



Lectotypification of the name *Helianthus dentatus* Cav., basionym of *Viguiera dentata* (Cav.) Spreng. (Asteraceae: Heliantheae)

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A recent molecular phylogenetic analysis (Schilling & Panero 2011) proposed to narrow the concept of the paraphyletic genus *Viguiera* Kunth (1818: 176; Asteraceae: Heliantheae) to embrace only the type, *V. dentata* (Cavanilles 1794: 10) Sprengel (1826: 615). Robinson (1977) emphasized the peculiarities of *Viguiera dentata* as the “distinctive and unique” presence of hairs on the filaments of the anther, the disk corollas throat less than twice as long as the lobes and densely scabrous below, a combination of features that differs from most member of the genus. During taxonomic studies of *Viguiera* and related genera, it was discovered that *V. dentata* has never been typified. The basionym, *Helianthus dentatus*, was described by Antonio José Cavanilles in *Icones et Descriptiones Plantarum* based on plants grown in the Real Jardín Botánico from seed sent by Martín Sessé from Mexico (Blanco 2000). Previous workers including Blake (1918) and Robinson (1977) have accepted the plate in Cavanilles as the type for *Helianthus dentatus* Cav.

Helianthus dentatus Cavanilles (1794: 10)

Type:—'Habitat in Imperio Mexicano cum praecedente. Florebat in Regio horto Matritense mensibus Octobri et Novembri' [*Helianthus linearis* Cavanilles—'Habitat in imperio Mexicano, prope oppidum Hapam'], *A. J. Cavanilles s.n.* (lectotype: MA 475778 [scan seen], designated here).≡ *Viguiera dentata* (Cav.) Sprengel. Fig. 1.

Of the four sheets of *H. dentatus* in the Cavanilles herbarium, only the sheet MA 475778 has label information annotated by Cavanilles (Garilleti 1993) and with an indication that the plant was cultivated in the Real Jardín Botánico (Fig. 1). The plate number from the *Icones* (T. 220) also appears on the label. The plate of Cavanilles does not exactly match with none of the four sheets of *H. dentatus* in the Cavanilles herbarium. But careful observations of the biggest fragment on the sheet MA 475778 allow to observe a great similarity between the plant's drawing (T. 220) and the exsiccata fragment (which is in an inverted position, in relation to the plant's drawing). The label on the sheet MA 475779 was not written by Cavanilles but by J. D. Rodríguez (Blanco *et al.* 2010) and is dated 1801 (after the publication of the *Icones*). The two remaining sheets have the same number, MA 475777, one of them with two handwritten labels, but neither in Cavanilles' hand.

Viguiera dentata shows remarkable phenotypic plasticity and considerable resistance to drought and heat (Sarquis *et al.* 2010). It occurs in dry areas (slopes, canyons, fields, and roadside ditches) in the southwestern United States, Mexico, West Indies (Cuba) and Central America (Schilling 2006). More studies are necessary to determine if the four varieties currently accepted for *V. dentata* should be elevated to the species level (Blake 1918, Schilling & Panero 2011). This emphasizes the importance of selecting a type for *V. dentata*.



FIGURE 1. Lectotype of *Viguiera dentata* Cavanilles (MA 475778).

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