanon (748); Ravin de Kibongui (762, 771, 772, 799); Ruisseau près de Ngamissaku (824, 830, 832, 837, 843); Forêt de Montota (932); Mikatou (1042). Widespread in tropical Africa.

4. *LOPHOCOLEA DIFFORMIS* NEES! RC: sur champignon — Non loin de Touboula (199). Known from Ethiopia to Cape, new for west Africa.

5. *CHILOSCYPHUS DUBIUS* GOTT.! CA: te — Galerie forestière de Gomokon (1033). Widespread in tropical Africa.

6. *PLAGIOCHILA AFRICANA* STEPH.! CA: ct — Galerie forestière de la N'Gouke (564B). West African species known from Ivory Coast to Cameroon.

7. *PLAGIOCHILA FUSIFERA* TAYL.! CA: ct, ru, te — Boutili, route vers chute de la Boali (308); Bekoue, route de Bossambélé (312); Bozo, vers lac du Sorcier (341B); Bangui, colline devant l'Aérodrome (513); Galerie forestière de Bokpali (574); Galerie forestière de la Ligala (618). Widespread in tropical Africa from Guinea to Somali.

8. *PLAGIOCHILA INTEGERRIMA* STEPH.! CA: te, ct — Bangui, Route de Damara (63); Vers Kaimba (100); Bangui, Ruisseau de Kassai (180); Forêt du Kassai (142C, 180, 199, 221, 232, 234B); Route de M'Baiki, env. de Bombé (634); Plateau de Kagadouba (715); Bangui, sommet de Kassai (1181).! RC: Env. de l'Anneau de Saturne (183). Widespread in tropical Africa from Nigeria to Madagascar.

9. *PLAGIOCHILA NECKEROIDEA* MITT.! RC: ct — Forêt de Montota (865, 920); Yanga (1087). West African rain forest plant from Liberia to Central Zaire.

10. *PLAGIOCHILA PINNIFLORA* STEPH.! CA: ra — Bérébérati (1150). Lowland rain forest plant known from Sierra Leone to Uganda.

11. *PLAGIOCHILA SALVADORICA* STEPH.! CA: Bozo, vers lac du Sorcier (33A); Galerie forestière de Kassagon (981A). Known only from Angola and Zaire.

12. *PLAGIOCHILA PRAEMORSA* STEPH.! CA: ru, ct, te — Kozo, route de Bogangolo (329); Damara, Lac du Sorcier (345, 352, 356); Galerie forestière

de Botanga (408, 411); Près de la chute de la Mbi (416); Galerie forestière de la Wowala (651A). Known from Sierra Leone to central Zaire.

13. *PLAGIOCHILA STRICTIFOLIA* STEPH. ! CA: ct — Bangui, collines derrière camp du Kassai (121); Galerie forestière de Kassagon (964A, 981 B); Près de la chute de la Mbi (425, 444); Babongi (292A); Bogasi (295); Gba, route de Damara (321); Galerie forestière de la N'Gouke (564A). Tropical African species from Sierra Leone to Tanzania.

14. *PORELLA SUBDENTATA* (MITT.) E. W. JONES var. *subdentata* ! CA: ct, ra — Galerie forestière de Botanga (419). Tropical African species known from Guinea to Tanzania.

15. *FRULLANIA ERICOIDES* (NEES) MONT. CA: ct, ru, te — Bangui, route de la Corniche (1); Près de l'Aérodrome (2); Bords de l'Oubangui (3); Près du Camp du Kassai (4); Route de Ouango (5); Moyenne Corniche (8); Quartier du Gbangouma (11); Derrière le Camp du Roux (21); Route de Damara (67); Corniche (76, 77, 78, 79, 80A, 82, 83, 84, 85, 88); Bangui, Mission St Paul (90, 94, 95, 96); Corniche près Bangui (102, 107); Boda (111, 115); Bangui, dans collines derrière camp du Kassai (136); Bangui, haut de Corniche (144, 145, 146); Damara, lac du Sorcier (158, 164); Bangui, sur palmiers (168, 169); forêt du Kassai (186); Penda, bords de l'Oubangui (276A), Boda (283), Ngola, route de Bossambelè (286); Bangui, St. Paul des Rapides (393, 394, 395); Bangui, colline devant l'Aérodrome (523); Galerie forestière Ligala (624, 629, 630); Bangui, arrête supérieure de la Corniche (751); Galerie forestière de la Yanganga (815); Galerie forestière de la Goukomba (921, 922, 898); Galerie forestière de Bakala (1083); Bérébérati (1153, 1160). RC: ct, te — Matala (398, 399); Rivière de M'Bote (422); Minduli (620); Vallon de Mavoula (656, 664); Ruisseau près de Ngamissaku (839, 840B, 863); Forêt de Montota (875, 907); Chemin de Voka près de Montota (974); Taba (1097) M'Bamou (378, 381). Pantropical species, common throughout Africa.

16. *FRULLANIA OBSCURIFOLIA* MITT. ! CA: ct — Bangui, Corniche (104); Boda (113C). ! RC: Rive droite de la Loye (109); Mvoula (1012B). Widespread in tropical Africa from Sierra Leone to the Cape and Réunion.

17. *FRULLANIA TRINERVIS* (LEHM. et LINDENB.) GOTT. et al. CA: ct — Bangui, Corniche (86, 87). ! RC: ct — Rivière Gamampoko (496); Rivière N'Ganimpe (507); Bosquet de Poto Poto (635A, 636); Ruisseau près Ngamissakou (840A). Widespread in tropical and in South Africa.

18. *BRACHIOLEJEUNEA* cf. *NIGRA* (STEPH.) STEPH. ! CA: ct — Bangui, crête supérieure de la Corniche (765B). Tropical African lowland species from Guinea to Tanzania.

19. *CAUDALEJEUNEA YANGAMBIENSIS* (VANDEN BERGHEN) E. W. JONES ! RC: sur broussailles — Environs de l'Anneau de Saturne, 696 m alt. (165B). Previously known only from Zaire: Yangambi, from Uganda: Budongo Forest and from Rwanda: Butare, centre INRS.

20. *MASTIGOLEJEUNEA YARINATA* (MITT.) STEPH. CA: ct, P, te (lateritic soil), ru — Bangui, Corniche (81, 108); Bangui, remblai d'un ruisseau dans collines du Kassai (135); Damara, Lac du Sorcier (166, 167); Bozo (331B, 332), Bossambélé (400), Bangui, arrête supérieure de la Corniche (765 p.p., 771, 116, 782), Galerie forestière de la Goukomba (919); Galerie forestière de la Bakala (1065, 1090). RC: ct — Rivière N'Ganimpe (536 526, 524). Widespread tropical African species from Guinea to East Africa.

21. *MASTIGOLEJEUNEA FLOREA* (MITT.) STEPH. CA: ct, ru — Bozo, vers lac du Sorcier (338D, 341A); Chutes de la Boali (39, 45, 48); Route de Damara (71, 72); Damara, Lac du Sorcier (148, 157); Galerie forestière environs de Bokpali (578); Galerie forestière de la Wowala (651B). West African species from Guinea to Zaire.

22. *MASTIGOLEJEUNEA RHODESICA* (VANDEN BERGHEN) E. W. JONES ! CA: ct — Forêt de Boali (251, 264, 274). Known in SE Africa from Kenya to Natal and from Madagascar and Réunion.

23. *LOPHOLEJEUNEA ABORTIVA* (MITT.) STEPH. ! CA: ct, ru, te — Bangui, Route de Damara (57, 64); Vers Kaimba (99); Bangui, collines derrière camp du Kassai (142B); Bangui, ruisseau du Kassai (187); forêt du Kassai (192, 193, 195); Galerie forestière de Bokpali (569, 579), Galerie forestière de Kassagon (978); Galerie forestière de Bakala (1055); Bangui, sommet du Kassai (1184). West African species known from Nigeria to Zaire.

24. *LOPHOLEJEUNEA FRAGILIS* STEPH. ! CA: ct — Bangui, collines derrière camp du Kassai (124, 126, 127); Galerie forestière de Kassagon (959). Species previously known from Sierra-Leone, Ivory Coast, Zaire and Tanzania.

25. *LOPHOLEJEUNEA GABONENSIS* VANDEN BERGHEN ! CA: ru, te — Bangui, Forêt du Kassai (224, 234A). Known only from the type locality in Gabon: Macoucou.

26. *LOPHOLEJEUNEA OBTUSILACERA* HERZ. in VANDEN BERGHEN ! CA: ct — Bozo, vers lac du Sorcier (338C). Known only from Nigeria and from Cameroon.

27. *LOPHOLEJEUNEA SUBFUSCA* (NEES) STEPH. ! CA: Bangui, Forêt du Kassai (212); Route de Mbaiki environs de Bombé (633A). Pantropical species, widespread also in tropical Africa.

28. *ACROLEJEUNEA EMERGENS* (MITT.) STEPH. var. *emergens* ! CA: ct, P, li — Bangui (103, 774A); Boda (109, 112, 113B); Galerie forestière de la Kpopo (593). RC: ct, sur broussailles, sur stipe de palmier, li, te — Kinkala (69); Environs de Massissa (122A, 123); environs de l'anneau de Saturne (165A); Landamambou (210); Chute de la Foulakari (268); M'Bamou (379); Boukonzo (455); Rivière de N'Ganimpe, Nzafon (541A); Chemin de Voka près de Mantaba (975, 976); Près de Kimpila (981); M'Bé (1000, 1001); Mvoula (1012A); Gampoko (1021, 1032). Known from tropical America and in Africa from Guinea to Malawi, Madagascar and from the Mascarene Islands.

29. SCHIFFNERIOLEJEUNEA OCCULTA (STEPH.) GRADST. ! RC: ct — Rive droite de la Loye (86B); Matala (408); Boukonzo (460); Vallon de Mavoula (696); Gampoko (1025B); Forêt de Montota (897). Previously known only from Nigeria.

30. SCHIFFNERIOLEJEUNEA PAPPEANA (NEES) GRADST. ! CA: ct — Damara et Bozo, Lac du Sorcier (150, 162, 165, 331A, 335, 355); Galerie forestière de Lobaye (751). Afromontane species known from Cameroon to Tanzania, Cape and to Réunion.

31. SCHIFFNERIOLEJEUNEA POLYCARPA (NEES) GRADST. ! CA: ct — Forêt de Boali (267). ! RC: ct — Rive gauche de la Loye (110). Widespread in tropical America and in tropical Africa from Guinea to Zimbabwe.

32. ARCHILEJEUNEA ABBREVIATA (MITT.) VANDEN BERGHEN ! CA: ct, te — Bangui, forêt du Kassai (215, 223); Babongi, route de Mbaiki (292B). West African, from Guinea to Angola.

33. ARCHILEJEUNEA AFRICANA STEPH. ! CA: ct — Bangui, collines derrière camp du Kassai (133). West African, from Nigeria to the Republic of Congo.

34. ARCHILEJEUNEA AUTOICA VANDEN BERGHEN ! CA: ct — Route de Mbaiki, vers Bombe (539). West African, known from Ivory Coast to Gabon.

35. ARCHILEJEUNEA ELOBULATA STEPH. CA: ct — Galerie forestière de Bakala (1054). Known only from the Central African Republic and Zaire.

36. ARCHILEJEUNEA JONESII VANDAN BERGHEN ! CA: ct — Bangui, forêt du Kassai (218). Previously known only from Nigeria: Benin.

37. ARCHILEJEUNEA LINGUAEFOLIA STEPH. CA :te — Galerie forestière de Bakala (1052). West African species known from Nigeria to Zaire.

38. STICTOLEJEUNEA BALFOURII (MITT.) E. W. JONES CA: Bangui, Chutes de Boali (35A). Known from Ghana, Cameroon, Rodriguez, Réunion and from the Republic of Central Africa: Bamongo.

39. CHEILOLEJEUNEA NEWTONII STEPH. ! CA: ct — Bangui, Chutes de Boali (47); Route de Damara (61,68); Boali (257); Bozo (338B); Damara, Lac du Sorcier (354C, 351). RC: Chute de la Foulakari (257), Rivière de M'Bote, sur tronc flottant sur l'eau (450B, 435, 436, 437, 441); Ruisseau de Ngamissaku (864); Environs de l'anneau de Saturne, sur broussailles (165C). West African, from Guinea to the Central African Republic.

40. STREPSILEJEUNEA BREVISSA (GOTT.) STEPH. ! RC: ct — Vallon de Mavoula (663, 699); Forêt du Montota (894). SE African montane species, new for West Africa.

41. *EUOSMOLEJEUNEA BRACHYTOMA* (GOTT.) STEPH. ! CA: Bangui, Chutes de Boali (43, 44); Bozo, vers lac du Sorcier (338A); Bangui, Forêt du Kassai (217). Tropical African species known from Ghana to Réunion, in lowland or in submontane rain forests.

42. *TAXILEJEUNEA* cf. *CONFORMIS* (MONT.) STEPH. CA: ct — Bangui, Chutes de Boali (35B). Afromontane species, widespread.

43. *TAXILEJEUNEA PULCHRIFLORA* PEARSON ! CA: ct — Bozo, vers lac du Sorcier, 450 m alt. As E. W. JONES (1976:53) noted, it is a montane element, which occurs from Guinea to Tanzania at altitudes between 1250—2060 m, except one Ghanaian record at low altitude.

44. *LEJEUNEA CAESPITOSA* LINDBERG ! CA: ct, ra, li — Babongi, route de Mbaiki (292C); Salanga (366); Route de Mbaiki près Bombe (543); Bangui, arête supérieure de la Corniche (775); Galerie forestière de Bakala (1062). ! RC: Chute de Foulakari (283); M'Bamou (377); Rivière de M'Bote (416, 428 — sur tronc flottant); Rivière N'Gaminpe (534B); Bosquet de Poto Poto (606, 632); Ruisseau près de Ngamissaku (816, 862); Forêt de Montota (895, 905); Mikatou (1049). Probably pantropical species, widespread in tropical Africa.

45A *LEJEUNEA FLAVA* (SW. NEES ad ssp. *FLAVA* vergens CA: ct — Rivière de Boali (301). RC: Matala (410).

45B *LEJEUNEA FLAVA* (SW.) NEES ssp. *TABULARIS* (SPRENG.) S. ARN. ! CA: Bangui, Ruisseau de Kassai (175); Forêt du Kassai (214); Boali (248, 249, 270, 271, 272, 269, 262, 273); Bandoro (299, 315); Boali (302, 304); Bérébérati (1151); Galerie forestière de Bakala (1099). RC: ct, ra — Mbamou (58); Matala (404); Rivière M'Bote, sur tronc flottant (450A); Vallon de Mavoula (680); Ravin de Kibongui (778, 785, 786, 792, 797, 802); Forêt du Montota (880); Chemin de Voka près Mantaba (978); Rivière Louingui (989). Pantropical species, the ssp. is tropical and South African, widespread from Nigeria to Cape and to Madagascar. Transitional specimens between the typical ssp. and ssp. *tabularis* are distinguished also by E. W. Jones (1968:551).

46. *LEJEUNEA RAMOSISSIMA* STEPH. ! RC: sur racines de bambous — Rivière de N'Ganimpe (540). West African, known from Sao Tomé, Annobon and from Cameroon.

47. *LEJEUNEA RHODESIAE* (SIM.) E. W. JONES CA: ct — Boda (113A). ! RC: ct — Bosquet de Poto Poto (604). Tropical African species, distributed from the Central African Republic to Transvaal.

48. *LEJEUNEA SETACEA* STEPH. CA: Bangui, Corniche (106). RC: ct — Rivière de Matala (558). Tropical African lowland species, from Sierra Leone to Kenya.

49. *LEJEUNEA TUBERCULIFLORA* E. W. JONES ex PÓCS 1980:231 (Syn.: *Eulejeunea camerunensis* STEPH.) ! CA: ru — Damara, Lac du Sorcier (354A). Tropical African species, known from Sierra Leone to Réunion.

50. LEJEUNEA ULICINA (TAYL.) TAYL. ex GOTT. ssp. OCELLIFERA (S. ARNELL) SCHUST. (Syn.: *Microlejeunea africana* STEPH.) ! CA: ct — Bozo, vers lac du Sorcier (334); Bangui, arrête supérieure de la Corniche (774B). ! RC: ct — Rive droit de la Loye (86A); Matala (401B); Rivière N'Gaminpe, Nzafon (541B); Bosquet de Poto Poto (635B); Gampoko (1023, 1025A, 1027, 1029, 1030). The subspecies is tropical and South African, known from Sierra Leone to Madagascar and Cape.

51. COLOLEJEUNEA ANDROPHYLLA E. W. JONES ! RC: li — Rivière N'Ganimpe (534). Rare lignicolous species known only from Nigeria and Cameroon.

52. RICCARDIA EROSA (STEPH.) E. W. JONES ! RC: li — Ravin de Kibongui (801). Tropical African lowland plant known from Sao Tomé, Cameroon and Tanzania.

53. RICCARDIA FASTIGIATA (L. et L.) S. ARNELL ! CA: ru, te — Bangui, forêt du Kassai (209); Ruisseau de Kassai (176); Galerie forestière de la Nguitou (701); Plateau de Kagadouba, dans cascade (729). ! RC: te — Forêt de Montota (954). Widespread in tropical and in South Africa.

54. RICCARDIA LIMBATA (STEPH.) E. W. JONES ! RC: li, ru — Rive droit de la Loye (85); Rive gauche de la Loye (116). Tropical and South African species.

PÓCS T.: KÖZÉP-AFRIKAI MÁJMOHÁK M. ASSEL GYŰJTÉSÉBŐL.

Az Egri Ho Si Minh Tanárképző Főiskola herbáriumára értékes közép- és nyugat-afrikai anyaggal gyarapodott, midőn, 1968 óta tavaly bekövetkezett haláláig a dijoni egyetem (Franciaország) professzora, M. BIZOT a szerzőhöz rendszeresen elküldte meghatározásra az azóta szintén elhunyt M. ASSEL gyűjtéseiből a májmohákat. A gyűjtés lombosmoha részét maga M. BIZOT dolgozta fel munkatársával (BIZOT—DURY 1970). A szerző megismerő kötelességének érzi e hozzá érkezett anyagok meghatározását és az eredmény közreadását, annál is inkább, mert olyan országokból származnak, ahonnan alig van közölt adat. Így lehetséges az, hogy a felsorolt 54 fajból 32 új a Közép-afrikai Köztársaság és a 19 Kongói Köztársaság területének flórájára. Növényföldrajzi szempontból érdekes, hogy számos nyugat-afrikai esőerdei faj a Közép-afrikai Köztársaság területén viszonylag szárazabb éghajlati körülmények között vált ismertté, a folyók mentén kialakult galériaerdőkből. Így a *Plagiochila africana*, *P. salvadorica*, *Lopholejeunea obtusilacera* és más fajok ismert areája messze kiterjedt északkelet felé. Egy pár montán elem, mint a *Schiffneriolejeunea pappeana*, *Tacilejeunea pulchiflora* és a *Strepsilejeunea brevifissa* 400 m körüli magasságból került elő. A *Schiffneriolejeunea occulta*, *Archilejeunea jonesii* és *Caudalejeunea yangambiensis* érdekes, ritka fajok új előfordulásai váltak ismertté. M. ASSEL még sokkal gazdagabb, Elefántesontparton gyűjtött anyagát a szerző egy további cikkben kívánja közzétenni.

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