

Typification of two Linnaean names in *Atriplex* (Amaranthaceae *sensu* APG IV) referred to ancient *Flora Anglica* by Hudson and Linnaeus

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Abstract

The typification of the names *Atriplex marina* and *A. maritima* is discussed. *A. marina* is lectotypified on a Petiver's illustration and synonymised with *A. littoralis* (heterotypic synonym), whereas *A. maritima* is neotypified on a specimen from **BM** and synonymised with *A. laciniata* (homotypic synonym).

Keywords: *Atriplex laciniata*; *Atriplex littoralis*; *Atriplex marina*; *Atriplex maritima*; typification; nomenclature.

Introduction

Atriplex L. (*Amaranthaceae* Juss. s.l. *sensu* APG IV, 2016) is a genus comprising about 260 species, which are distributed in arid and semiarid regions of Eurasia, America and Australia (Akeroyd, 1993; Sukhorukov & Danin, 2009; Kadereit *et al.*, 2010; Brignone *et al.*, 2016). According to Kadereit *et al.* (2010) this genus is monophyletic, including *Obione* Gaertn., *Teutliopsis* (Dumort.) Čelak. and some other segregate genera.

Linnaeus published 14 names under *Atriplex* (see Jarvis, 2007), of which just one (*A. portulacoides* L.) currently belongs to another genus, i.e. *Halimione* Aellen (see e.g., Ball, 1993; Jarvis, 2007; Iamónico, 2017). Two out of these 14 Linnaean *Atriplex* names are not yet typified (see Jarvis, 2007) and are here discussed as part of an ongoing study of Linnaean names in *Amaranthaceae* s.l. (see also Iamónico, 2014, 2016; Iamónico & Kadereit, 2013; Iamónico & Jarvis, 2012; Iamónico *et al.*, 2012; Iamónico & Sukhorukov, 2014).

Material and methods

This research is based on the analysis of relevant literature (i.e. protologues of the names investigated and pre-Linnaean works therein cited, and primary Floras in which the studied names are listed) and examination of specimens preserved at **BM** and **LINN** (herbarium acronyms following Thiers, 2020 [continuously updated]). The articles cited throughout the text follow the *Shenzen Code* (Turland *et al.*, 2018).

Typifications

Atriplex marina

Linnaeus (1771: 300) described *Atriplex marina* providing a short diagnosis ("ATRIPLEX caule herbaceo, erecto, foliis linearibus serratis") which was taken directly from Hudson (1762: 377). In addition, Linnaeus (1771) cited two synonyms from Bauhin [1623: 152 ("Atriplex maritima angustifolia")], and Petiver (1713, "Atriplex angustifolia dentata"). The provenance ("Habitat in Angliae, Sveciae litoribus marinis") was also reported. Petiver (1713) published an illustration ("t. 7 f. 4") which is part of the original material for the name *Atriplex marina* [also Hudson (1762), in his *Flora Anglica*, cited Petiver]. Note that, since Hudson (1762) validly published *A. serrata*, the name *A. marina* by Linnaeus (1771) appears as a replaced, superfluous and illegitimate name according to Arts. 52.1, and 52.2 of ICN. As a consequence, the type of the Linnaean's *A. marina* is that of Hudson's *A. serrata*.

No specimens which can be considered as part of the original material for *Atriplex serrata* (\equiv *A. marina*) can be found. As a consequence, Petiver's illustration appears to be the only extant element useful for the purpose of lectotypification. This image (Fig. 1) shows a complete plant with root, leaves, and inflorescences whose features match both Linnaean's and Hudson's descriptions, and it is here designated as the lectotype of *Atriplex serrata*. Although the bracteoles, which are of major taxonomic importance in *Atriplex*, are not visible in Petiver's illustration, it is clearly identifiable as *A. littoralis* according to the current concept in *Atriplex* (e.g., Akeroyd, 1993; Sukhorukov, 2006; Sukhorukov & Danin 2009; Iamonico, 2017).

Atriplex littoralis L., Sp. Pl. 2: 1054. 1753. – TYPE (lectotype designated by Jonsell & Jarvis, 1994: 154): Herb. Linnaeus No. 1221.22 (**LINN!**). — An image of the lectotype is available at <http://linnean-online.org/10781/> = *Atriplex serrata* Huds., Fl. Angl.: 377. 1762 \equiv *A. marina* L., Mant. Pl. Alt.: 300. 1771, *nom. superfl. et illeg.* (Arts. 52.1, and 52.2 of ICN) – TYPE (lectotype designated here): [Icon] *Atriplex angustifolia dentata* in Petiver (1713: t. 7, f. 4). — For an image of the lectotype see Fig. 1.

Atriplex maritima

Atriplex maritima L. was published in the Linnaean edition of *Flora Anglica* (Linnaeus, 1754) where the name was validated by a mere reference to the species numbered "152-8" in the third edition of Ray's *Synopsis Methodica Stirpium Britannicarum* (1724: 152–153).

Ray (1724: 152) reported as synonyms of his "*Atriplex maritima*" a polynomial by Bauhin (1623: 120, "[Atriplex] maritima laciniata") which was, in turn, considered by Linnaeus (1753: 1053) as a synonym of *Atriplex laciniata* L. in the first edition of *Species Plantarum*. Linnaeus (1762: 1493) again listed Bauhin's polynomial as a synonym of *A. laciniata*, whereas the name *A. maritima* was not included. It seems that Linnaeus (1753, 1762) changed his opinion about the originally described species *A. maritima* and he later included

it in *A. laciniata*. Stearn (1973: 64), in fact, treated the Linnaean *A. maritima* as a synonym of *A. laciniata*, and I agree with this consideration.



Figure 1. Lectotype of the name *Atriplex serrata* (\equiv *A. marina*) (Petiver's illustration).

Since no original material was traced in the Linnaean and Linnaean-linked herbaria (see also Jarvis, 2007), a neotypification is required according to Art. 9.7 of ICN. Here I propose to designate as the neotype of the name *Atriplex maritima*, the lectotype of *A. laciniata* (BM000647540) which was correctly proposed by Taschereau (1972: 1591). As a consequence, the Linnaean *A. maritima* is here considered as homotypic synonym of *A. laciniata*.

Atriplex laciniata L., Sp. Pl. 2: 1053. 1753. – TYPE (lectotype designated by Taschereau, 1972: 1591) Herb. Clifford: 469, *Atriplex* 3 (**BM000647540!**). — An image of the lectotype is available at <https://www.nhm.ac.uk/resources/research-curation/projects/clifford-herbarium/lgimages/BM000647540.JPG>

= *Atriplex maritima* L., Fl. Angl.: 25. 1754 – TYPE (neotype designated here): Herb. Clifford: 469, *Atriplex* 3 (**BM000647540!**).

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Petiver's illustration from *Herbarii Britannici*. A. Sukhorukov (Moscow State University) and helping me in the identification of Petiver's illustration.

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