

STUDIES IN THE EUPATORIEAE (COMPOSITAE). XXXIII.

THE GENUS GYPTIS

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Gyptis of Cassini is the oldest name for a group of plants which have often mistakenly been placed in the genus Conoclinium. These plants which occur in Brazil and adjacent areas have flat receptacles, 4-26 flowers per head, thick densely setose achenes, very prominent papillae on the inside and outside surface of the corolla lobes and many hairs on the outside surface of the corolla lobes. The plants with their rather long scapose inflorescences, compact clusters of heads and often bluish or lavender flowers do resemble Conoclinium (King & Robinson, 1970) and the related Brazilian genus, Barrosoa (King & Robinson, 1971a). These three genera along with Lourteigia (1971b) of the northern Andes, share papillose outer surfaces of the corolla and highly ornamented walls of the anther collar cells. There is every reason to place them together in a group which we would refer to as Gyptoid. Only striking differences in pappus structure and slight differences in carpodium structure separate the related group which we refer to as Ageratoid.

One feature of the achene of Gyptis may be more the result of its shape than of relationship. The achenes are very broad and the minute punctations on the lateral surfaces are usually arranged in prominent transverse rows. Similar rows of punctations have been observed in other groups such as Disynaphia which are not considered closely related.

In G. artemisifolia, we have seen a few papillae on the base of the style which might suggest some relationship to the Eupatorioids. Distinctions between the groups are clear, however. One species often associated with Gyptis, Eupatorium oblongifolium Sch.-Bip. ex Baker is definitely a Stomatanthes (Robinson, 1970) in the Eupatorioid series having non-papillose corolla lobes and occasional stomates.

Gyptis (Cassini) Cassini, Dict. Sci. Nat. 16: 10. 1820.

Perennial herbs usually with tuberous tap roots. Stems erect, sparingly branched. Leaves opposite often becoming alternate above, ovate to bipinnatifid, serrulate to deeply cleft. Inflorescence usually densely corymbose or cymose. Involucre of 16-25 lanceolate to linear truncate scales in 2-3 series; receptacle flat, glabrous. Head with 4-26 flowers, corollas narrowly funnelform, strongly papillose on both surfaces of lobes, hairs and often glands on outer surface of lobes,

cells of tube narrow with sinuous walls; anther collar with mostly quadrate or short rectangular cells below, walls with transverse or oblique thickened bands. Anther appendages elongate with rather large cells; style base not enlarged, style appendages with distinct usually pointed papillae, appendages sometimes slightly enlarged; achenes prismatic, 5-costate, costae and lateral surfaces densely setiferous, minute punctations in rather regular transverse bands. Carpodia very short, of very quadrate rather thin-walled cells. Pappus of many setae, apical cells of setae usually subacute or pointed.

Type species: Gyptis pinnatifida Cassini
Chromosome number not determined.

Key to species of Gyptis

1. Style branches with rather broad short-papillose appendages
G. commersonii
1. Style branches slender with pointed long papillae.
 2. Leaves pinnately-bipinnately dissected.
 3. Plants with few or no branches above the base, inflorescence usually of one or a few rather dense corymbs or cymes
G. pinnatifida
 3. Plants with many axillary branches, inflorescence rather diffuse
G. artemisifolia
 2. Leaves ovate with crenate or serrate margins.
 4. Phyllaries with unmodified tips
G. inornata
 4. Phyllaries with densely pubescent and often much broadened tips.
 5. Leaves nearly glabrous, with some short hairs near the margin
G. alternifolia
 5. Leaves densely pubescent.
 6. Leaves with short pubescence, blades elliptical-lanceolate
G. vernoniopsis
 6. Leaves coarsely long-pubescent, blades often rhomboid-ovate
G. lanigera

Our studies indicate that the genus contains the following seven species.

Gyptis alternifolia (Schultz-Bip. ex Baker) R.M.King & H.Robinson, comb. nov. Eupatorium alternifolium Schultz-Bip. ex Baker in Mart., Fl. Bras. 6(2): 333. 1876. Argentina, Brazil, Paraguay.

Gyptis artemisifolia (Griseb. in Goett.) R.M.King & H.Robinson, comb. nov. Eupatorium artemisifolium Griseb. in Goett. Abh. 24: 171. 1879. Argentina.

Gyptis commersonii Cassini, Dict. Sci. Nat. 20: 178. 1821.

Eupatorium bacleanum A.P.Decandolle, Prodr. 5: 157. 1836.
Argentina, Brazil, Uruguay.

Gyptis inornata R.M.King & H.Robinson, sp. nov.

G. lanigerae Hook. & Arn. affinis sed involucri squamae
inornatae

Brazil, Parana: Jaguariahyva, Dusen 14938 Holotype US!
Dusen 11679 US

The simple narrowly acute involucrel bracts are very distinct from all the other species of the genus. In other characters, the species is very close to the forms of G. lanigera having narrowly oblong ovate leaf blades and rather spreading violet colored cymose to corymbose inflorescences.

Gyptis lanigera (Hook. & Arn.) R.M.King & H.Robinson, comb. nov.

Eupatorium lanigerium Hook. & Arn. in Hook., Comp. Bot. Mag.
1: 242. 1835. Argentina, Brazil, Paraguay.

Gyptis pinnatifida Cassini, Dict. Sc. Nat. 20: 178. 1821.

Eupatorium ceratophyllum Hook. & Arn. in Hook., Comp. Bot.
Mag. 1: 240. 1835. Eupatorium tanacetifolium Gill. ex Hook.
& Arn. in Hook., Comp. Bot. Mag. 1: 242. 1835. Eupatorium
erodiifolium A.P.Decandolle, Prodr. 5: 158. 1836. Gyptis
peucedanifolia Schultz-Bip. ex Baker, in Mart., Fl. Bras.
6(2): 333. 1876. Argentina, Brazil, Uruguay.

Gyptis vernoniopsis (Schultz-Bip. ex Baker) R.M.King & H.Robinson,

comb. nov. Eupatorium vernoniopsis Schultz-Bip. ex Baker in
Mart., Fl. Bras. 6(2): 334. 1876. Eupatorium aureoviride
Chod., in Bull. Herb. Boiss. Ser. II (2): 309. 1902.
Argentina, Brazil, Paraguay, Uruguay.

Species excluded

Gyptis baccharoides Schultz-Bip. ex Baker = Symphypappus
viscosus Schultz -Bip. ex Baker.

Gyptis oblongifolia Schultz-Bip. ex Baker = Stomatantes
oblongifolius (Schultz-Bip. ex Baker) H.Robinson.

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