

TAXONOMY OF OXYPAPPUS (COMPOSITAE)¹

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Oxypappus is a monotypic Mexican genus belonging to the polyphyletic tribe Helenieae of the Compositae. Rydberg (1914) included the genus in his subtribe Amauriana, which itself is a polyphyletic group (Turner and Flyr, 1965). The relationship of *Oxypappus* appears to be with members of the subtribe Peritylanae (including *Amauria*), a group of closely related genera whose tribal relationships appear to lie with either the Heliantheae or Senecioneae (Powell and Turner, unpubl.).

Chromosome counts of $n = 10$ have been reported for only two collections (Turner and Flyr, 1965).

OXYPAPPUS SEEMANNII (Sch.-Bip.) Blake, Contrib. U.S. Natl. Herb. 26: 261. 1930. *Pectis seemannii* Sch.-Bip., Seem. Bot. Voy. Herald 309. 1856. Isotypes (GH!, NY!): "N.W. Mexico. Seemann."

Oxypappus scaber (H. & A.) Benth., Bot. Voy. Sulph. 118. 1845.

Chrysopsis scabra H. & A., Bot. Beech. Voy. 434. 1841. Not *Chrysopsis scabra* Ell., 1823.

Pentachaeta gracilis Benth., in Hook. Icon. Pl. 12: 1, pl. 1101. 1872.

MEXICO. Oaxaca: Gneiss rocks, near Juquila Zacatepeque, 4000-6500 ft., Galeotti 2057. (Holotype, BR!).

Oxypappus gracilis (Benth.) Gray ex Hoffm., in Engl. & Prantl., Pflanzenfam. 4⁵: 257. 1890.

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Annual or short-lived perennials, 20-30 cm. high, glandular-pubescent throughout; stems erect, delicate, covered with slender, crisp, glandular trichomes (with age often glabrate); leaves simple, opposite below (at first forming a rosette), sessile, or nearly so, becoming reduced and alternate in the inflorescence, lanceolate, 3-8 mm. wide, 20-50 mm. long, with 2 to 4 inconspicuous dentations along each margin, upper surface green, reticulate-veined, lower surface pale green and not so prominently veined. Inflorescence a relatively open panicle of 10 to 40 small heads; involucre subturbinate to hemispheric, 3.5-5.0 mm. high, 3-5 mm. wide; involucral bracts, 13 to 15, concave, linear, rounded on the back, in a single series; receptacle about 2 mm. across, slightly convex; ray flowers, pistillate, fertile, about 11, bright yellow, the ligule 3-6 mm. long, 1.3-2.0 mm. wide, prominently 5-nerved, with 2 or 3 teeth at the apex, the tube 2 mm. long; disc flowers yellow or yellowish-orange (?), 3.5-4.5 mm. long; corolla 5-lobed, tubular, with a poorly defined throat, 2.2-2.4 mm. long, glandular-pubescent below; style branches filiform, hirtellous, more or less enrolled with indistinct stigmatic lines, 0.60-0.75 mm. long; achenes black, 1.3-1.5 mm. long, 0.3-0.4 mm. wide, sparsely pubescent with sharp, rigid hairs, more or less flattened radially, with



Distribution of *Oxypappus seemannii*.

3 to 4 indistinct ribs and lacking a callous margin; pappus of 3 to 5 subulate squamellae (the peripheral florets more often with 3 or 4, the inner florets with 5), the mid-rib extending as long, scabrous awns.

Chromosome number, $n = 10$ pairs.

DISTRIBUTION: West coast of Mexico from southern Sinaloa to Oaxaca (Fig. 1). Occurring in mountainous areas usually in pine or oak forests at 1200 to 2200 meters, occasionally at lower elevations in grassy areas of semi-deciduous forests (McVaugh & Koelz 697; etc.). Flowering from October to February.

The species, except for the rather remarkable collection at MICH, is poorly represented in herbaria, presumably because of its winter flowering period. It is quite variable in head size and in flower color, some of the labels noting the disk as yellow and the rays orange (Feddemma 2191, MICH) or else the disk orange and the rays yellow (Feddemma 2672, MICH). The populations which I have examined have had both rays

and disk yellow; most collectors record the flower colors as light or, rarely, bright yellow. In Jalisco, populations are found with relatively small heads (e.g. *Feddema* 2191, *Cronquist* 9777, *McVaugh* 20164, 21244) but intermediate- and large-headed collections have been made in the same area so, lacking other features, these populations are treated as part of the variation of the species.

REPRESENTATIVE SPECIMENS:

GUERRERO: District Mina: Chilacayote—Soledad, 29 Nov. 1939, *G. E. Hinton et al.* 14913 (MO, NY, US).

JALISCO: 10 miles s.w. of Autlan, 1 Nov. 1962, *A. Cronquist* 9777 (MICH, NY, TEX); s.w. of Talpa de Allende, Sierra de Cuale, 19-21 Nov. 1952, *R. McVaugh* 14294 (MICH, US); San Sabastian, Hacienda del Cura; 1425 m, 2 Jan. 1927, *Y. Mexia* 1350 (GH, MICH, MO, NY, UC, US); dry gravelly bluffs near Guadalajara, 30 Sep. 1889, *C. G. Pringle* 2373 (GH, MICH, MO, NY, UC, US); La Resolana, near El Corte, Colorado, 16 Nov. 1960 *Rzedowski* 15044 (Tex).

MICHOACAN: Coalcoman: Pine forest at Villa Victoria 15 Nov. 1938, *G. B. Hinton* 12573 (MICH, MO, NY, UC).

NAYARIT: Tepic, Feb. 1895, *F. H. Lamb* 598 (GH, MO, NY, US); 9 mi n. of Compostela, 12 Nov. 1959, *R. McVaugh & W. N. Koelz* 491 (MICH.).

SINALOA: 25 mi. w. of El Palmito, on Mex. Hwy. 40, 29 Jan. 1964, *D. Flyr* 141 (TEX).

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