



## Neotypification of the name *Atriplex pentandra* (Amaranthaceae, Chenopodioideae)

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*Atriplex* Linnaeus (1753: 1054) is a genus of about 260 species distributed in arid and semiarid regions of Eurasia, America and Australia (Sukhorukov & Danin 2009, Iamónico 2013, Brignone *et al.* 2016). Several names (at species, subspecies, variety and form ranks) were described related to the high phenotypic variability of this critical genus (IPNI 2008, Al-Turki *et al.* 2000). As consequence, misapplication of names and nomenclatural disorders exist and need clarification (see e.g., Sukhorukov 2010, Iamónico 2012).

*Atriplex pentandra* (Jacquin 1763: 244) Standley (1916: 54) is an annual or perennial, sprawling to erect herb distributed along the Atlantic Ocean coast of United States, from Massachusetts to Texas (Welsh 2003), Tamaulipas state in Mexico (Flores Olvera 1992), West Indies, and Venezuela, Colombia and Peru in South America (Standley 1916; Flores Olvera 1992; Welsh 2003; Brignone *et al.* 2016).

As a part of ongoing studies of the genus *Atriplex* for South America, the name *A. pentandra* is investigated, and a neotype is here designated. Also, a complete illustration of this species is here provided.

The protologue of *Axyris pentandra* Jacquin (1763: 244) (basonym of *A. pentandra*) consisted of a short diagnosis, a detailed description, the habitat and provenance (“Habitat in littoribus maritimis Cubae”). In the 2<sup>nd</sup> edition of *Selectarum Stirpium Americanarum Historia* (Jacquin 1780), an original drawing of the species was provided (plate 235) with the name ‘*Axyris pentandra*’ in Jacquin’s handwriting (image available at [http://plantillustrations.org/illustration.php?id\\_illustration=205329](http://plantillustrations.org/illustration.php?id_illustration=205329)).

Standley (1916) transferred *Axyris pentandra* to *Atriplex*, also giving good complete description of the species, and listing two heterotypic synonyms, *Atriplex cristata* Humboldt & Bonpland ex Willdenow (1806: 959) and *Obione cristata* (Humb. & Bonpl. ex Willd.) Moquin (1840: 73); the type locality and the distribution area were also provided; no type specimens were specified.

Flores Olvera (1992) stated for the type of *Atriplex pentandra*: “Cubae, littoribus maritimis, [Cuba, 1755–1759], *N. J. Jacquin s.n.* (Tipo, BM?, LINN?, W?)” suggesting that these herbaria where probably Jacquin housed his material, following D’Arcy (1970). However, Flores Olvera (l.c.) did not establish any type material.

Recently, Brignone *et al.* (2016) stated that the type material in BM, LINN or W, as mentioned D’Arcy (1970) and Flores Olvera (1992), and in any other herbaria, could not be located. Moreover, Brignone *et al.* (2016) considered the Jacquin’s drawing of *Axyris pentandra* as original material, proposing it as the lectotype of the name (see Jacquin 1780; image available at [http://plantillustrations.org/illustration.php?id\\_illustration=205329](http://plantillustrations.org/illustration.php?id_illustration=205329)). However, since the Jacquin’s image was published later than 1763 (year of the protologue), it cannot be considered as part of the original material and not eligible as lectotype.

Lacking original material for the name *Atriplex pentandra*, a neotypification is required under the Art. 9.7 of ICN (McNeill *et al.* 2012). After a revision of material from different herbaria (NY, SI, US, VEN; acronyms following Thiers 2017+) the specimen selected as neotype is US-01274701 (Fig. 1) since it well shows the fruiting bracteoles whose features have high taxonomic value in *Atriplex* (see e.g., Welsh 2003).

*Atriplex pentandra* (Jacquin) Standley (1916: 54) ≡ *Axyris pentandra* Jacquin (1763: 244) ≡ *Obione pentandra* (Jacquin) Ulbrich (1934: 507).

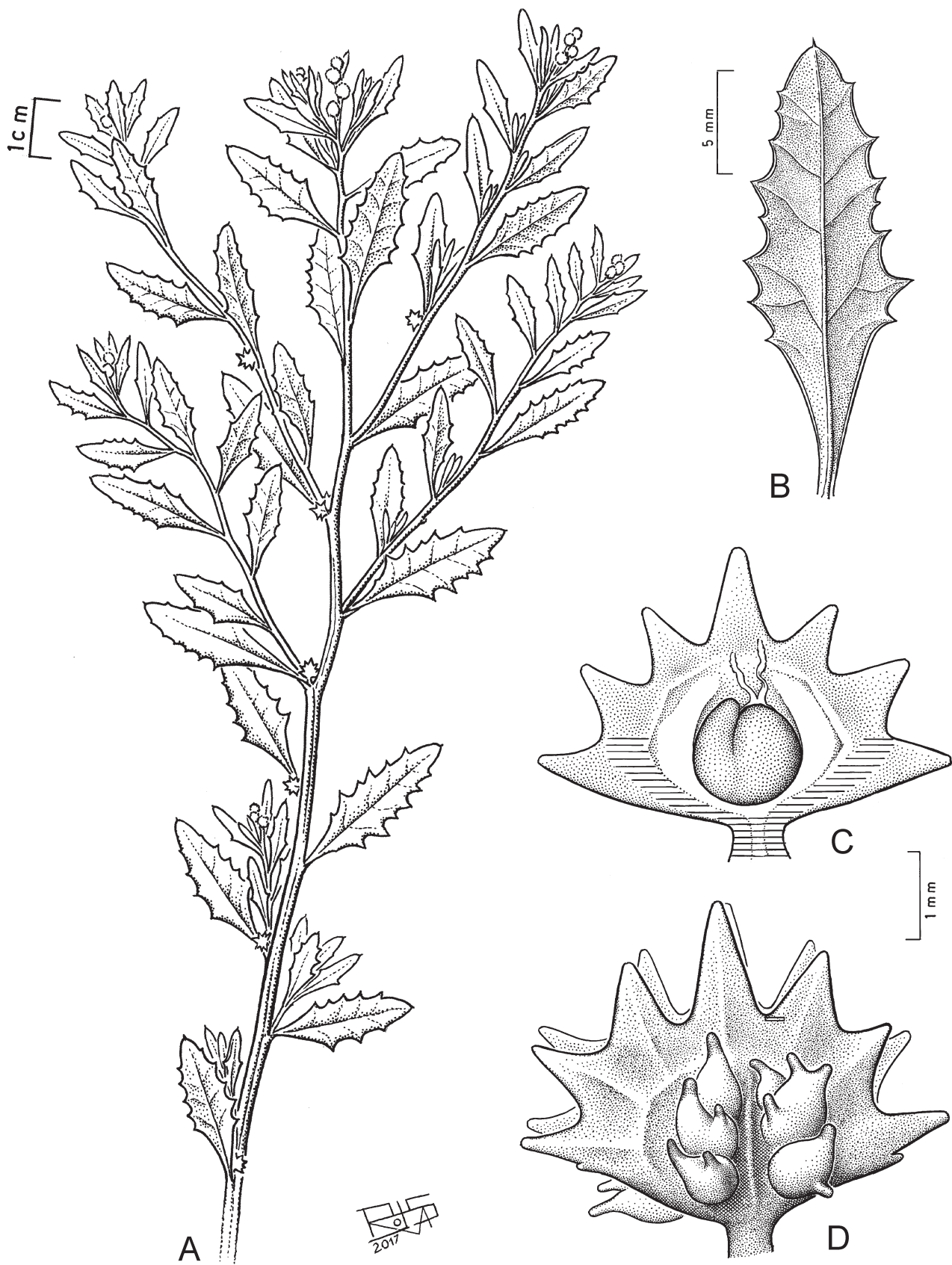
Type (neotype, designated here):—MEXICO, Tamaulipas, ‘25 mi S of Matamoros’, 29 June 1919, *Wooton s.n.* (US-01274701!) (Fig. 2).

**Note:**—*Atriplex pentandra* may be confused with *Atriplex tampicensis* Standley (1916: 56), but they can be distinguished by the staminate inflorescences which are commonly arranged in axillary spikes of 10–15 mm long in *A. pentandra*, whereas

in *A. tampicensis* terminal spikes are up to 10 cm long. Also, fruiting bracteoles of *A. pentandra* bear up to seven teeth in the apex, and are always dorsally crested. However, in *A. tampicensis* the fruiting bracteoles show 7–11 teeth in the apex, and are smooth or crested dorsally.



FIGURE 1. Neotype of *Atriplex pentandra* (US-01274701!).



**FIGURE 2.** *Atriplex pentandra*: (A) Habit, (B) Leaf, (C) Fruiting bracteole, dorsal view, (D) Fruiting bracteole, internal view and seed (drawn from the neotype by F. Rojas).

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