STUDIES ON VENEZUELAN HEPATICAE, I.

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The present study represents the first in a series of papers intended to clarify problems concerning the Hepaticae of Venezuela. Its intent is to make available for legitimate use the names of a number of new taxa. These have all been uncovered either during studies carried out at the Universidad de los Andes, Merida, Venezuela (during January-March, 1976), or in subsequent collateral studies (during the succeeding two years). The need for legitimizing the names has become pressing for several reasons: (1) duplicates bearing these names have been distributed; (2) the names have been used in ecological discussions in various parts of the work under way and will appear prior to any detailed treatment of the individual taxa; (3) a number of these taxa -- especially the new generic and subgeneric elements -- are illustrated and diagnosed (in English) in the forthcoming second edition of the Hepaticae in Engler & Prantl, Die Natürlichen Pflanzenfamilien; (4) the names of various new taxa of Lejeuneaceae, studied cytologically from fresh material, appear in a paper on the oil-bodies of Lejeuneaceae, to appear shortly in the Journal of the Hattori Botanical Laboratory. It is thus imperative that these names be legitimized.

It is intended to illustrate all new taxa and, to date, over 40 plates have accumulated, as well as over 180 pages of MS. I therefore limit myself here to Latin diagnoses and type citations, plus comments that seem appropriate.

The new records and new taxa here briefly noted represent the most interesting and striking novelties among several thousand collections made and processed. A large number of taxonomic problems remain, some of which will, hopefully, be resolved during the course of the next several years and will be discussed in succeeding numbers of this series.

Of greatest significance is the description on the following pages of 10 new genera (Ruizanthus, Gymnocoleopsis, Pseudocephaloziella, Lophonardia, Platycaulis, Leptoscyphopsis, Rhodoplagiochila, Aureolejeunea, Physantholejeunea, and Amphilejeunea). Discovery of so many novelties clearly reflects the fact that, up to this time, no trained hepaticologist has had an opportunity to do intensive field work in the region of the northern Andean mountains.

Family BLEPHAROSTOMATACEAE [PSEUDOLEPICOLEACEAE]

1. Temnoma (subg. Blepharotemnoma) chaetophylla Schust., subg. et sp. n.

Plantae minutae aureo-brunneae; cortex e 10-12 ordinibus cellularum rigidis compositus, cellulis corticalibus diametro 1-1.8 plo maioribus quam cellulae medullosae. Ramificatio typi Frullaniae, Microlepidoziae et ventrali-intercalaris. Folia (2)3-4-lobata, rigida, remota, normaliter sine dentibus; lobi rigidi, setacei, basi latitudine solum ducellulari. ♀ Bracteae aliquot dentes spinescentes, non-oppositos (alternatos) praebentes. Type: Estado Merida: La Fria, Sierra Nevada de Merida (RMS & L. Ruiz-Teran 76-1626).

The first American member of its genus known north of the subantarctic Nothofagus zone. Distinct from all other Temnoma species in the alternate, rather than opposite, spinescent teeth of the ♀ bracts and the usual lack of any dentition of sterile leaves.

Family BALANTIOPSIDACEAE Nakai

2. Isotachis subg. Hypoisotachis Schust., subg. n.

Plantae repentes. Gynoecia (necnon pleraque androecia) ramos ventrali-intercalares valde abbreviatos terminantia; insertio foliorum angusta, in dimidio ventrali succuba, in dimidio dorsali transversa; cacumina foliorum surculorumque a substrato arcuata. Type: Isotachis coilophylla Herz., Repert. Spec. Nov. 21:25, 1925.

This plant, of which I have seen an isotype, is possibly conspecific with I. multiceps (Lindenb. & G.) G. (and is stated to be so by Fulford, 1963, p. 66), but Gottsche draws his plant with gynoecia terminating a leading, leafy axis.

The highly abbreviated, essentially leafless stem-perigynia, plus the antically arched leaves and shoot tips are diagnostic. Perhaps the plant should be placed into an autonomous genus.

3. Ruizanthus Schust., gen. n.

Genus ab omni alio genere Balantiopsidacearum differens ut capsula ellipsoidea valvas erectas, potius quam spiraliter tortas habet. Plantae ± erectae ad procumbentes; ramificatio ventrali-intercalaris; rami saepe geotropici, microphyllosi radiciformes; folia fere symmetrica ad apicem aut (2)3-cuspidata aut 3-4 lobata; cellulae, supra, trigones bene definitos praebentes. Type: Ruizanthus venezuelanus Schust., sp. n. Including two known species only:
R. venezuelanus Schust., sp. n.

Folia matura 4-lobulata, lobis non profundis longe acuminato-cuspidatis, indistincte marginatis (cellulis marginalibus vix maioribus quam intramarginales); gynoecia subisophyllosa. Type:

Estado Merida: Loma Redonda, Sierra Nevada de Merida (RMS & L. Ruiz-Teran 76-1462).

R. lopezii Schust., sp. n.

Folia matura non profunde 2-lobulata (foliis hic illic 3-lobulatis), lobis brevi-cuspidatis, valde marginatis (cellulis marginalibus amplificatis, pachydermatis); gynoecia anisophylla. Type: Estado Merida: Sierra de Santo Domingo, paramo de Mucubaji, 3600 m. (RMS & L. Ruiz-Teran 76-870).

Family LEPIDOZIACEAE

4. Telaranea (Neolepidozia) rectangularis Schust., sp. n.

Species T. capilligerae (Schwaegr.) Schust. subantarcticae cognata, propria ut folia oblongo-cuneata, segmentis vix divergentibus; discus rectangulatus, in foliis caulinis 8-seriatus, tam altus quam latus aut altior; lobis in 3-4 cellulis perelongatis terminantibus. Type: Estado Merida: Above Rio Frias, Sierra Nevada de Merida (RMS & L. Ruiz-Teran 76-1480).

Differing from the other three South American taxa (known only from cool, nontropical southern latitudes) in the narrow leaves with long-tapered, hardly divergent segments.

5. Telaranea (Telaranea) quadrifida Schust., sp. n.

Species T. nematodes cognata ut folia caulina, 3-4-lobata, ad situm 0.35 a basi cellulae basalis remotum divisa. Propria ut discus foliorum caulinorum 8-10 cellulas latus (uno lobo plerumque 3-4 cellulas lato); amphigastria caulina 3-4-lobata, ca. 0.5 aeque longa ac folia. Type: Estado Tachira: Paramo de Tama, Mirador (RMS & L. Ruiz-Teran 76-1974).

A much larger plant than T. nematodes, which also occurs in the region, having 36-42 rows of medullary cells plus 15-16 rows of cortical cells that are only little enlarged vis a vis the medullary cells.

6. Telaranea (Telaranea) microstipulata Schust., sp. n.

Species T. nematodes atque T. quadrifidae cognata, propria, autem, ut folia omnia 2-fidia, in caulem inserta ita ut duo ordines cellularum dorsales admodum "sine-foliis" sit; rami saepissime ventrali-intercalares, nonnulli rami, autem, typi Frullaniae ad angulum cauli sub-acutum orientes; amphigastria vestigialia. Type: Estado Tachira: Paramo de Tama (RMS & L. Ruiz-Teran 76-1904).

Family CALYPOGEIACEAE

7. Calypogeia (Caracoma) obovata Schust., sp. n.

Species C. amazonicae (Spr.) Schust. similis, differens, autem, ut dentes in apicibus foliorum late dispositi, 2-3 cellulas longitudine; sinus latus, lunatus ad fere planum in fundo; folia in culculis maturis satis obovata, ambobus marginibus plane arcuatis. Type: Estado Merida: Sierra Nevada de Merida (RMS & L. Ruiz-Teran 76-1485a).

A smaller species than C. amazonica (which is to 3 mm wide), hardly exceeding 1.5 mm wide. A single Frullania-type branch has been seen -- the first instance of such branching in a member of subg. Caracoma.

Family JUNGERMANNIACEAE
Subfam. Lophozioideae

8. Lophozia (Massula) incisa (Schrad.) Dum. subsp. austrigena Schust., subsp. n.

Subspecies subsp. incisae magnitudine parvo, textura succulenta et aspectu similis; propria ut plantae colore fere albidae ad pallide subflavo-virides (numquam viventes colore caesio tinctae); cellulae trigones manifeste tumescentes habentes; folia asymmetrice oblongo-obcuneiformia, 2-3-lobata, duobus lobis dorsalibus valde arcteque dentibus confertis spinescentibus. Type: Estado Merida: Sierra de Santo Domingo, 3600 m. (RMS & L. Ruiz-Teran 76-849).

Quite possibly deserving the status of a distinct species, but the type consists of so little material that a definitive decision is hardly possible. However, nothing matching these plants has been seen in any of the hundreds of populations of the nearctic subsp. incisa studied. If actually referable to L. incisa, s. lat., then that species is new to Latin America.

9. Lophozia (Protolophozia) verruculosa Schust., sp. n.

Species L. crispatae Schust. locorum Fuegia et the Distr. of Magallanes dictorum cognata, propria, autem, ut saepissime paroecia (saepe, autem, androecia accessoria habens, tum heteroecia); cuticula verruculosa. Type: Estado Tachira: Paramo de Tama, 3130-3140 m. (RMS & L. Ruiz-Teran 76-1944).

L. verruculosa and L. crispata are identical in facies, yet are abundantly distinct. L. verruculosa has 2- to 2-3-lobed leaves with lanceolate, longly acute lobes, often with gibbous sinuses -- exactly as in L. crispata.

10. Lophozia (Hypolophozia) stolonifera Schust., sp. n.

Plantae virides, repentes; distaliter saepe spadiceae ad castagneas; frequentes ramos ventrales microphyllos et rhizoideos stoloniformes habentes; rami foliacei laterali-intercalares. Folia valde asymmetrica, squarrosa, 2-lobata, ambobus lobis spinoso-dentatis; lobi saepe longo-cuspidati. Gemmae ferrugineae, duocellulares, angulato-stellatae. Plantae autoeciae. Os perianthii in multos lobos parvos angustosque divisum, omni lobo in cuspidem longam terminante. Type: Estado Tachira: Paramo de Tama (RMS & L. Ruiz-Teran 76-1950b).

Superficially like L. (Isopaches) bicrenata in the color, size, rust-red and angulate gemmae, and the bisexual inflorescences, and in the toothed ♀ bracts. Sterile shoots, however, have spinescent squarrose leaves; plants are apparently uniformly autoecious; oil-bodies are uniformly small and also present in the marginal leaf cells.

11. Gymnocoleopsis (Schust.) Schust., gen. n.
Basionym: Gymnocolea subg. Gymnocoleopsis Schust., Bryologist 70:111, 1967.

The single species falling here is Lophozia multiflora St., Spec. Hep. 6:113, 1917 = Gymnocoleopsis multiflora (St.) Schust., comb. n. This has been known only from the type, from Bolivia. Excellent collections were made in a Polylepis sericea bosque, in the Sierra Nevada de Merida, at 4130 m. These show clearly that my evaluation of L. multiflora was overly conservative; I had already noted (Schuster, 1967) that the "species should perhaps be divorced from Gymnocolea entirely." A plate and detailed diagnosis will follow in the succeeding number in this series.

12. Anastrophyllum stellatum Schust., sp. n.

Species a omni alia specie Anastrophylli in America Meridionali antea nota differens ut gemmas stellatas 1-2-cellulares ferruginoso-aurantiacas efficit. Type: Estado Tachira: Paramo de Tama, 3140 m. (RMS & L. Ruiz-Teran 76-1900).

The aspect is unique. Shoots are rather frontally flattened, with quite asymmetrically bifid leaves. The presence of rusty-red gemmae is shared with A. minutum (Cr.) Schust., but the gemmae are strikingly stellate; leaves are more asymmetric, with the dorsal lobes much reduced; branches seem to be all lateral-intercalary. Also, leaf cells are linearly oriented and bear very coarse, knot-like trigones; the cuticle is coarsely papillose above.

13. Pseudocephaloziella epiphytica Schust., gen. et sp. n.

Plantae minutae, clare ad hyaline virides (androecia gynoeciaque interdum pigmentationem ferruginoso-rubram habentia). Magni-

tudine aspectuque Cephaloziellae similes. A Cephaloziella differens ut caulis ca. 20-24 ordines cellularum corticearum valde pachydermatarum habet, hae cellulae in medullam pallidiorem membranas firmas habentem abeuntes; amphigastria similia aut paululo minora quam folia lateralia, bifida similiter ac folia; cellulae minimae, lumina rotundata-angulari (trigones magni ad confluentes, conspicui); membranae radiales, praecipue in marginibus foliorum, dilatatae et "papillam" hyalinam tumidum aut hemisphericam proiectentes; margines foliorum, amphigastriorum atque bractearum ita valde crenulati apparentes. Androecia spicata, bracteis monandris. Gynoecia isophylla subisophyllave, bracteis in aliquot seriebus imbricatis, a se discretis; bracteolae similes, saepe, autem, non lobatae. Perianthium obscure infra partem mediam 3-plicatum, distaliter pluriplicatum, ore produnde lobulato, lobis parvis dentatis. Type: Estado Tachira, Paramo de Tama, 3140 m. (RMS & L. Ruiz-Teran 76-1910e).

Initially believed to be allied to Cephaloziella, but the nontiered cells of the lobulate perianth mouth and the conspicuous trigones of leaf cells clearly suggest these affinities are superficial rather than real. Probably a member of the Lophozioideae, in which it is isolated by the peculiar, Pigafettoa-like leaf cells, with hyaline tumidities produced from the intersections between cells. The larger shoots are almost or quite isophyllous -- a condition previously unknown in Lophozioideae. Equally unique, if the plant truly belongs in the Lophozioideae, is the isophyllous to subisophyllous gynoecium.

Subfamily JUNGERMANNIOIDEAE

14. Lophonardia Schust., gen. n.

Plantae taxis Lophoziae (s. lat.) et Nardiae similes ut folia bilobata, lobis obtusis ad rotundatos; ut rami typi Frullaniae, hemiphyllum dorsalem ovatum habentes, regulariter obventes; necnon ut rhizoidea dispersa. Genus ab ambobus generibus proprium insertione foliorum, foliis in arcum apertum insertis, basi folii manifeste cava, sacculum basalem non profundum efficiente; folia verticalia, remota, non profunde bilobata mollia laxaque, aspectu atque orientatione Marsupellae similia. Type (and only) species: L. caespitosa Schust., sp. n. Estado Merida: Sierra Nevada de Merida, in a Polylepis bosque at 4150 m. (RMS & L. Ruiz-Teran 76-1458).

Although with a Marsupella-like aspect because of the form and vertical orientation of the leaves, it is distinct from all Gymnomitriaceae in that leaves are inserted merely to the stem midline antically and in the Frullania-type branches. Although perhaps to be placed in the Lophozioideae, rather than Jungermannioideae, it is distinct from all Lophozioideae known to me in the following ensemble of criteria: soft-textured stem, lacking

cortical differentiation, with all cells leptodermous, lacking mycorrhizal infection; the leptodermous leaf cells; lack of asexual reproduction; no appendages, even vestigial, of the ventral side of the stem. Although the first 3 criteria occur in Nardia, the last -- plus the leaf orientation -- suggests that placement there would be unsuitable.

15. Jamesoniella autumnalis (DC) St.

This well-known holarctic taxon has not been previously known from Latin America. Typical plants are from: Estado Tachira: Paramo de Tama, 2550 m. (RMS & L. Ruiz-Teran 76-2086).

Family GEOCALYCACEAE

16. Platycaulis Schust., gen. n.

Plantae robustae, erectae, brunneae, cacuminibus surculorum clare viridibus, maxime lateraliter compressae complanataeque, raro ramosae; rami laterali-intercalares et typi Frullaniae; caulis filo metallico similis, cellulis corticalibus rectangulatis (4-7:1), atque pachydermatis; folia alterna, natura plana, reniformia lataque (1.5-2:1), valde erecto-appressa; amphigastria a foliis discreta, parva, 0.75-0.85 bifida; rhizoidea in fasciculis a basibus amphigastriorum orientia; cellulae trigones crassos habentes; cuticula valde papillosa. Plantae dioeciae; gynoecia (rara) ♀ bracteas foliiformes atque innovationes binas subflorales habentia. Type (and only) species: P. renifolia Schust., sp. n. Estado Tachira: Paramo de Tama (RMS & L. Ruiz-Teran 76-1902b).

An extraordinary plant, with the aspect, color, and vigor of a large Adelanthus -- especially since it is almost unbranched above. The exact affinity remains problematic: color, the fasciculate rhizoids and distinct bifid underleaves, as well as the laterally compressed (single and putative, very juvenile) gynoecium suggest Leptoscyphus. Axial anatomy, with elongated cortical and strikingly elongated medullary cells, seems distinctive; so does the leaf insertion which fails to attain the stem midline.

17. Lophocolea (subg. Fragilifolia) fragmentissima Schust., subg. et sp. n.

Plantae minutae repentes, laxe caespitosae, epiphyticae, subflava; rami remoti, normaliter typi Frullaniae; folia remota, facile caduca, in lineam constrictam fere transversam inserta, adaxialiter a valde concava ad squarrosa, a caule rigide patentia, obdeltoidea ad angusto-obtrapezoidea, 0.55-0.6 bifida; lobi triangulari-lanceolati, acute ad obtuse acutos, latibus fere rectis. Amphigastria 0.4-0.55 magnitudinis foliorum, bifida, dente parvo uno in latere interdum praedita. Plantae dioeceae. Gynoecia in caulibus terminaliter sita; perianthium urceolatum, ad os late

apertum, leve atque inflatum (plerumque omnino sine angulo alisve), os trilobatum, omni lobo non profunde bilobato. Type: Estado Merida: Sierra de Santo Domingo, near Laguna Grande, 3600 m. (RMS & L. Ruiz-Teran 76-864b).

Somewhat like a hypothetical cross between the New Zealand Lophocolea amplectens and a Cephaloziella ! The very freely caducous leaves -- a mode of asexual reproduction not before noted in any Geocalycaceae (s. lat., to include Lophocoleaceae) -- suggest that perhaps subg. Fragilifolia ought to be given the rank of an autonomous genus. This, however, should await knowledge of the ♂ plant and sporophyte.

18. Lophocolea cuspidata (Nees) Limpr.

Estado Tachira: Villa Paez, 2550 m. (RMS & L. Ruiz-Teran 76-2088). New to South America! The recent treatment of Lophocolea in Fulford (1976) fails to cite this as a Latin American species; however, the present plants are quite typical. They occur admixed with Blepharostoma trichophyllum -- another species (and genus) regarded as "absent" from Latin America by Fulford.

19. Leptoscyphopsis Schust., gen. n.

Genus Leptoscypho cognatum ut unisexuale ut insertionis foliorum sucubus, anticaliter ad lineam caulis mediam; ut perianthium ad apicem caulis primarii inflatum, ore late bilabiato, labiis rotundatis dentatisque; carina nec dorsalis nec ventralis alata. Genus a Leptoscypho distinctum ut basis surculi microphylla, ut stolona (combinationem quae Plagiochilae similis est surculorum et microphyllorum et folia normalia habentium) adsunt; merophyta ventralia angustissima, etiam in gynoecio, amphigastriis solum e 1-2(3) cilliis brevibus, ad basim vix connatis constantibus. Type: L. paradoxus Schust., sp. n. The diagnosis may serve as a descriptio specifico-generica. Type: Estado Merida: Above Loma Redonda, Sierra Nevada de Merida (RMS & L. Ruiz-Teran 76-1450a).

Distinctive in the: ventral + lateral-intercalary branches, microphyllous at the base; oblong leaves, ± flat, soft-textured, rather nitid, truncate to bidentate at the apex; smooth cells with rather bulging trigones, each with (8)9-15 rather large, smooth, essentially homogeneous oil-bodies largely obscuring the cell lumen. Its position within the Leptoscyphus alliance is uncertain; the microphyllous branches and stolons suggest Plagiochila, yet the genus is very different in aspect, in the soft texture, lack of cnemis, and largely creeping mode of growth. In drying, plants tend to blacken -- a Lophocoleoid character never seen in Plagiochilaceae.

Family PLAGIOCHILACEAE

20. Plagiochila caducidentata Schust., sp. n.

Species P. caducilobae Blomquist in montibus Southern Appalachian dictis repertae cognata (ut partes distales foliorum facile caducae); propria ut folium angustius, obovatum ad interdum ovatum, non lobatum; margines folii ca. 6-12 dentibus caducis, uniseriatis nisi ad basim praediti. Type: Estado Merida: Cloud forest at 2650 m. below Rio Frias, Sierra Nevada de Merida (RMS & L. Ruiz-Teran 76-1515).

As in P. caduciloba, branching is wholly lateral-intercalary; oil-bodies are usually homogeneous, 6-7(8) per cell. Diagnostic of this species is the androecium: erect, unbranched, leafy axes may produce a spicate, tapered androecium, at which point the shoot apex becomes arched and the apical sterile innovation (of strictly limited growth) may grow down toward the substrate; at the androecial base this is almost invariably a vigorous sterile innovation overtopping the androecium and "seemingly" deflecting the androecium to one side.

21. Plagiochila moniliformis Schust., sp. n.

Plantae minutae, axibus foliaceis essentialiter non ramosis, folia minutissima verticalia subverticaliave habentibus; folia natura bilobata, discum cuniiformi-obtrapezoideum atque duos lobos parvos ramosos praebentia--ramis tantummodo ordinibus cellularum moniliformium quae singulatim (aut interdum cellulis binis ternisve) dehiscunt. Type: Estado Tachira: Below Paramo de Tama, 2790 m. (RMS & L. Ruiz-Teran 76-1972).

This and the preceding species both bear essentially homogeneous oil-bodies and show asexual reproduction by dropping fragments derived from leaf teeth or lobes -- hence belong in the Bidentes (s. lat.). P. moniliformis is unique in that section, and, indeed, in the genus Plagiochila because of its minute size, linked with asexual reproduction by 1-celled, thick-walled gemmae produced by dehiscence from moniliform cell rows that terminate the primary lobes and secondary leaf "lobes" (or teeth).

22. Rhodoplagiochila Schust., gen. n.

Genus Plagiochilae cognatum, proprium, autem, et cacumina surculorum pigmenta membranae typi "anthocyanin": rosea ad subpurpurea praebentia; insertio foliorum utra lineam caulis mediam anticaliter extensa, insertionibus foliorum dorsaliter implicatis; proprium necnon foliia lateraliter apressa, omnino sine margine folii anticali deflexo, necnon folium non profunde 3-4-lobatum, ciliis marginalibus nitidis, flavo-brunneis, valde elongatis atque fere seriaceis, armatum. Type: R. rosea Schust., sp. n.; monotypic.

Type: Estado Merida: Sierra de Santo Domingo, in cloud forest above Laguna de los Patos, 3700-3750 m. (RMS & L. Ruiz-Teran 76-901).

Because of its erèct growth, circinate-decurved shoot apices and strikingly laterally compressed shoots, initially believed (in the field) to be a member of the Adelanthaceae. Yet reddish pigments are unknown in Adelanthaceae (s. str.; Odontoschisma does not belong in that family). The laterally compressed shoots and lack of a deflexed fold of the antical leaf margins suggests Acrochila and Plagiochilion, yet the lateral-intercalary stolons and lateral-intercalary leafy branches and innovations (aside from a single Frullania-type branch seen) suggest no close affinity to these two genera is possible. In neither of them, nor in any other genus of Plagiochiloideae, has anthocyanin pigmentation ever been seen; nor have interlocking dorsal merophyte margins been seen in any other member of the Plagiochilaceae.

Family SCAPANIACEAE

23. Diplophyllum andicolum Schust., sp. n.

Plantae dioeciae, dilute virides ad castaneas, basibus ventralibus, autem, foliorum subrubris. Propriae lobis dorsalibus foliorum longe attenuatis necnon gemmis unicellularibus, colore subrubra-brunneis. Type: Estado Merida: Sierra Nevada de Merida, 4160 m. (RMS & L. Ruiz-Teran 76-1432).

The reddish coloration of ventral leaf bases and the pigmented gemmae suggest the D. domesticum-obtusifolium-obtusatum complex, but the plants are abundantly different in being dioecious, and in the strikingly drawn out, lanceolate-acuminate, often somewhat caudate dorsal lobes.

Family GYMNOMITRIACEAE

24. Marsupella (subg. Nanòmarsupella) xenophylla Schust., subg. et sp. n.

Genus ab omni alio taxo Marsupellae (s. lat.) distinctum ut cellulae foliorum singulatim tumidae, omni papilla saliente alta pachydermata armata; surculi folacei pumili, repentes, ob ramos laterali-intercalares abbreviatos pinnulati; gynoecia capitata "germen" apicale abrupte discretum formantia; folia imbricata sed minuta, squamaformia. Type: Estado Merida: Sierra Nevada de Merida, 4160 m. (RMS & L. Ruiz-Teran 76-1449).

The above diagnosis is a descriptio generico-specifica. This dwarf, easily overlooked plant is mostly subterranean, consisting of a massive system of very long, leafless, geotropic stolons from which the slight, somewhat dorsiventrally flattened, stoutly wiry,

creeping "aerial" shoots arise. Such leafy axes are of limited growth and tend to go over abruptly into relatively large, "bud-like" terminal structures. These are putative gynoecia, formed of 2-3 pairs of tightly imbricate, paired bracts. No perianth or archegonia could be found, however, and it is not impossible -- but unlikely -- that these structures represent aborted androecia. The uniquely armed leaf cells, much as in Pigafettoa of the Geocalycaceae, are unique. Possibly forming an autonomous genus.

25. Marsupella (Stolonicaulis) microphylla Schust., sp. n.

Plantae minutae, folia minuta, maxime remota, squamaformia habentes tamquam in M. stoloniforme (in loco Borneo, N. Guinea dicto reperta), propriae ut coloratio admodum subrubra; ♀ bracteae erectae, lobos patentes, lanceolati-triangulares habentes, necnon folia patentia ad squarrosa, ad 0.5 bifida. Type: Estado Merida: Sierra Nevada de Merida, ca. 4160 m. (RMS & L. Ruiz-Teran 76-1429a).

Because of its bifid leaves I have placed this plant into Marsupella subg. Stolonicaulis Kitagawa, rather than into Poeltia Grolle. Poeltia, however, probably should be reduced to a subgenus of Marsupella -- since the lack of leaf emargination seems to be its only claim for generic rank. The seta has 8 epidermal + 3(4) internal cell rows. If this proves to be constant for other taxa of the Stolonicaulis-Poeltia complex, then generic segregation from Marsupella may prove necessary.

Family ACROBOLBACEAE

26. Acrobolbus (Xenopsis) laceratus Schust., subg. et sp. n.

Plantae in ramunculis epiphyticae, albido-virides nisi caulibus subbruneis, filo metallico similibus. Caules rigidi, ca. 7 cellulas diam., corticem 1-stratosum e cellulis maxime pachydermatis et valde elongatis compositum habentes. Folia valde deflexa ventraliter mutuo attingentea aut superposita (sectio surculi ita tubularis), oblonga ad oblongo-cuneata, fragilia bisbifida, lobis fractis. Cellulae elongatae (2-3:1 vel magis in basibus foliorum), trigones crassos longitudinaliter confluentes habentes. Type: Estado Tachira: Paramo de Tama, 3140 m. (RMS & L. Ruiz-Teran 76-1910a).

The most extraordinary species known of Acrobolbus and so isolated from that genus that separate generic status may become unavoidable when the reproductive structures are known. Differing from all other taxa in the genus in the strikingly elongated stem and leaf cells, the bisbifid leaves, and the fragmenting leaf lobes.

27. Marsupidium latifolium Schust., sp. n.

Plantae erectae, caulibus subbruneis, filo metallico simili-

bus, interdum distaliter microphyllis; cellulae corticales lineares; bases surculorum flagellis atque stolonibus geotropicis praeditae. Folia chlorophyllosa, subtransverse orientia, patelliformia ad admodum concava, late elliptico-reniformia, basibus angustissimis, margine integro, cuticula levi. Type: Estado Tachira: Paramo de Tama, 3100 m. (RMS & L. Ruiz-Teran 76-1940c).

The genus has been known, in America, only from the subantarctic Nothofagus zone. Among American taxa perhaps allied to M. urvilleanum, but in that species leaves are typically pluridentate. Possibly also allied to M. renifolium (Hässel & Solari) Schust., comb. n. [Basionym: Tylimanthus renifolius Hässel & Solari, Darwinia 17:583, 1972].

Family ADELANTHACEAE

28. Adelanthus aureomarginatus Schust., sp. n.

Plantae marginem folii aureum, nitidum, denticulato-serrulatum, a lamina folii viridi insigne discrepantem, praebentes, folium ovato-rotundatum ad rotundatum, concavum, patelliforme, multis dentibus parvis acutis spinosisque verticaliter orientibus praeditum. Cellulae marginales in 2-3(4) seriebus ordinatus, inflatae, admodum pachydermatae; cellulae intramarginales parvae, membranas firmas habentes. Type: Estado Merida: Sierra Nevada de Merida, ca. 2000 m. (RMS & L. Ruiz-Teran 76-1620).

Unique within the genus in the extraordinarily well-defined border of nitid, thick-walled cells from which arise numerous spinous (1)2-celled teeth formed of thick-walled cells; the intramarginal cells are smaller, slightly but evenly thick-walled, isodiametric, and grade into a basal field of larger, firm-walled cells that are little (1.8-2.5:1) elongated. The marginal teeth are ca. 48-55 per leaf and extend over the entire margin, except at the very base.

29. Adelanthus decipiens subsp. aureocinctus Schust., subsp. n.

Subspecies subsp. decipienti similis ut folia (normaliter) bispinulosa et suborbicularia; os perianthii setuloso-ciliatum; cellulae folii admodum collenchymatosae, trigones crassos habentes. Distinctae ut variatio in unico surculo, inter folia bispinulosa atque folia (spina una vel utraque suppressa); distinctum necnon limbus aureus nitidus e singulari ordine cellularum satis amplificatarum, membranas crassiores habentium formatus; necnon spinae folii rigidae pachydermataeque, e 1-3 cellulis perelongatis (4-8:1) formatae. Type: Estado Tachira: Paramo de Tama, 3140 m. (RMS & L. Ruiz-Teran 76-1910).

Similar to the preceding in the nitid, golden border -- conspicuous under both hand lens and the dissecting microscope. The

border is less marked, however, and only 1 cell wide; cells, including the firm-walled marginal ones, bear coarse trigones.

The A. decipiens complex, including A. crossii, is only perfunctorily and unsatisfactorily treated in Grolle (1972). The present plant keys out between these two taxa in his treatment; no mention is made of the form and dimensions of the apical spines and their cells, nor is mention made of the development -- if any -- of a differentiated border. It is likely the present plant may prove to be an autonomous species, but it is equally possible that A. crossii will need reduction to subspecific status under A. decipiens. More material will need to be critically studied to ellucidate this malleable complex.

FOOTNOTE

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