

**NEW SPECIES AND NEW RECORDS IN SYMPHYOPAPPUS
(EUPATORIEAE: ASTERACEAE)**

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ABSTRACT

Symphypappus decemflorus is described from Brazil with ten flowers in a head and *S. apurimacensis* is described as new from Peru, the first record for the genus outside of Brazil.

KEY WORDS: *Symphypappus*, new species, Peru, Brazil.

The genus *Symphypappus* was established by Turczaninow in 1848 for a single Brazilian species with a pappus that tended to detach as a unit with the upper callus of the achene. The genus was maintained and expanded by B.L. Robinson, in his key to the genera (1913), and other works, in spite of the fact that the distinctions from the then accepted broad concept of *Eupatorium* L. were very weak. Only Steyermark (1953) actually synonymized the genus with *Eupatorium*.

Symphypappus was resurrected by King and Robinson (1971) and more carefully defined by King and Robinson (1978, 1987). Robinson (2002) added a species with uncinat tips on the pappus bristles. As of the latter date, all species of the genus were restricted to Brazil, and all species that were retained in the genus were like other Disynaphiinae in having 5 florets in a head. The two species described below include a species with ten florets in the heads and extend the geographic range of the genus to Peru.

***Symphypappus decemflorus* H. Rob., sp. nov. TYPE: BRAZIL.**

Minas Gerais: Serra do Cabral entre o Rio Embaiassaia e o Rio Preto (Mun. Joaquim Felício), 7 Jun 2004, campo rupestre, solo arenoso, arbusto 2 m, untuoso ao tacto, capitulo alvo, G. Hatschbach, M. Hatschbach & O.S. Ribas 77515 (holotype MBM, isotype US). (Fig. 1).



Fig. 1. *Symphyopappus decemflorus* H. Robinson, isotype, United States National Herbarium (US).

A speciebus congeneribus in floribus 10 in capitulo differt.

Dark brownish-green, glutinous shrubs ca. 2 m tall, moderately branched; stems dark reddish, terete, with small glandular dots, without nonglandular hairs; branches slender, internodes mostly 1.5-2.0 cm long. Leaves opposite below, subopposite or alternate above, petioles 0.4-1.7 cm long; blades lanceolate, upper leaves mostly 3.5-5.0 cm long, 0.5-1.2 cm wide, base short-acute, margins closely serrulate in distal $\frac{3}{4}$, apex caudate-acuminate, both surfaces dark, with dense glandular dots, midrib prominent on both surfaces, 2 pairs of strongly ascending secondaries, 1 from near base, 1 near middle. Inflorescences terminal on leafy stems, rather laxly corymbiform, with slender ascending branches subopposite to alternate; lower bracts foliiform, to 2.5 cm long, distal bracteoles linear, 2-9 mm long; peduncles 2-9 mm long. Heads broadly campanulate, ca. 11 mm high, 6-8 mm wide; involucre bracts subimbricate, ca. 18, in ca. 5 unequal series, 1 or 2 at base linear and dark, others broadly ovate to oblong, 1.5-8.0 mm long, 1.5-2.0 mm wide, margins scarious, apices rounded, outside with many, median, pale striations and dark grooves, distally below tip with patch of small glandular dots; receptacle without hairs or spines. Florets 10 in a head; corollas white, cylindrical, ca. 6.5 mm long, mostly glabrous, basal tube ca. 1.5 mm long, throat ca. 4 mm long, lobes ca. 0.5 mm long, with small glandular dots outside; anther collars ca. 0.3 mm long; thecae reddish, ca. 2.5 mm long; apical appendages rather oblong, ca. 0.45 mm long, 0.27 mm wide, slightly emarginate at tip. Achenes ca. 3.5 mm long, body glabrous, pale apical callus easily detached, with many distorted setulae, micropunctations in regular transverse rows; carpodium pale, with few differentiated cells; pappus of 30-35 white bristles, 3.0-5.5 mm long, gradually narrowed from base. Pollen grains ca. 25 μm in diam.

Symphyopappus decemflorus is presently known only from the type collection. The slender flexuous branches, caudate-acuminate leaves, and the setulae on the upper callus of the achene are rather distinctive, but the heads with 10 florets are unique in the genus and in the subtribe Disynaphiinae. The subtribe otherwise consistently has 5 florets in the heads. There is no reason to doubt the present new species is a member of the genus, it has the transversely aligned

micropunctations of the achene wall, and has the upper callus of the achene detaching as a unit with the pappus. The 10-flowered condition was previously claimed for a species of *Symphypappus*, *S. catharinensis*. (King and Robinson, 1974), but that species was very different in details, later proving to be a *Neocabreria* in the subtribe Critoniinae, with hairs inside of the corolla (King and Robinson 1978).

Symphypappus apurimacensis H. Rob., **sp. nov.** TYPE: PERU. Apurimac: Abancay, Santurni Noe Ampay, 2800 m, 23 Jul 1995, A. Tupayachi & W. Galerno 2860 (holotype US, isotype CUZ). (Fig. 2).

Dark brownish-green glutinous shrubs ca. 1? m tall, moderately branched; stems terete, densely gland-dotted, without nonglandular hairs; distal internodes 1.8-2.5 cm long. Leaves opposite, petioles 0.5-1.5 cm long, grading into lamina; blade narrowly ovate to lanceolate, 4.5-11.0 cm long, 1.3-2.8 cm wide, base acuminate, margins serrate with 8-20 teeth, apex narrowly acute, upper surface dark, densely dotted with small glands, lower surface somewhat paler, with more obvious numerous glandular dots; midrib prominent on both surfaces, subtrineriate with stronger more ascending secondary veins 0.7-2.0 cm above base. Inflorescence densely corymbiform, with compact corymbiform branches, with foliiform bracts below, opposite or alternate, 2.0-3.5 cm long, 0.3-0.4 cm wide, distal bracteoles alternate, linear to filiform, 3-5 mm long; branches strongly ascending, uppermost at 20-30° angles; peduncles 0-2 mm long, without nonglandular hairs. Heads cylindrical, 8-9 mm high, 2-3 mm wide; involucre bracts yellowish with darker lines and tips, subimbricate, oblong to narrowly oblong, ca. 12, in 4-5 unequal series, 2-7 mm long, margins scarious, apices short-acute, outside with numerous small glands, bicostate; receptacle glabrous. Florets 5 in a head; corollas white, very narrowly funnelform, ca. 6.5 mm long, basal tube ca. 2 mm long, with numerous small glands outside, throat ca. 3.5 mm long, glabrous, lobes ca. 0.7 mm long, glabrous; anther collars ca. 0.3 mm long; thecae pale reddish, ca. 2 mm long; apical appendage rather oblong, ca. 0.35 mm long, 0.23 mm wide, slightly emarginate at tip. Achenes ca. 2.5 mm long, without setulae, upper callus persistent,



Fig. 2. *Symphyopappus apurimacensis* H. Robinson, holotype, United States National Herbarium (US).

micropunctations in walls in rather regular transverse lines; carpodium poorly developed; pappus of ca. 23 sordid bristles, 4-6 mm long, gradually narrowed from base. Pollen grains ca. 25 μ m in diam.

The height of the plant and branching are uncertain since only a branch tip is available.

Symphyopappus apurimacensis is known only from the type collection from southern Peru, well beyond the geographical range of all other members of the genus. As to relationships, the subimbricate involucre bracts in many unequal series are most similar to those of *S. itatiayensis* (Hieron.) R.M. King & H. Rob. and *S. lymansmithii* B.L. Rob., but these two Brazilian species both have rounded tips on the involucre bracts and a white rather than sordid pappus. The new species must trace its origins back to eastern Brasil where the genus and subtribe are concentrated, but the introduction to Peru was apparently long enough ago to allow speciation.

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