- 8. Leaves narrowly linear or filiform, prevailingly cauline; western Chihuahua. P. junceus.
- 8. Leaves linear to spatulate, mostly basal, or basal and cauline; Veracruz to Central America.
 - 9. Middle phyllaries 1-1.5 mm wide, long-tapering or linear, 3-5 times as long as wide; acute inner phyllaries usually evidently prolonged beyond the middle and outer ones; Veracruz and Puebla.

 P. spathulatus var. spathulatus.
 - 9. Middle phyllaries 1.5-2.5 mm wide, prevailingly elliptic, 2.5-3.5 times as long as wide; inner phyllaries, except sometimes those resembling large paleae, not evidently prolonged; Chiapas and Guatemala.

 P. spathulatus var. chiapensis.

Pinaropappus diguetii McVaugh, sp. nov.

Herba perennis, caespitosa, glabra, subscaposa, caulibus striatis, pauciramosis, 30–60 cm altis; folia basalia ignota, caulinia linearia, integra, anguste acuta, 5–10 cm longa, 2–3.5 mm lata; folia superiora multo minora, bracteiformia, 2–10 mm longa; capitula solitaria, erecta, longe pedunculata; involucrum campanulatum, 1.5–2.2 cm longum; phyllaria 40–50, versus basin viridia, apicibus plumbeis sagittatis conspicuis; phyllaria media late elliptica vel rhomboidea, prope medium 3–4 mm lata, versus apicem obtusum vel subobtusum angustata; phyllariorum apices ciliato-fimbriati (pilis usque ad 0.5 mm longis), mox erosi et lacerati; bracteae sub involucrum 6–12, imbricatae, late ovatae vel irregulariter rotundae, 2–3 mm longae lataeque, basi carnosae, convexae, phyllariis exterioribus similes; flores circiter 70, albi, 2.2–2.5 cm longi, ligulis basi pilosis; antherae 5 mm longae; paleae scariosae, lanceolatae, longe attenuatae, ca 15 mm longae; achaenia matura ignota; pappus setis 11 mm longis capillaribus barbellatis, sordidis.

A deep-rooted perennial with multicipital caudex, the cauline leaves mostly in the lower third of the stem; the plant is easily recognized by the relatively large heads of white flowers, the broad elliptic phyllaries with ciliate lead-colored tips that are soon much frayed and broken, and the numerous broad imbricated accessory bracts with green and somewhat fleshy bases.

JALISCO: Near km 58, road from Zapotlanejo, ca 11 km west-northwest of Tototlán, elev. 1800 m, 24 Aug 1958, McVaugh 17262 (MICH, type); Sierra de Nayarit, partie occidentale, L. Diguet s.n. (P, MICH). NAYARIT: Between Santa Gertrudis and Santa Teresa, 8 Aug 1897, J. N. Rose 2094 (US).

Species in memoriam cel. Léon Diguet (1859–1926), cui debetur "Les Cactacées utiles du Mexique," nominavi.

Evidently akin to P. roseus, but differing from it by characters like those that distinguish P. spathulatus in eastern Mexico, P. diguetii is restricted as far as known to the high grasslands and adjacent mountains in northern Jalisco and Nayarit. It resembles P. roseus var. foliosus in habit and vegetative characters, and in the relatively large heads with broad elliptic to rhombic-obovate or even suborbicular phyllaries. P. diguetii shows to the greatest extent of any Pinaropappus the combination of stout stem with numerous cauline leaves; large and many-flowered heads; broad phyllaries that are widest at or near the middle, and green or whitish (not purple) below the discolored tips; outer phyllaries numerous and closely imbricated, pale and fleshy or convex at base, and broadly erose or lacerate at the broad tips. The flowers are white, the tips of the principal phyllaries are ciliate-fimbriate, and the discolored areas near the middle of the phyllaries tend to be lead color rather than brown. In P. roseus the flowers are never white as far as I know, the tips of the phyllaries are closely and coarsely short strigose but not at all or only very sparingly ciliate, the discolored tips of the phyllaries are usually pale or dark brown (sometimes with a narrow transverse black zone), and the phyllaries are usually purple or purplish below the discolored tips and not at all or scarcely thickened at base (except sometimes in var. foliosus).

Although the differences between *P. roseus* and *P. diguetii* are readily seen and demonstrated, the separation of the two taxa remains a somewhat subjective matter. Experimental investigation of the relationships between *P. roseus* var. *foliosus*, *P. diguetii*, and *P. roseus* var. *roseus*, might be most rewarding.

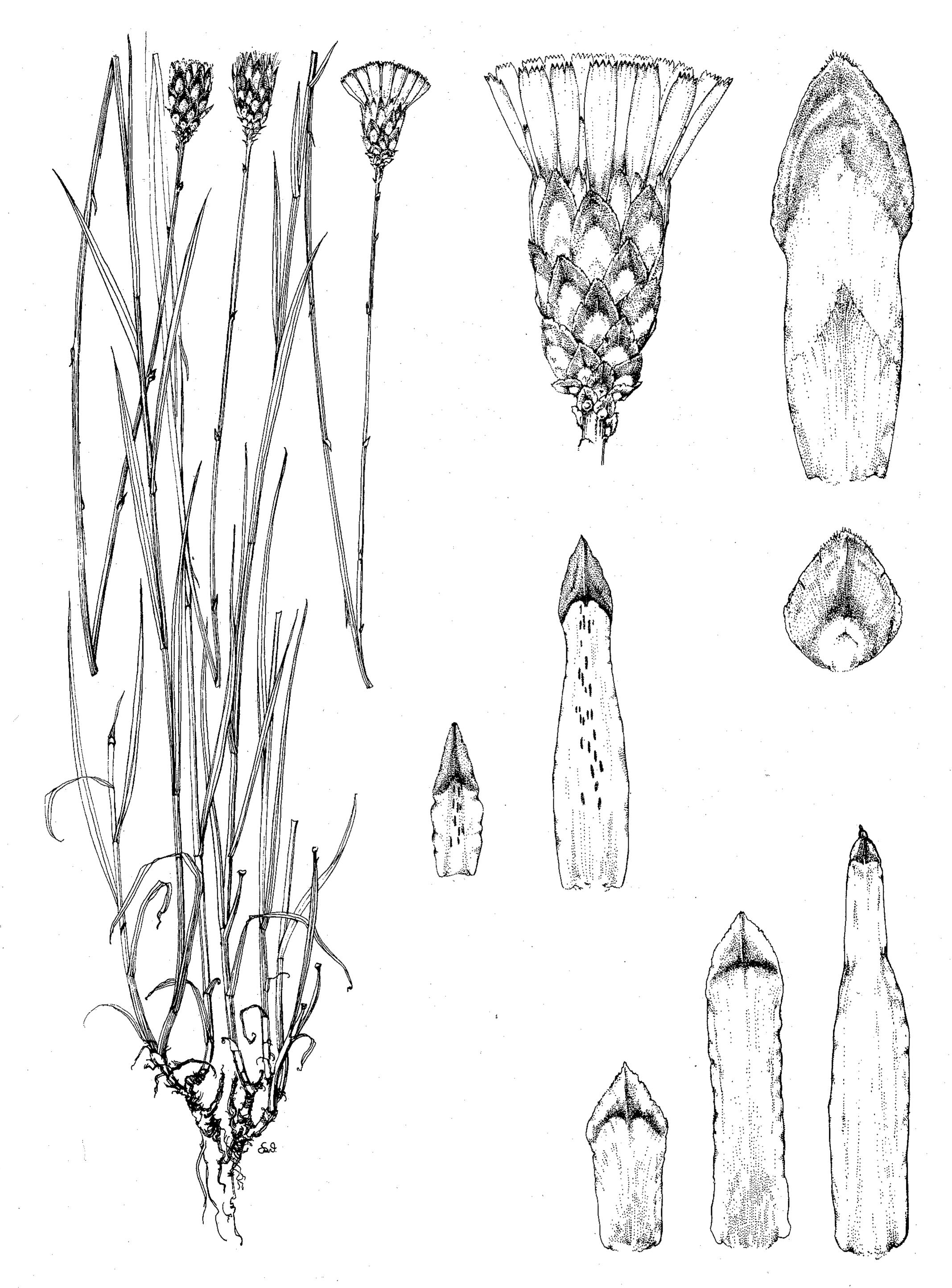


FIG. 4. Pinaropappus diguetii and P. roseus. Flowering plant, X½ (McVaugh 17262, type of P. diguetii). Flowering head of P. diguetii (type), X½. Middle and outer phyllaries of P. diguetii (type, upper right), P. roseus var. maculatus (Shreve 9395, type, at center), and P. roseus var. roseus (Jalisco, McVaugh 16847, lower right), all X5.