

## SOME HELENIOID COMPOSITAE FROM CENTRAL AMERICA

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The tribe Helenieae of the Compositae is not greatly different from the tribe Heliantheae, and by some botanists the two are joined. The Guatemalan genera of the tribe Helenieae seem to be fairly distinct from the helianthoid kinds, so as a matter of convenience the tribe Helenieae will be maintained in the Flora of Guatemala. The tribe is a small one in Guatemala, 12 genera and 32 species. Very few additional species are known from the other Central American countries.

The field and herbarium work involved in the preparation of the Helenieae for the Flora of Guatemala, and for preliminary notes on Guatemalan and Central American kinds, has been generously supported by the National Science Foundation, to which our sincere thanks are given.

DYSSODIA DECIPIENS (Bartling) M. C. Johnston, Rhodora 64:- 13. 1962; Strother, Univ. Cal. Publ. Bot. 48: 25. 1969. Syncephalantha decipiens Bartling, Ind. Sem. Hort. Goett. 1836: 6. 1836; Schlechtendahl, Linnaea 12: Lit. Ber. 80. 1838. S. sanguinea Klatt, Leopoldina 25: 106. 1889. S. macrophylla Klatt, l. c. 108. Dyssodia sanguinea Strother, l. c.

The genus Syncephalantha was based by Bartling on plants grown from seeds received from Karwinski. Karwinski spent five years in Mexico, principally in Oaxaca, and it may be assumed that the seeds which he collected of this attractive plant came from there. Klatt, in 1889, described two additional species of Syncephalanthus, a variant spelling of the generic name. Syncephalanthus sanguineus was described from a Warszewicz collection, number 87 "Hab. Guatemala et Costarica." Since the species is not known from Costa Rica and is abundant in Guatemala, I assume that the collection was made in Guatemala. Syncephalanthus macrophyllus was grown in the Berlin Botanical Garden from material of unspecified origin.



Strother in his study of *Dyssodia* has maintained both *Dyssodia decipiens* and *D. sanguinea*. However the collections available to me in Field Museum, 4 from Oaxaca, 4 from Chiapas and about 40 from Guatemala, seem to me to represent a single species, and will be so treated in the Flora of Guatemala.

ESPEJOA MEXICANA DC. Prodr. 5: 660. 1836. *Jaumea mexicana* Benth. & Hook. ex Hemsl. Biol. Cent. Am. Bot. 2: 209. 1881.

There is a single species in this genus, *E. mexicana* DC., which is found from Mexico south to Nicaragua. The species sometimes has been referred to *Jaumea*, as was done by Hemsley and by Bentham and Hooker. I have seen inadequate material of *Jaumea linearifolia* Pers. (the type species of *Jaumea*) from the sea coast of Argentina and Uruguay, but that seen seems to indicate that *Espejoa mexicana* does not belong in the same genus.

HELENIUM INTEGRIFOLIUM (HBK.) Benth. & Hook. ex Hemsl. Biol. Cent. Am. Bot. 2: 227. 1881

A common plant in the high subalpine meadows of the Cuchumatanes mountains in Guatemala, extending well north in Mexico. These meadows are badly overgrazed by sheep, but this *Helenium* is not grazed and is said locally to be poisonous to sheep. We have no proof that this is so, but for some reason the plant is not palatable to sheep.

*Helenium scorzoneraefolium* (DC.) Gray is a very closely related species to be expected in Guatemala, for it is known close by in Chiapas.

These two species have often been placed in different genera, - by Rydberg in North American Flora one in *Dugaldia* and the other in *Hecubaea*. However, the differences between the two even at specific level seems minor to me.

PECTIS MULTIFLOSCULOSA (DC.) Sch.-Bip. in Seem. Bot. Voy. Herald 309. 1856. *Lorentea multiflosculosa* DC. Prodr. 5: 102. 1836. *Pectis arenaria* Benth. Bot. Voy. Sulphur 110. 1846. *Cheilodiscus littoralis* Triana, Ann. Sci. Nat. ser. 4. Bot. 9: 36. 1858. *Pectis bibracteata* Klatt, Leopoldina 20: 92. 1884. *P. grandiflora* Klatt, Leopoldina 1895: 6. 1895; Bull. Soc. Bot. Belg. 35: 290. 1896. *P. lehmannii* Hieron. in Engler, Bot. Jahrb. 28: 620. 1901.

An interesting strand plant that occurs along Pacific shores from a bit farther north than Acapulco, Mexico, to Tumbes on the northernmost coast of Peru. I have seen no specimens from Guate-



mala but my associate, Prof. Antonio Molina R., tells me that it is abundant along the beach at Champerico. The species is known from a single collection each in El Salvador, Honduras and Nicaragua, and from several Costa Rican collections. It is to be expected in Panama, but I have seen no specimens.

Photographs of types or authentic material are available at the Field Museum of: Lorentea multiflosculosa (20718); Cheilodiscus littoralis (38045); Pectis bibracteata (22605); and Pectis lehmannii (15472).

SCHKUHRIA VIRGATA (Llave & Lex.) DC. Prodr. 5: 654. 1836. Mieria virgata Llave & Lex. Nov. Veg. Descr. 2: 9. 1825. Hopkirkia anthemoidea DC. Prodr. 5: 660. 1836. Tetracarpum anthemoideum Rydb. N. Am. Fl. 34: 45. 1914. T. guatemalense Rydb. l. c. T. virgatum Rydb. l. c. Schkuhria guatemalensis Standl. & Steyerl. Field Mus. Bot. 22: 319. 1940. S. pinnata (Lam.) O. Kuntze var. virgata Heiser, Ann. Mo. Bot. Gard. 32: 271. 1945. S. anthemoidea var. guatemalensis Heiser, l. c.

Distributed from Arizona through Mexico, and in Central America south to Nicaragua.

I am unable to distinguish satisfactorily the common, and often weedy, Schkuhria of Mexico and Central America into the varieties under two species, as was done by Heiser in his revision of the genus. The distinction of S. anthemoidea and its variety guatemalensis is difficult and the characters used for separation seem very weak. The plants found under these names seem to differ in no consistent way from plants determined by Heiser as S. pinnata var. virgata. The number of flowers in a head, whether 5 or fewer or 5-8, and the comparative villosity of the angles of the achenes are tenuous characters and not consistent. I believe that the South American material of S. pinnata (Lam.) O. Kuntze that I have seen is distinct from the North American material, which I am calling S. virgata, the oldest name for this complex in North America.

TAGETES IN GUATEMALA. Most specimens of Tagetes in our collection were studied and annotated in 1957-58 by Robert T. Neher. His studies have not been published

There are two complex groups of Tagetes in Guatemala, both of them sometimes weedy. One group comprises the cultivated marigolds, Tagetes erecta L., with possible synonyms of T. patula L. and T. remotiflora Kunze. There seems to be intergression between what seems to me to be primitive T. erecta (perhaps represented by the name T. remotiflora) and T. tenuifolia,



the commonest Tagetes in Guatemala. Tagetes erecta is widely cultivated and escaped in Guatemala, as in most of the rest of Central America. The primitive form is apparently native in Mexico and Guatemala, but not on southward. The second complex centers around Tagetes foetidissima DC., a species which occurs from middle to highest elevations in Mexico, Guatemala, and south to Costa Rica. It is possible that there may be intergression between T. foetidissima and T. tenuifolia. A species very like T. foetidissima is T. multiflora HBK., abundant in the Andean countries. I suspect that these two names may represent one complex and variable species. At best they are two very closely related species.

TAGETES NELSONII Greenm. Proc. Am. Acad. 39: 117. 1903; Contr. Gray Herb. n.s. 25: 117. 1903. T. sororia Standl. & Steyerl. Field Mus. Bot. 23: 146. 1944.

One of the commonest of the native marigolds of the western highlands of Guatemala. In adjacent Chiapas, Mexico, it is probably also common, but there are relatively few collections to indicate this. The type is from near Tumbala, Chiapas.

The plant is sometimes suffrutescent, but usually herbaceous, up to 2 meters tall, and the better forms of it are most attractive. One of the finest examples of this species can be found along the stone fences that surround Indian dwellings and fields on the road to the Sierra de los Cuchumatanes, near the lookout (El Mirador) at about 3,000 meters elevation. This area is a few kilometers north by airline and 1,100 meters above the city of Huehuetenango.



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