PROCEEDINGS

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TWO NEW SPECIES OF HELIOPSIS (ASTERACEAE) FROM SOUTH AMERICA.

BY S. F. BLAKE.

The two new species of Heliopsis here described have been held in manuscript for several years. A note identifying a species of this genus wrongly described by Klatt as a *Gymnolomia* is appended.

Heliopsis lanceolata Blake, sp. nov.

Herba perennis erecta v. adscendens; caulis tenuis bifariam pilosus; folia opposita remota anguste lanceolata longe acuminata basi acute cuneata petiolata triplinervia calloso-serrulata utrinque dense subappresso-hirsutula; capitula majuscula radiata terminalia solitaria longe pedunculata; involucri 6–8 mm. alti phyllaria oblonga herbacea calloso-apiculata dense pilosiuscula; achenia disci parva oblonga quadrangularia

apice truncata non striata.

Erect or ascending perennial herb, single-stemmed, with a few short leafy branches from the base; stem subterete, striate, 1.5-3 mm. thick, purplish or purplish brown, densely gray-pilose with matted hairs in two lines and sparsely pilose or nearly glabrous elsewhere, glabrescent below, bifurcate or few-branched, with erect branches; internodes 2.5-10 cm. long; leaves often with short leafy branches in their axils; petioles slender, unmargined, 1-2 cm. long, sulcate above, densely pubescent in the sulcus; blades narrowly lanceolate, 4.8-8.5 cm. long, 6-16 mm. wide, callousserrulate chiefly above the base and below the apex (teeth acute or acutish, 0.3-1 mm. high, 3-10 mm. apart) or the smaller subentire, firm-papery, about equally green on both sides, densely subappressed-hirsutulous on both sides and with some longer hairs especially along the margin and the chief veins beneath, the bases of the hairs sometimes glanduliform; peduncles solitary at tips of stems and branches, slender, 14-22 cm. long, pubescent like the stem below, above densely subtomentose-pilose with spreading or erectish ochroleucous hairs; heads 2.8-5 cm. wide (as pressed); disk 1-(fruit) 1.5 cm. high, 1.2-1.5 cm. thick; involucre 2-seriate, obgraduate, appressed, the outer phyllaries unequal, oblong or oblongoblanceolate, acute or acutish, conspicuously callous-tipped, herbaceous, densely pilosulous with ochroleucous hairs, the inner phyllaries shorter, oblong, acute or acuminate, thinner, subchartaceous, glabrous or slightly puberulous; rays about 14–18, golden yellow, fertile, the lamina oblong, bluntly 2–3-denticulate, about 14-nerved, sessile, persistent, puberulous at base, glabrous on back, 19–23 mm. long, about 6 mm. wide; disk corollas yellow, glabrous or subglabrous, 4.4 mm. long (tube 0.7 mm., throat slenderly subcylindric, 3 mm., teeth ovate, acutish, recurving, 0.7 mm. long); pales lance-oblong, obtuse or acute, essentially glabrous, narrowly keeled, 3-vittate, thickened toward apex, brownish yellow above, 6 mm. long; ray achenes (submature) obovoid, trigonous, about 1-nerved on each face or nerveless, sparsely hispidulous above chiefly on the angles, 3 mm. long, 1.5 mm. wide; disk achenes oblong, bluntly quadrangular, nerveless or weakly 1-nerved on the faces, dull, glabrous, truncate at the obscurely crenulate apex, 2.5 mm. long, 1–1.2 mm. wide.

Colombia: Open rocky hillsides, vicinity of Vetas, Dept. Santander, Eastern Cordillera, alt. 3100–3250 m., 16–20 Jan. 1927, E. P. Killip & A. C. Smith 17339 (type no. 1,352,958, U. S. Nat. Herb.); in thicket, same locality and date, Killip & Smith 17905.

A species of the *Heliopsis buphthalmoides* group, readily distinguished by its narrowly lanceolate acuminate leaves.

Heliopsis decumbens Blake, sp. nov.

Herba perennis rhizomatosa decumbens 8–10 cm. alta; caules pauci breves patenter pilosi; folia opposita paucijuga elliptico-oblonga v. elliptico-ovata obtusa basi cuneata petiolata crenato-serrata triplinervia praecipue infra patenti-hirsuta; capitula mediocria solitaria longe pedunculata aurea radiata; involucri 2-seriata ca. 8 mm. alti obgraduati phyllaria exteriora oblonga v. oblongo-obovata obtusa 3-nervia herbacea pilosa; radii ca. 15 aurei ca. 12 mm. longi; achenia disci obovoidea paucinervia truncata epapposa.

Low herb, with prostrate branching rhizome (up to 10 cm. long or more), short decumbent stems, and relatively long ascending or erectish terminal peduncles; leafy part of stem about 2.5-4 cm. long, subterete, striate or sulcate, greenish, more or less densely pilose with spreading or partly subappressed hairs sometimes arranged more or less in lines, in age glabrate or glabrescent; internodes 5-10 mm. long; leaves in about 4 pairs; petioles rather broad, more or less pilose, 5-7 mm. long, obscurely margined essentially to base, connate at base; blades 2.5-3.5 cm. long, 1-1.5 cm. wide, obtuse, bluntly and obscurely callous-apiculate, at base cuneately decurrent into the petiole, crenate-serrate chiefly above the cuneate lower part (teeth about 5-7 pairs, about 0.3 mm. high, mostly 2-3 mm. apart, obtuse or acutish, callous-tipped), above glabrous or sparsely short-hirsute, sparsely or rather densely hirsute or hirsutulous on margin, beneath hirsute on chief veins and sometimes sparsely so on smaller veins and surface; peduncle slender, pilose with spreading or upcurved hairs, densely so below the head, 4-7 cm. long; head 3 cm. wide; disk about 1.3 cm. wide, 8-10 mm. high (as pressed); involucre hemispheric, 7-9 mm. high, appressed, 2-seriate, the outer phyllaries about 7, oblong or obovate-oblong, obtuse, obscurely

callous-tipped, sparsely to rather densely pilose with spreading to erectish hairs, herbaceous, somewhat paler and subindurated toward base, the inner series 1–2 mm. shorter, thinner, paler, obtuse or abruptly short-acute, less pubescent or nearly glabrous; receptacle (in flower) short-conical; rays fertile, the corolla apparently golden yellow, sessile on the achene, oblong, tridenticulate, 11–14-nerved, hispidulous at base, 11–13 mm. long, 3 mm. wide; disk corollas yellow, glabrous, 4.6 mm. long (tube 0.7 mm., throat cylindric-funnelform, 3.2 mm., teeth ovate, 0.7 mm. long); pales scarious, obtuse or acute, narrowly carinate, 3-nerved, 6 mm. long; ray achenes obovoid-trigonous, glabrous, epappose, 3 mm. long, 1.5 mm. wide, 1–3-nerved on each face, with narrow whitish irregularly undulate margin; disk achenes obovoid, compressed, thickened, about 3-nerved on each side, blackish, glabrous, epappose, truncate at apex, 2.7 mm. long, 1.3 mm. wide.

Peru: Cajamarca, 30 April 1912, W. H. Osgood & M. P. Anderson 35 (type no. 346721, Field Museum).

Somewhat similar in appearance to the Mexican *Heliopsis procumbens* Hemsl.

Heliopsis buphthalmoides (Jacq.) Dunal, Mem. Mus. Paris 5:57. 1819. Anthemis buphthalmoides Jacq. Hort. Schoenbr. 2:13. pl. 151. 1797. Gymnolomia silvatica Klatt, Leopoldina 25:104. 1889.

Gymnolomia silvatica Klatt is represented in the Gray Herbarium by a sketch of the type (Carl Hoffmann 153, Costa Rica, in silva montis Irazu) in the Berlin Herbarium, accompanied by a pocket containing flowers, pales, and achenes. Examination of this material shows that Klatt's species is identical with the common and widespread tropical American Heliopsis buphthalmoides (Jacq.) Dunal. Klatt described the leaves as ovate-lanceolate, 3 inches long, 9 lines wide, but the leaf blades are represented in his careful sketch as ovate, 7–8.5 cm. long, 3–3.8 cm. wide. Klatt's species was referred to Heliopsis by Robinson and Greenman¹ in their revision of Gymnolomia, but has not previously been synonymized specifically.

¹ Proc. Boston Soc. Nat. Hist. 29: 104. 1899



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