

STUDIES IN THE HELIANTHEAE (ASTERACEAE). XXII.

TWO NEW SPECIES OF *CALEA* FROM BRASIL

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A recent paper describing four species of *Calea* from Brasil (Robinson, 1979), provided results of efforts to identify members of the genus in Bahia and some adjacent parts of Brasil. Since the completion of that paper, two additional new species have been encountered, from Minas Gerais and Bahia, both showing superficial resemblance to *C. rotundifolia* (Less.) Baker. The new species from Minas Gerais proves to have represented in the U.S. National Herbarium by a Belem collection received many years ago under the latter name. Receipt of a second specimen of the Belem collection and the recent collection of similar material by R. M. King in Bahia, has led to the present re-evaluation. The two new species are more closely related to each other than to any other members of the genus, but they are amply distinct, as noted below.

It has also been noted that the nom. nov. proposed in the recent paper was superfluous, the name *Calea marginata* was proposed for the latter homonym, *Calea longifolia* (DC.) Baker, by Blake in 1937 in the Journal of the Washington Academy of Sciences 22: 387.

CALEA BELEMII H. Robinson, sp. nov.

Plantae fruticosae ca. 1 m altae mediocriter ramosae. Caules brunnescentes teretes subangulati perdense hirtelli. Folia opposita, petiolis brevibus 2-4 mm longis; laminae coriaceae orbiculares vel suborbiculares plerumque 2.5-5.0 cm longae et 2.0-4.5 cm latae base late rotundatae margine multo grosse crenato-serratae apice rotundatae vel vix obtusae supra erecte pilosae subscabrae subtus hirtellae vel tenuiter pilosae in nervis et nervulis valde reticulo-prominentes, nervis secundariis subpinatis, in binis submediis ascendentioribus. Inflorescentiae terminales in ramis dense corymbosis, ramis plerumque oppositis hirtellis, ramis ultimis 0-3 mm longis. Capitula interdum tripliciter sessiliter aggregata cylindrica 14-17 mm alta et 3-4 mm lata; squamae involucris ca. 18 subimbricatae 5-6-seriatae flavo-rufescentes late ovatae vel oblongae 2-10 mm longae et 2-3 mm latae apice breviter obtusae vel rotundatae minute fimbriatae extus plerumque glabrae basilares vis herbaceae et paucae hirtellae: paleae 1-2 bracteiformes ca. 10 mm longae. Flores 5 in capitulo discoidei; corollae flavae ca. 7.5 mm longae extus glabrae, tubis ca. 3 mm longis, faucibus late campanulatis ca. 2 mm longis, lobis oblongo-lanceolatis ca. 2.5 mm longis et 0.8 mm

latis; thecae antherarum ca. 2.5 mm longae; appendices antherarum extus glanduliferae. Achaenia 7.0-7.5 mm longa base longe anguste stipitata inferne subcarnosa et glabra ceterum dense setifera, setis leniter flexuosis biseriatis multi-cellularibus; squamellae pappi ca. 15 anguste ellipticae superne subulatae ca. 3 mm longae ad 0.2 mm latae margine erosae extus minute spiculiferae. Grana pollinis plerumque 50-55 μ m in diam. valde breviter spinosa.

TYPE: BRASIL: Minas Gerais: Rodovia BR 4, Km 924. Mata Cipó. Planta de 1 m de altura. Capitulo amarelo, involucrio esverdeado. 27.6.1968. R. P. Belem 3763 (Holotype US).

For the distinctions of the species see the discussion under *C. morii* sp. nov.

CALEA MORII H. Robinson, sp. nov.

Plantae fruticosae 1-2 m altae mediocriter ramosae. Caules brunnescentes subhexagonales perdense hirtelli. Folia opposita, petiolis 2-9 mm longis; laminae late oblongae vel suborbiculares 2.5-6.0 cm longae et 1.6-5.3 cm latae base late rotundatae margine subtiliter serrulatae apice late rotundatae vel obtusae et minute mucronulatae supra hirtellae et sparse glandulo-punctatae subtus dense breviter tomentellae et inter nervulas dense glandulo-punctatae in nervis et nervulis valde reticulo-prominentes. Inflorescentiae terminales in ramis densae corymbosae, ramis plerumque oppositis perdense hirtellis vel subtomentosis. Capitula plerumque tripliciter sessiliter aggregata cylindrica ca. 12-14 mm alta et 3-4 mm lata; squamae involucri subimbricatae ca. 18 ca. 5-seriatae latae ovatae vel oblongae 3-9 mm longae ad 3 mm latae apice obtusae vel breviter acutae margine et extus plerumque in partibus superioribus tomentellae extus sparse glandulo-punctatae, bracteae interiores praeter apicem glabrae, bracteae exteriores ad apicem vix herbaceae; paleae 1-2 bracteiformes ca. 10 mm longae apice breviter acutae glabrae margine plerumque uni-dentatae. Flores 4-5 in capitulo discoidei; corollae flavae ca. 7 mm longae, tubis ca. 2.5-2.8 mm longis extus dense glandulo-punctatis, faucibus distincte campanulatis ca. 2 mm longis extus glabris, lobis oblongo-lanceolatis ca. 2.5 mm longis et 0.8 mm latis superne dense glandulo-punctatis; thecae antherarum ca. 3 mm longae; appendices antherarum extus glanduliferae. Achaenia 5.5-6.0 mm longa base breviter stipitata inferne carnosa et subglabra ceterum dense setifera et glandulo-punctata, setis leniter flexuosis biseriatis multi-cellularibus; squamellae pappi ca. 13 anguste oblongae superne breviter subulatae vel subtruncatae ca. 3 mm longae extus minute spiculiferae. Grana pollinis plerumque 50-60 μ m in diam. valde breviter spinosa.

TYPE: BRASIL: Bahia: Município de Rio de Contas. Base de Pico das Almas, a 18 km ao NW de Rio de Contas. Elev. 1300 m. Common shrubs 1-1½ meters tall, flowers yellow. July 22, 1979. R. M. King, S. Mori, T. S. Santos & J. Hage 8097 (Holotype RB,

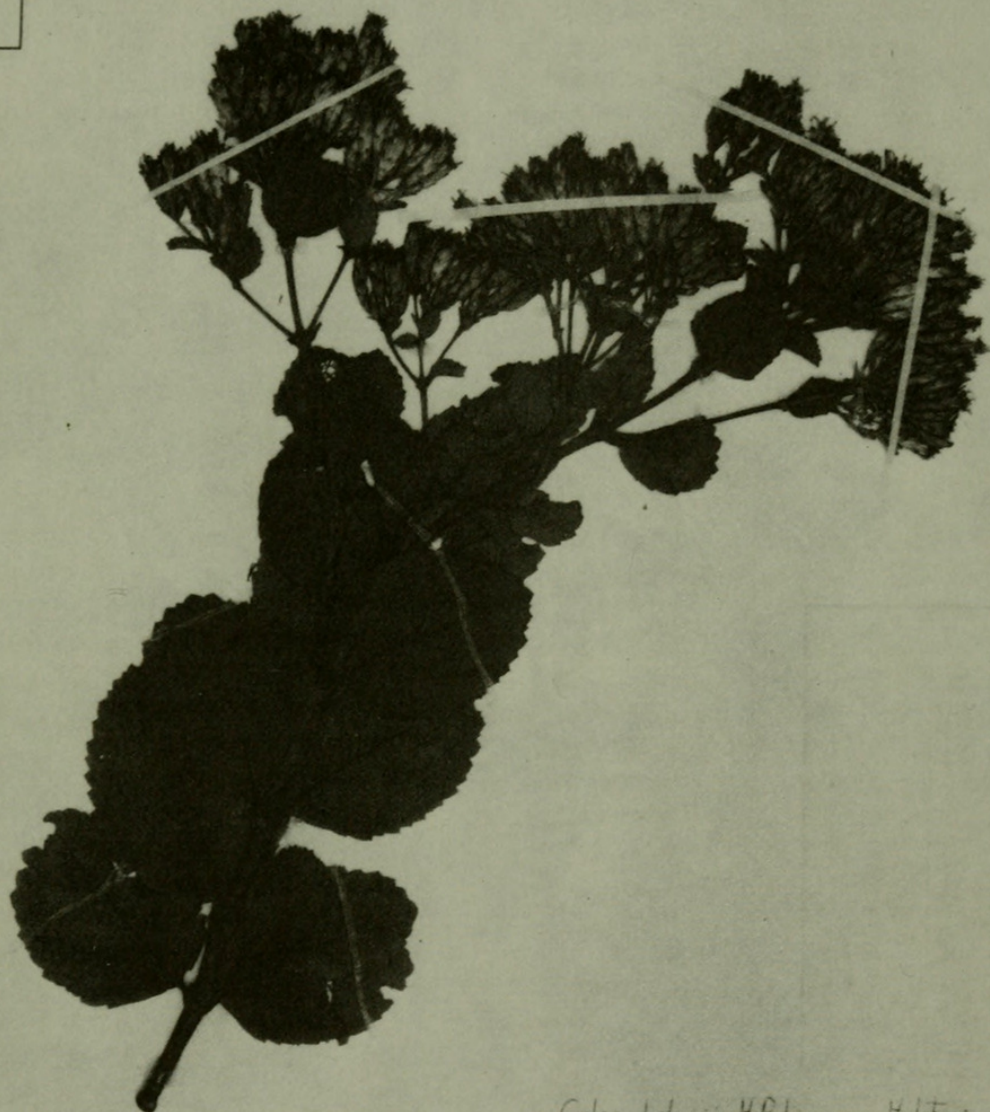
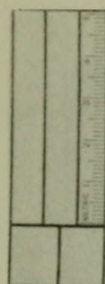
isotypes CEPEC, US). PARATYPES: BRASIL: Bahia: Município de Rio de Contas. Base de Pico das Almas, a 18 km ao NW de Rio de Contas. Elev. 1300 m. Shrub one meter tall, flowers yellow. July 24, 1979. R. M. King, S. Mori, T. S. Santos & J. Hage 8121 (CEPEC, US); Município de Mucugê, a 3 km ao S de Mucugê. Na estrada que vai par Jussiape. Elev. ca. 1000 m. Shrub 2 meters tall, flowers yellow. July 26, 1979. R. M. King, S. Mori, T. S. Santos & J. Hage 8161 (CEPEC, US).

Both *C. belemii* and *C. morii* can be distinguished readily from *C. rotundifolia* by the lack of ray flowers and by the lack of the more herbaceous-tipped lower involcral bracts. In both of the new species, the outermost flowers of the heads sometimes lack anthers, but the corollas are in no way asymmetric. The only previously described discoid member of the species complex is *C. lantanoides* Gardn. which has 6-8 flowers in the head, and has longer linear-lanceolate pappus setae that reach more than 3/4 the length of the corolla.

In comparison of the two new species, *Calea belemii* differs from *C. morii* initially by the more rounded, more serrate, less pubescent leaves, and by the mostly glabrous involucre bracts. In details of the florets, *C. belemii* has the corollas glabrous, the achenes narrow with a long-stipitate base, and the pappus squamae narrowly elliptical with subulate tips. In *C. morii*, the tube and lobes of the corolla are densely glandular-punctate on the outer surface, the achenes are broad with stout bases, and the pappus squamae are more oblong with generally blunt or retuse tips. Also, the throat of the corolla is generally shorter and more abruptly expanded at the base in *C. belemii*.

Literature Cited

- Robinson, H. 1979. Studies in the Heliantheae (Asteraceae). XIX. Four new species of *Calea* from Brasil. *Phytologia* 44 (4): 270-279.



Calea belemii H. Robinson Holotype

PLANTAS DO BRASIL

Região Bahia - Ilhéus São João

N.º 3763 *Calea rotundifolia* Baker Comp.
Det. G. Barroso, 1971
Mina Gerais. Rodovia BR 4, Km 924. Mata Cipo

Planta de 1 m de altura. Capítulo amarelo, in-
vólucro esverdeado

Recoleta P. Petten

27.5.1968

UNITED STATES

2648074

NATIONAL HERBARIUM

Projetos de cooperação entre UNIC, New York Botanical Garden, Universidade
de Brasília e CBPA

Calea belemii H. Robinson, Holotype, United States
National Herbarium. Photos by Victor E. Krantz, Staff
Photographer, National Museum of Natural History.



ASTERACEAE of BAHIA, BRAZIL

Cytological and/or Biochemical Vouchers

No. 8097

CALEA MORII H. Robinson

HOLOTYPE

Município de Rio de Contas, Base de Pico das Almas, a 18 km as NW de Rio de Contas. Elevation ca. 1400 meters.

Common shrubs 1-1½ meters tall, flowers yellow.

Robert M. King, Scott A. Mori, T. S. dos Santos
& J. L. Hage

July 22, 1979

Specimens collected for the United States National Herbarium and the Herbario
Centro de Pesquisas do Cacau at Itabuna.

Calea morii H. Robinson, Holotype, Jardim Botânico,
Rio de Janeiro.



Calea enlargements of heads: Top. *C. belemii*. Bottom. *C. morii*.



Robinson, Harold Ernest. 1979. "Studies in the Heliantheae (Asteraceae). XXII. Two new species of *Calea* from Brasil." *Phytologia* 44, 436–441.

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