

STUDIES IN THE SENECEONEAE (ASTERACEAE). I.

A NEW GENUS, PITTOCAULON

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A review of the Senecioneae has shown that a large group prominent in Mexico and Central America is a distinctive element in the Tribe. Though most of the species are presently placed in the genus Senecio the relationship is closer to those genera often referred to as Cacalioid. One of the most distinctive groups within that element is a series of five deciduous leaved, thick-stemmed, resinous species recognized here as a new genus, Pittocaulon.

The species of Pittocaulon have the habit of thickened seasonally leafless stems seen in many rather unrelated Mexican plants such as Cnidocolus of the Euphorbiaceae and Dyscrotanthamnus of the Heliantheae-Helenieae complex. The abruptly terminal corymbose inflorescences from the leafless stems are particularly reminiscent of Pachythamnus in the Eupatorieae. Closest relationships of Pittocaulon seem to be with other species of the section Terminales of Senecio with which the species have been placed by Greenman (1901). The related species differ by their more persistent leaves having pinnate venation, their less developed stem cortex, their more deeply divided corollas and the more developed laticifers in the middle of the corolla lobes. The shape of the leaves is more like some members of the section Palmatinervii of Senecio but those have the leaves more persistent, the inflorescence less abrupt and the stems without resin ducts. Pittocaulon differs from typical Senecio macroscopically in its prominently leafy-stemmed habit and microscopically by the uniformly sized cells of the anther collar and the fused stigmatic lines of the style. The name of the new genus is taken from the distinctive resinous stems.

Pittocaulon H. Robinson & R. D. Brettell, genus novum
Asteracearum (Senecioneae). Plantae erectae arborescentes. Caules incrassati, canales resiniferi corticei biseriati. Folia alternata per anthesin nulla, laminis palmatis. Inflorescentiae terminales abruptae corymbosae vel subumbellatae. Flores radii et disci prominentes flavi. Corollae breviter lobatae, canalibus resiniferis intermediis brevibus vel nullis; filamenta in parte superiore non inflata; cellulae exotheciales quadratae vel longiores, parietibus lateralibus noduliferis; lineae stigmaticae connatae.

Species typica: Cineraria praecox Cav.

Key to the species of Pittocaulon

1. Bases of petioles completely deciduous, scars on stems of previous year flush with stem; 8 phyllaries 2
1. Bases of petioles partially persistent on stems of previous year; 10-20 phyllaries 3
2. Upper part of stem below inflorescence glabrous; inflorescence with a short central stalk; disk flowers 15-18
P. praecox
2. Upper part of stem with dense short brownish pubescence; inflorescence with more prominent central stalk; disk flowers 6-7
P. velatum
3. Inflorescence corymbose, pedicels much branched; corollas 8-9 mm long
P. hintonii
3. Inflorescence subumbellate, pedicels unbranched; corollas 11-16 mm long 4
4. Bracts at base of inflorescence large and covered with prominent wool; pappus setae with attenuate tips
P. bombycophole
4. Bracts at base of inflorescence small with only slight pubescence; pappus setae often with rather clavate tips
P. filare

The five species of the genus are as follows including one previously undescribed.

Pittocaulon bombycophole (Bullock) H. Robinson & R. D. Brettell, comb. nov. Senecio bombycophilis Bullock in Hook. Ic. Pl. 34: t. 3343 (1937).

Pittocaulon filare (McVaugh) H. Robinson & R. D. Brettell, comb. nov. Senecio filaris McVaugh, Contr. Univ. Mich. Herb. 9(4): 470. 1972. Additional specimen seen: MEXICO: Colima. November 1961. Gentry, Barclay, and Arquelles 1956! (US!).

Pittocaulon hintonii H. Robinson & R. D. Brettell, sp. nov.
Plantae 3 m altae paucе remosae. Caules usque ad 1.5 cm lati ad apicem parum albo-tomentosi; folia decidua, petiolis basi foliorum recentium breviter persistentibus; folia sub inflorescentiis linearia 1.0-1.5 cm longa dense albo-tomentosa ad apicem minute lobata. Inflorescentiae terminales abrupte tenuiores

corymbosae; pedicellis ramosis glabris 1-3 cm longis. Capitula late campanulata 1.0-1.2 cm alta ca 1.3 cm lata; bracteae subinvolutae paucae lineares 1-4 mm longae; squarriae involucri 12-14 uniseriatae anguate oblongae ca. 8 mm longae 1.5-2.0 mm latae glabrae; receptacula plana glabra. Radii 7-9, tubis angustis 4-5 mm longis, limbis ellipticis ca. 10 mm longis usque ad 5 mm latis flavis; flores disci ca. 32; corollae anguste infundibulares flavae 8-9 mm longae, lobis 1 mm longis 2-2½ longioribus quam latioribus; thecae antherarum ca. 2.5 mm longae, cellulis exothecialibus breviter oblongis, parietibus lateralibus nodiferis. Achaenia cylindrica glabra 3.5 mm longa, costis ca. 10; carpodia subcylindrica, cellulis ca. 12 seriatis quadratis vel brevioribus; pappus facile deciduus plerumque biseriatus, setis ad apicem clavatis, cellulis apicalibus magnis. Grana pollinis ca. 30-40µ diam.

Type: MEXICO: Michoacan: District of Coalcoman, March 12, 1941. G.B. Hinton 15770 (Holotype US!).

The most distinctive features of the species are: persistent leaf bases, branching pedicels, and enlarged pappus tips.

Pittocaulon praecox (Cav.) H. Robinson & R. D. Brettell, comb. nov. Cineraria praecox Cav., Icon. Pl. 3: 23. 1794.

Pittocaulon velatum (Greenm.) H. Robinson & R. D. Brettell, comb. nov. Senecio velatus Greenm. in Ann. Missouri Bot. Gard. 1:280. 1914. The concept includes S. morelensis Miranda (1941) which was distinguished by its more glabrous leaves. Specimens have been seen from the states of: Guerrero, Jalisco, Mexico, Nayarit, Oaxaca and Zacatecas.

References

- Greenman, J. 1902. Monographie de nord- und centralamerikanischen Arten der Gattung Senecio. Eng. Bot. Jahrb. 32: 1-33.
- Miranda, F. 1941. Estudios sobre la vegetacion de Mexico. I. Anal. Inst. Biol. [Mex.] 12: 569-614.