

SUBMERGENCE OF THE GENERA CATEROTHAMNUS AND OAXACANA
INTO HOFMEISTERIA (EUPATORIEAE, ASTERACEAE)

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The monotypic genera Oaxacana and Caterothamnus are interesting members of the tribe Eupatorieae since both possess well-developed pales on the receptacle and both relate to the well-known, widespread, genus Hofmeisteria.

Oaxacana was proposed by B. L. Robinson and Greenman in 1895 to accomodate a single, poorly known, bluff-dwelling species, O. malvaefolia from the canyons of northern Oaxaca. They compared the plant to Alomia and Trichocoronis, but its proper taxonomic position was not appreciated until the work of King (1972) who compared Oaxacana with his newly described genus Carterothamnus R. M. King. Robinson and King (1977) subsequently accepted both of the latter, placing them as the only genera of their "Oaxacana group" of the tribe Eupatorieae, next to the "Hofmeisteria group" which contained the single genus Hofmeisteria (from which several of its classically-conceived elements were removed and posited elsewhere; King and Robinson, 1966).

In a forth-coming treatment of the Asteraceae of Mexico (Turner & Nesom, in prep.), we intend to treat the genera Carterothamnus and Oaxacana as but chaffy members of the genus Hofmeisteria, and so propose the appropriate combinations herein.

Indeed, after a study of all members of the Hofmeisteria - Carterothamnus - Oaxacana complex (sensu King and Robinson) I can not find a single convincing character, or group of characters, that might lead to the retention of the latter two as distinct genera. Receptacular pales, which are emphasized in their treatment, occur sporadically in Hofmeisteria, and nearly every other character possessed by the two paleaceous genera are also found there in one form or the other. All of the taxa, except, perhaps, H. urenifolia, are more-or-less xeric members which occupy bluffs or saline seaward habitats. Of the three taxa, Oaxacana is the most distinct, occurring in a region remote from its congeners and possessing nearly epappose, flattened, achenes. Phyletically, it is perhaps best distinguished by the enlarged, sclerose, base of its stylar shaft. However, within Hofmeisteria and Carterothamnus specialization in the base of the stylar shaft varies from zilch (in H. urenifolia) to markedly nodose (in Carterothamnus) to a

lesser version of the Oaxacana-type (in H. malvaefolia).

King and Robinson (1970) have briefly discussed some of the differences that are said to distinguish between Oaxacana and Carterothamnus. They emphasize the following:

Oaxacana

1. achenes flattened
2. corolla glandular-pubescent
3. pappus obsolete
4. weakly-expanded style apices
5. firm collar-cells
6. anther-appendages longer, obtuse

Carterothamnus

1. achenes symmetrical
2. corolla glabrous
3. pappus well-developed
4. knob-like style apices
5. weak or lax collar-cells
6. appendages shorter, truncate

Nevertheless, they prefaced the above observations by the following, "One further point of great interest is that these [two] genera seem to be very closely related to each other."

In my opinion the Hofmeisteria-Carterothamnus-Oaxaca complex is a monophyletic assemblage, the basal members of which are Carterothamnus and Oaxacana, both of which have retained receptacular chaff, presumably a primitive or relic-trait in the Asteraceae generally. Appropriate name changes to accomodate these views follow.

HOFMEISTERIA MALVAEFOLIA (B.L. Rob. & Greenm.) B. Turner, comb. nov.

Based upon Oaxacana malvaefolia B.L. Rob. & Greenm., Amer. J. Sci. 50:151.1895.

HOFMEISTERIA ANOMALOAETA (R.M. King) B. Turner, comb. nov.

Based upon Carterothamnus anomalochaeta R.M. King, Rhodora 69:45.1967.

LITERATURE CITED

King, R.M. 1967. Studies in the Eupatorieae (Compositae) I-III. 69:35-47.

_____. 1972. Studies in the Compositae-Eupatorieae. XV. Rhodora 72:100-105.

King, R.M. and H. Robinson. 1966. Generic limitations in the Hofmeisteria complex (Compositae-Eupatorieae). Phytologia 12:465-476.

_____. 1970. Studies in the Eupatorieae (Compositae). XIV. Phytologia 19:301-302.



Turner, B. L. 1987. "Submergence of the genera *Carterothamnus* and *Oaxacania* into *Hofmeisteria* (Eupatorieae, Asteraceae)." *Phytologia* 63, 415–416. <https://doi.org/10.5962/bhl.part.19976>.

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