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A New Species of *Catolesia* (Asteraceae, Eupatorieae) from Bahia, Brazil

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ABSTRACT. *Catolesia* D. J. N. Hind is an endemic, previously monotypic genus (Asteraceae, Eupatorieae) from the campos rupestres of Bahia, Brazil. A second species for the genus, *C. huperzioides* Roque, H. Robinson & A. A. Conceição, is recognized and described here. It is distinguished from *C. mentiens* D. J. N. Hind principally by the well-organized terminal synflorescence composed of (7)8 to 12 capitula, of which one is central and larger, its shorter leaves (4–5 mm vs. 7–19 mm in *C. mentiens*), its white corolla (vs. pink), and the pappus (a brief crown to 0.1 mm vs. mostly absent). *Catolesia huperzioides* is known only from the municipality of Mucugê and is probably endemic to the Chapada Diamantina Region of Bahia, Brazil.

Key words: Brazil, *Catolesia*, Compositae, Gyptidinae, IUCN Red List.

Catolesia D. J. N. Hind was recently described (Hind, 2000b) as a monotypic genus for the tribe Eupatorieae (Asteraceae) based on the taxon *C. mentiens* D. J. N. Hind. The genus exhibited obvious affinities with the subtribe Gyptidinae, especially in its spirally inserted leaves, the biseriate and not imbricate involucre, the paleaceous receptacle, the narrowly funnelliform corolla tubes, and the eppapose cypsela with more or less procurved upper margins to the carpopodium (Hind, 2000b).

The subtribe Gyptidinae of the tribe Eupatorieae is distributed mostly in eastern South America, with its greatest taxonomic diversity in the campos rupestres of Brazil. Of the 29 genera and ca. 135 species in the subtribe, 13 genera are exclusively Brazilian and nine are restricted to the state of Bahia (Hind & Robinson, 2007).

The taxonomy of the Gyptidinae has recently been discussed by Hind (1999, 2000a, b; Hind & Robinson,

2007), and three informal groups were recognized within the subtribe. *Catolesia* falls clearly into Hind's second group with "many-flowered capitula, densely spirally inserted leaves and many with variously defective pappus setae" (2000b: 944). According to Hind, *Catolesia* and *Agrianthus* Martius ex DC. are the only genera in the subtribe that possess paleaceous receptacles. However, *Agrianthus* differs by its pubescent stems, scale-like leaves that are densely prominently veined and without any hint of succulence, (2)3- to 5-seriate phyllaries, clavate style branches, and setiform pappus.

The new taxon is described and illustrated and ecological information is provided. The data presented here are based on literature revisions and an analysis of *Catolesia* collections and types available at ALCB, HUEFS, and US. Morphological studies using an Olympus SZH10 stereomicroscope (Olympus, Tokyo, Japan) were carried out on dried material.

Catolesia huperzioides Roque, H. Robinson & A. A. Conceição, sp. nov. TYPE: Brazil. Bahia: Mpio. Mucugê, Chapada Diamantina, Serra do Esbarrancado, 12°43'S, 41°30'W, 5 Sep. 2006, A. A. Conceição & P. D. Carvalho 1804 (holotype, HUEFS). Figures 1, 2.

Haec species a *Catolesia mentiente* D. J. N. Hind synflorescentia terminali ex capitulis aggregatis sessilibus bifimbriis constante, foliis brevioribus (4–5 mm longis), corollis albis et pappo breviter coroniformi ca. 0.1 mm longo semper praesente distincta.

Candelabriform shrub 0.6–0.9 m; stems 0.4–1 cm diam., glabrous, branched from base, 6 to 8 branches pseudowhorled beneath old synflorescences, densely leafy in upper half, leaf blades lost on older stem but sheaths persistent. Leaves densely spiraled, imbric-

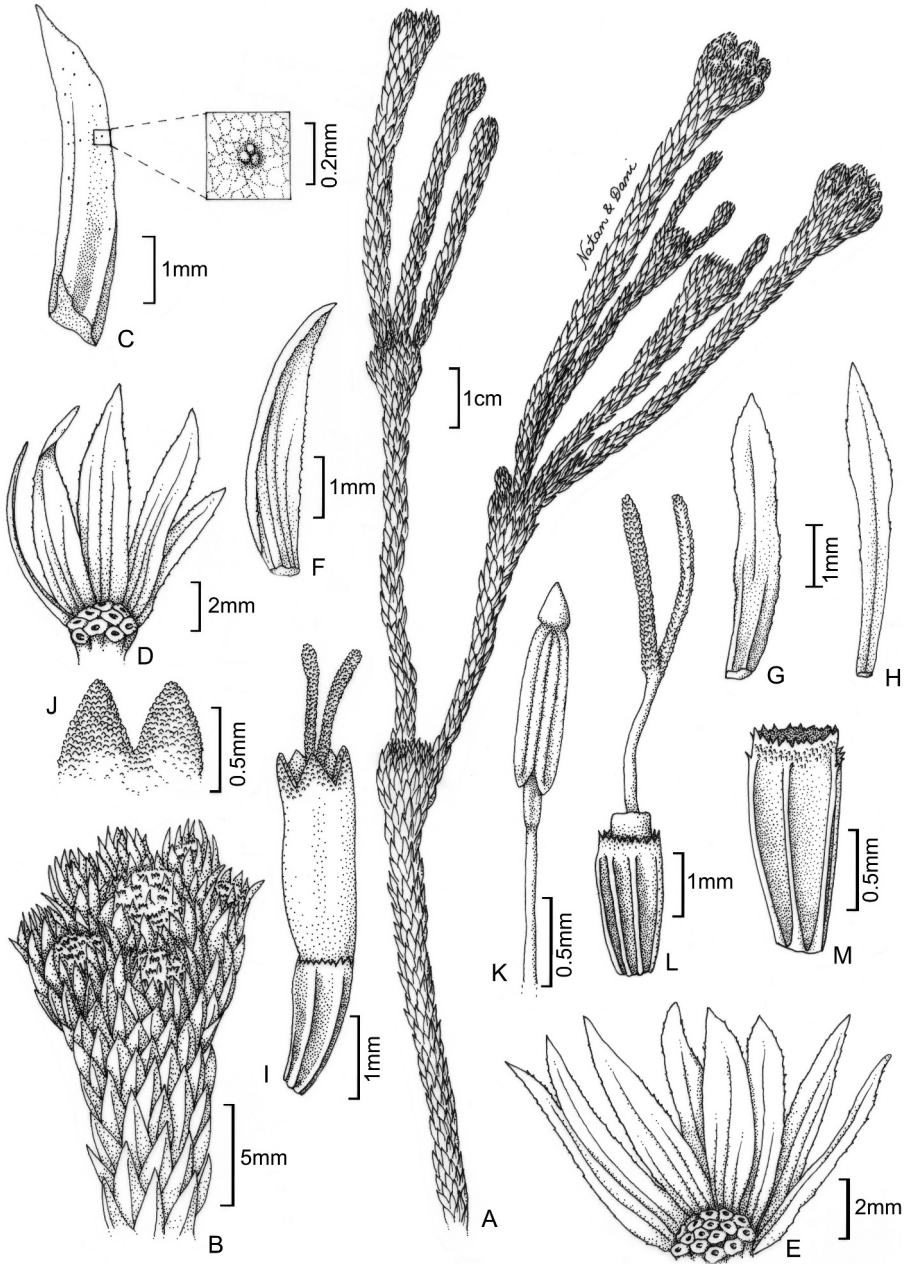


Figure 1. *Catolesia hyperzioides* Roque, H. Robinson & A. A. Conceição. —A. Fertile habit. —B. Synflorescence on the apex of the branch showing eight capitula, with the central one significantly larger. —C. Detail for the lanceolate, somewhat succulent leaf with a cluster of three glandular dots shown at right. —D. Receptacle and involucre of a peripheral capitulum. —E. Receptacle and involucre of the central capitulum. —F. Outer phyllary. —G. Inner phyllary. —H. Palea. —I. Floret. —J. Papillose apices of two corolla lobes. —K. Stamen, showing appendage and collar. —L. Floret dissected to show the nectary surrounding the stylar base. —M. Cypselus with a short dentate to laciniate coroniform pappus. Drawn from the holotype A. A. Conceição & P. D. Carvalho 1804 (HUEFS).

cate, sessile, simple, concolorous, lanceolate, slightly succulent in appearance, blades $4-5 \times 0.7-0.9$ mm, adaxially glabrous and pitted with 1 or an assemblage of glandular dots, abaxially glabrous, midrib carinate

in both sides, blade margins in distal half undulate, apices acute, pungent and incurved. Synflorescences terminal, corymbose, more than 200 in a single plant, each 0.5–1 cm, 1–1.5 cm diam., hemispheric, sur-

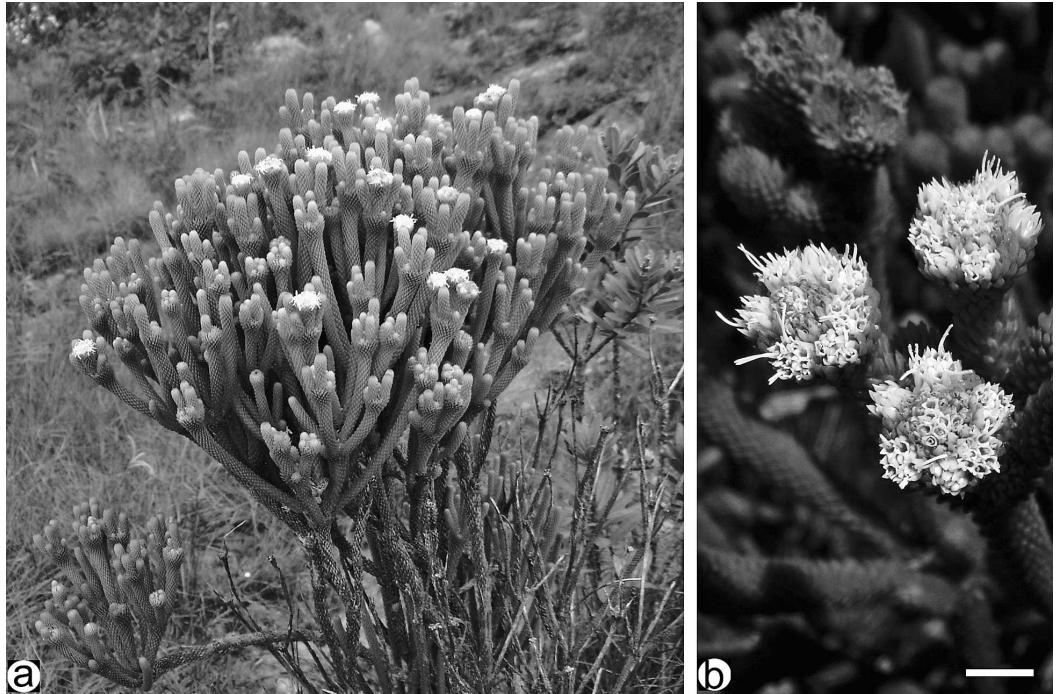


Figure 2. *Catolesia hyperzioides* Roque, H. Robinson & A. A. Conceição. —A. Photo showing candelabriform habit and the strongly imbricate leaves. —B. Detail for three anthesal synflorescences revealing one larger central capitulum surrounded by ca. seven peripheral capitula. Photos by Abel A. Conceição taken at Mucugê, Bahia. Scale bar = 0.5 cm.

rounded by leaves subequal to the capitula; each synflorescence with (7)8 to 12 capitula, with 1 capitulum central and larger by its width and additional florets. Capitula homogamous, discoid, cylindric, sessile, the peripheral capitula 6–7 mm, 2–3 mm diam., the central capitulum 6–7 mm, ca. 5 mm diam.; bracteoles 3 to 5 per capitulum, leaflike, thick, linear, 4–5 × ca. 0.5 mm, outer surface and margins glandular-punctate in the epidermal pits, margins entire, ciliate, apices acute, mucronate. Involucre campanulate, phyllaries biseriate, cream, 17 to 20, distant, subequal, outer phyllaries 8 to 10, persistent, slightly keeled, with base inflated, lanceolate, 4–4.5 × ca. 0.5 mm, glabrous, margins slightly

sinuate with stipitate-glandular cilia, apices acute, inner phyllaries 9 to 10, easily falling, slightly keeled, with base inflated, lanceolate, ca. 5 × 0.8–1.2 mm, margins with stipitate-glandular cilia, apices acute; receptacle convex, alveolate, glabrous, paleaceous, paleae 4 to 6, scattered among flowers, deciduous, slightly keeled, with base inflated, linear to spatulate, 4–5 × 0.5–0.7 mm, glabrous, margins with stipitate-glandular cilia, apices acute. Flowers bisexual, ca. 10 in peripheral capitula and 26 to 30 in central capitulum, 4.5–5.5 mm, corolla white, actinomorphic, 2.5–3 × ca. 1 mm, glabrous, corolla lobes 5, narrowly triangular, ca. 0.5 mm, papillose outside, margins involute; anther cylinder included within corolla

Table 1. Morphological differences between *Catolesia hyperzioides* Roque, H. Robinson & A. A. Conceição and *C. mentiens*.

Characters	<i>C. mentiens</i>	<i>C. hyperzioides</i>
Leaf shape	narrowly oblanceolate	lanceolate
Leaf size (mm)	7–19 × 1.1–2.1	4–5 × 0.7–0.9
Capitula	in loose groups at branch apices, capitula similarly sized, pedunculate	a synflorescence with (7)8 to 12 congested at branch apices, the central capitulum notably larger, all capitula sessile
Florets	ca. 20, corolla pink	ca. 10 in peripheral capitula and 26 to 30 in central capitulum, corolla white
Pappus	absent or very rarely with minute abortive setae on apical callus	short dentate to lacinate crown ca. 0.1 mm long

throat, oblong, ca. 1 mm, apical anther appendages triangular, ca. 0.2 mm, as long as wide, apices rounded, anther collar prominent and distinctly wider than filament; style ca. 3 mm, style branches linear to filiform, ca. 1.5 mm, papillose, nectary present. Cypselas 1.5–2 mm, 5-ribbed, glabrous; carpodium inconspicuous; pappus a short dentate to lacinate crown ca. 0.1 mm.

Habitat and distribution. *Catolesia hyperzioides* was collected from campos rupestres, at the summit and slopes of the Serra do Esbarrancado from 1450–1700 m, where there is frequent mist in the morning. The plants are found growing in sandy soil between rocks among herbs and shrubs. The new species is known only from the municipality of Mucugê and is probably endemic to the Chapada Diamantina Region of Bahia, Brazil.

IUCN Red List category. According to the available information about this species, it can be considered Critically Endangered (CR B1ab; B2ab) according to IUCN Red List criteria (IUCN, 2001) because of its restricted distribution (only one locality).

Etymology. The specific epithet alludes to the vegetative similarity of the new species to *Hyperzia mooreana* (Baker) Holub (Lycophyta, Lycopodiaceae), a very common species in the Serra do Sincorá that is also found in the Chapada Diamantina Region.

Discussion. *Catolesia hyperzioides* has all of the characteristics that distinguish the genus. The plant is a candelabriform shrub, poorly branched at the base, moderately branched in the upper half, and pseudo-whorled beneath old inflorescences; the leaves are slightly succulent and lack any nonglandular trichomes; the inflorescences are terminal and corymbose; and the receptacle is paleaceous. However, *C. hyperzioides* has several interesting characters that distinguish the species. The principal differences include the leaves that are lanceolate with pungent and incurved tips (vs. narrowly oblanceolate, rather blunt, and not incurved at all in *C. mentiense*); smaller leaf blades (4–5 mm vs. 7–19 mm in *C. mentiense*); the capitula that form a highly congested terminal

synflorescence composed of (7)8 to 12 capitula, sessile, congested, with the central capitulum markedly larger with twice as many florets (vs. the synflorescence in *C. mentiense* that is also composed of several capitula [10(to 12), rarely few (4)] but these more diffuse, similarly sized, and conspicuously pedunculate); and the cypselas with a short, coroniform pappus (vs. seta absent or abortive) (Table 1).

Catolesia hyperzioides was collected in the same type of habitat as *C. mentiense*, in the campos rupestres of the Chapada Diamantina Region. Given the taxonomic diversity of the Gyptidinae in the campos rupestres, the discovery of the new species further supports the habitat as a major center of diversity for the subtribe within the state.

Paratypes. Brazil. **Bahia:** Mucugê, Chapada Diamantina, Serra do Esbarrancado, 12°44'S, 41°30'W, 24 Feb. 2005, A. A. Conceição 1179 (HUEFS); Mucugê, Parque Nac. Chapada Diamantina, 12°42'S, 41°31'W, 4 Mar. 2006, A. A. Conceição 1741 (HUEFS).

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