

PLANTAE MESOAMERICANAE NOVAE. III.*

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Cnemidaria stolzeana L. D. Gómez, sp. nov. *Caudex brevissimus, petiolus inermis; petioli paleae bicolores instructus; pinnae sessiles vel subsessiles, apicalis subconformis, basalibus reductis; apices pinnarum integri deinde serrati; costae et costulae subtus paleis pilisque ferrugineis axillares instructae; venae infimae anastomosantes areolae costales efformantes, venae fertiles simplices; sori uniseriati, mediani; indusia omnino circularia bicolora integra applanata, persistentes.*

Caudex short, 10-15 cm long. Fronds 0.95-1.10 m long, 0.60-0.70 m wide at the middle, pinnate, 6-8 pairs of opposite pinnae, abruptly terminating in a subconform apical pinna; petiole 40-50 cm long, canaliculate above, smooth, with scales restricted to its base. Scales deltoid-lanceolate, 10-12 mm long, appx. 2 mm wide at the truncate base, bicolorous, brown with narrow white margins which are somewhat fimbriate towards the apex, rachis non-alate, lacking scales but with abundant, stiff hairs underneath. Lowermost basal pinnae short-stalked and smaller than the middle pinnae, the base subcuneate, broadly serrate in proximal 2-thirds, entire near apex and acute. Middle pinnae 15-20 cm long, 3-5 cm wide, sessile, truncate at base, broadly serrate in proximal 2-thirds, apical third entire, acute. Costae and basal costules with scattered, rusty brown, stiff hairs and small scales. Veins simple, basal ones forming costal areoles from costules. Sori in single lines, medial. Indusia bicolorous, circular, completely surrounding the receptacle, entire, flat, persistent.

Holotypus: Beyond sawmill in lumber road above El Cope, Prov. Coclé, 900 m, B. Hammel 1036, CR. Isotypus: MO.

The new species is a close ally of *Cnemidaria nervosa* (Max.) Tryon which has similar indusia but presents smooth and muricate petioles, glabrous rachis, petiolulate pinnae, and glabrous costae and costules. In Panama, the only other species with persistent, circular indusia is *C. cocleana* Stolze which differs in the spiny petioles, scaly rachis and pinnae with serrate apex.

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The new species is dedicated to Mr. Robert G. Stolze, Field Museum, as a tribute to his excellent monograph of the genus and Notorious work on the ferns of Guatemala.

Thelypteris [Goniopteris] *hondurensis* L. D. Gomez, sp. nov.

Rhizoma repens, crassum, glabrum; petioli remoti, glabri, straminei, nitentes, teretes, 30-65 cm long. Lamina 30-40 cm longa, 40-45 cm lata, pinnata. Pinnae 2-3-jugatae, ample lanceo-ellipticae, laxe crenatae, infimae venis basiscopicis liberis, mediales venis basiscopicis segmentibus basalibus areolatis. Costae costulaeque venisque infra piliis minutis obtectis. Sori exindusiati. Sporangia omnino glabra.

Terrestrial. Rhizome short-creeping, thick. Fronds distant, few (3-5), petioles 30-65 cm long, stramineous, opaque, smooth, glabrous. Pinnae 2-3 pairs, 22-25 cm long, 7-8 cm wide at the middle, broadly lance-elliptic. Basal pinnae with upper base obtuse and lower base strongly excavate. Middle pinnae with equilateral, obtuse bases. All shallowly crenate, apically acuminate. Costae, costules and veins with many, minute, translucent hairs. Sori borne at base of included veinlet produced by the merging veins of adjacent segments. Middle pinnae with the basiscopic veins of the basal segments anastomosing to produce several, irregular areoles. Lowermost pinnae with those veins simple or 1-forked uniting at the margin, never anastomosing. Costae, costules and veins more evident near proximal third, almost immersed near the apex of the pinnae. Sori exindusiate. Sporangia glabrous.

Holotypus: NW slope of El Tiburon, Lancetilla Experimental Station, Atlantida, Honduras, 50-300 m, CR, Gomez 7012. Isotypi at F and CA.

Akin to *Thelypteris poiteana* which has setose sporangia and to *T. ghiesbreghtii* with glabrous sporangia but differs from both in the peculiar areolation of the basiscopic veins of the basal segments of the middle pinnae and, in general, the larger proportions of the new species.

Thelypteris [Goniopteris] *alan-smithana* L. D. Gomez, sp. nov.

Rhizoma breve repens, frondes proximas emittens. Stipes brunneus, crassis, subnitidus, supra piliis furcatis vestitus, laminam subaequans. Lamina deltoideo-lanceolata, pinnata. Rachis costaeque subtus pilosis. Pinnae 11-12-jugatae, quasi sessiles, oblongo-lanceolatae, crenatae. Venae simplicis in sinu concurrentes, praeter basales. Sori mediali, indusiati. Indusia peltata, pallide brunnea, setosa. Sporangia setosa.

Rhizome short-creeping. Fronds fascicled, 80-95 cm long. Petioles 45-50 cm long, dull brown or semilustrous, with minute, forked hairs above. Rachis pilose, laxly flexuose. Lamina herbaceous, pinnate. Pinnae 11-12 pairs, the basal opposite, the rest alternate, shortly stalked (0.5-1 mm), long-lanceolate, crenulate-crenate, 24-26 cm

long, 3.5-4 cm wide, the sinuses reaching no more than one third to the costa, segments rounded, entire or undulate. Costa, costules and costulules pilose, hairs simple, curved, minute with a few stiff, scattered longer hairs. Veins simple throughout, the basal veins of adjacent segments arising the basisopic from the costa and the acroscopic from the costule, merging to produce a veinlet that does not reach the commissural vein formed by the rest of the veins. Sori medial. Indusium setose. Sporangia with a few setae.

Holotypus: NW slopes of the Tiburon hills, Lancetilla, Atlantida, Honduras, 50-300 m, Gomez 6959, CR. Isotypus: F, CA.

Related to the species of the *Thelypteris nicaraguensis-tristis-minor* group, the new species differs from them in the flexuose rachis, and the characteristic included veinlet produced by the merging basal veins of the segments. It is named in honor of Dr. Alan R. Smith, ardent student of the genus.

Tectaria acutiloba (Hieron.) Maxon was described from the Cauca, Colombia. This species which is often confused with *T. mexicana* with which it bears a superficial resemblance, is now known from Panamá in the Province of Colón (S. Knapp 987, MO, CR) and the vicinity of Puerto Limón in Costa Rica (R. Ocampo s.n., CR).

Trichipteris falcata (Kuhn) Barrington was supposed to be confined to southern Colombia. A Panamanian collection from the Province of Coclé (K. Sytsma et al. 4415, MO, CR) corresponds to this rare fern, a dwarfed Cyatheaceae, known from few specimens.

Rhynchospora oreoboloidea Gomez-L., sp. nov. species distinctissima omnibus speciebus generis *Rhynchospora* facile cognoscenda, ob genus *Oreobolus* R. Br. habitus vegetativus similis.

Planta glabra, nana, 5-12-15 cm alta; rhizomate breve, ramoso, pluriceps caespites denses emittens; radicibus fibrosis; culmus intra folia plura radicales, 2-3 caulinas, culmus superantia, subdisticha, lamina anguste linearia, tricostata, sulcata, rigida, marginibus antrorsis spinuloso-scabra, apice obtusa, incurvva excurvae, etiam torta, pallido-viridia, fulvescens, albidae basim; vaginae fibrascens, multinervosae, dilatatae, externae apertae internae non-apertae, castaneae fulvescens; bractea usque 3 cm longa, disticha, folia simile, bracteolae setaceae, 3-nervosae, margines scabrae; inflorescentia 1-2-spiculata, inaequaliter pudunculati (pedunculum fere quadrialati, 3-30 mm longum), folia abscondita; spiculae 1-2-nucigerae, 3.5-4.5 mm longae, ca. 1.5 mm crassae, apice acutae, porphyro-rufescens; glumae vacuae late triangulares, 1.3 mm longae, 1-nerviae, nerviis incurvatis scabris, mucronatae; glumae nucigerae 2.7 mm longae, 1-nerviae, porphyreae, margine scariosae et plicatae, apice mucronatae; stamina 3, filamenta plana 2 mm longa, antherae 0.8 mm longae; stylus filiformis quasi in medio bifidus; stylopodium anguste conicum,

0.5 mm longum, 1 mm crassum, biconvexum, tumidum, maturitate porphyreum, nitens, facie minute reticulatum; setae hypogynae 6, graciles, inaequales, 1-2.5 mm longae, antrorsim spinuloso-scabrae.

Holotypus: Cerro Buvis, Buenavista massif, altitude ca. 3400 m, Cartago, A. S. Weston 5967a, CR. *Isotypi*: UC, F, MO, NY. *Paratypi*: Cerro Nai, Talamanca, altitude ca. 3100 m, Weston 6172, CR, USJ, UC.

The new species resembles one of the genus *Oreobolus* in the general habit but is easily distinguished from its species by the whitish leaves. No other species of *Rhynchospora* possesses the combination of characters given in the description. I feel amply justified in erecting for it a new section:

Rhynchospora Vahl, sectio *Oreoboloides*, sect. nov.

Rhizoma breve, pluriceps caespites denses agens; culmus intra folia absconditus, teretibus, sulcatus; folia culmus superantia, subdisticha, tricostata, rigida, albidae basim; vaginae fibrascens, dilatatae, multinervosae, externae apertae internae inapertae; bractae foliae similes; inflorescentia pauciflorae, inaequaliter pedunculati, folia abscondita; stamina 3; stylus quasi in medio bifidus; stylopodium anguste conicum; achaenium oblongum, biconvexum, tumidum, reticulatum; setae hypogynae 6; antrorsim spinuloso-scabrae.

Species typica sectionis Rhynchospora oreoboloidea Nobis est.



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