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NEW SPECIES OF VERNONIA FROM BOLIVIA AND PERU

(VERNONIEAE: ASTERACEAE)

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The following two new species have been discovered in undetermined material of Asteraceae from Bolivia and Peru.

Vernonia fournietii H. Robinson and B. Kahn, sp. nov. Plantae suffrutescentes ad 1 m altae laxae ramosae. Caules pentangulares dense breviter hirtellii et tomentellii. Folia alterna, petiolis brevibus ca. 8-10 mm longis; laminae oblongo-ellipticae 10-12 cm longae et 1.4-3.5 cm latae base rotundatae margine integrae vix recurvatae apice breviter acutae supra et subtus strigosae in nervis primitivibus dense sericeae, nervis secundariis pinnatis utrinque ca. 12 patentibus sensim ascendentiter arcuatis. Inflorescentiae abrupte late scorpioidae cymosae bracteiferae; bracteae folioliformes sed minores 10-40 mm longae et 6-14 mm latae. Capitula in axillis bracteorum solitaria sessilia ca. 12 mm alta; squamae involucrati ca. 30-35 subimbricatae ca. 4-seriatae graduatae oblongo-ovatae vel oblongo-lanceolatae 1-5 mm longae et 1.0-1.5 mm latae apice late vel anguste rotundatae planae extus dense sericeae vel subtomentellae. Flores 20-25 in capitulo. Corollae lavandulae ca. 10 mm longae leniter carnosae extus glabres, tubis 4.5 mm longis infundibularibus, faucibus 0.75 mm longis, lobis linearibus ca. 4.75 mm longis et 0.7 mm latis apice extus minime armatis; filamenta in partibus inferioribus reflexa superioribus ca. 0.7 mm longa; thecae 4.1-4.2 mm longae; appendices antherarum lavandulae acutae 0.9-1.0 mm longae et 0.25 mm latae glabres; basi stylorum disciformes noduliferi; scapi stylorum in partibus hispidulis superioribus ca. 0.7 mm longi; ramistylorum ca. 3 mm longi. Achaenia ca. 1.8 mm longa dense sericeo-setulifera base glandulifera; carpopodia turbinata ca. 0.3 mm alta et 0.5 mm lata; setae pappi albae subdeciduae ca. 37 plerumque 6.0-6.5 mm longae apice leniter latiores in sereibus exterioribus palaeceae ad 1 mm longae et 0.2 mm latae. Grana pollinis in diametro ca. 55-60 μm valde lophor-
ata, cristis altis minute multo spiculiferis, spinis majoribus nullis, reticulatis a V. gernatis similis.

TYPE: BOLIVIA: La Paz: Route de Coroico, km 64, alt. 2650 m. Herbacée de 1 m de haut en buisson. Feuilles alternes de 10-12 cm de long, acuminées, pétiole de 8-10 mm de long. Fleurs mauves en racème, cauliflores. 2/8/1984. A. Fournet A. F. 429
(Holotype, US; isotype, IBBA)

The new species apparently belongs to the Vernonía salzmannii alliance on the basis of the cymose bractiferous inflorescence and the pollen. The new species differs from V. salzmannii DC. by the blunter, less numerous involucral bracts and the much more densely pubescent stems and involucule. Actually, the new species is most obviously distinct by the more abrupt differentiation of the inflorescence. Perhaps the closest relationship of V. fournetii is to V. tarijensis (Griseb.) Hieron. of northern Argentina, but the latter has more tapered narrowly acute leaves and has narrowly acute, lanceolate involucral bracts.

Vernonia sandemanii H. Robinson and B. Kahn, sp. nov.

Plantae fruticosae ad 3.3 m altae. Caules brunnescentes teretes striati vix angulati appresse irregulariter pilosuli et sparse glandulo-punctati. Folia alterna, petiolis 1-3 mm longis; laminae papyraceae ellipticae plerumque 7-9 cm longae et 1.5-2.7 cm latae base late cuneatae margine superne sensim breviter serratae apice breviter acuminatae supra nitidae plerumque sparse pilosulae in nervis primariis densius pilosulae in nervis et nervulis insculptae subitus breviter luteo-sericeae inter nervos et nervules majoris vadose appresse albo-tomentosae, nervis secundariis pinnatis utrinque 5-6 valde ascendentibus. Inflorescentiae in ramis terminales laxe ramosae in ramis dense corymbosae in ramulis dense glomerulae, ramis dense luteo-sericeis, bracteis foliaceis solum in nodis primariis inferioribus presentibus. Capitula in glomerulis sessilia cylindracea 10-12 mm alta et 2-3 mm lata; squamae involucris ca. 15 imbricatae ca. 4-5-seriatae valde inaequales 1.5-5.0 mm longae et ca. 1 mm latae apice generaliter rotundatae sed in maturitatis eroso-fissae extus in partibus non imbricatis purpureae, squamae exteriores ovatae extus subtomentellae, squamae interiores facilis deciduae lineares vel anguste ellipticae extus plerumque glabrae superne leniter appresse puberulae. Flores 1 in capitulo. Corollae violaceae ca. 8 mm longae, tubis anguste cylindraceis 3.5-4.0 mm longis extus breviter stipitato-glanduliferis, faucibus nullis, lobis 5 profunde divisis linearibus 4.0-4.5 mm
longis et 0.7 mm latis extus apice in aggregis discretis dense glanduliferis caetera persparsae glandulo-punctatis; filaments in parte superiore ca. 0.6 mm longa; thecae ca. 1.3 mm longae base papilloso-fimbriatae; appendices apicales antherarum oblongae ca. 0.5 mm longae et 0.27 mm latae apice rotundatae glabrae; nodi stylorum distincti breviter cylindracei; scapi stylorum in partibus superioribus hispidulis 0.5-1.0 mm longi, pili apice rotundati. Achaenia submatura ca. 2 mm longa distincte 10-costata in costis breviter setulifera inter costas glandulo-punctatis; carpopodia breviter subcyllindrica ca. 0.1 mm alta et 0.4 mm lata; setae pappi persistentes albae ca. 65 plerumque ca. 7 mm longae et apice anguste clavatae, setae paucae exteriores breviores et apice tenuiores. Grana pollinis in diametro ca. 45 μm irregulariter areolata et spinulosa (Lynchnomophora-type).

TYPE; PERU: Huanuco: Carpish (above Huanuco), the rain forest, growing in semi-shade. Alt. 8500 ft. 8-10 ft. shrub with bright-heliotrope flowers. June 1938. C. Sandeman 219 (Holotype BM).

The new species seems most closely related to Vernonias flexipappata Gleason of southern Ecuador and to Eremanthus jelskii Hieron. of northern Peru which has recently been renamed as V. shanyensis by MacLeish (1984). All have single-flowered heads. The three species superficially resemble Critochnopsis which has few-flowered heads with easily deciduous inner involucral bracts (Robinson 1980), but they differ by the lobes of the corolla being divided to the base of the throat and by the achenes being distinctly 10-ribbed with glans and setulae. The blunt hairs of the style branches are also like the subtribe Piptocarpinae to which Critochnopsis belongs (Robinson et al. 1980), but the achenes are not smooth and nearly glabrous as in members of that subtribe. The present group seems to hold a relationship to Critochnopsis similar to that of another northern Andean group noted by Robinson (1980). The latter group contains V. crassilanata Cuatr., V. neoglossoniana Cuatr., V. sparrei H. Robinson, and V. trichotome, having corollas deeply lobed like in the present group but with more numerous flowers in the heads and with opposite leaves.

Vernonia sandemanii is like the Ecuadorian V. flexipappata in the more congested pappus with distinctly more than one row of long setae and with the lower leaf surfaces thinly pale-tomentose and yellowish pilose. The Ecuadorian species differs by the pale involucral bracts and the leaves broadest at or below the middle with less toothed often narrowly
recurved margins and less prominent veins on the lower surface. *Vernonia shawensis* is a more densely leaved shrub with denser, more abrupt inflorescences, more shortly petiolate leaves with somewhat recurved margins, more sharply pointed involucral bracts, and with the pappus less congested and scarcely more than uniseriate.

The new species helps clarify the nature of a small group distributed from southern Ecuador to central Peru which had previously been known from only two species that were not recognized as close relatives of each other.

**Literature Cited**


Vernonia sandemanii H. Robinson & B. Kahn, Holotype, British Museum (Natural History).