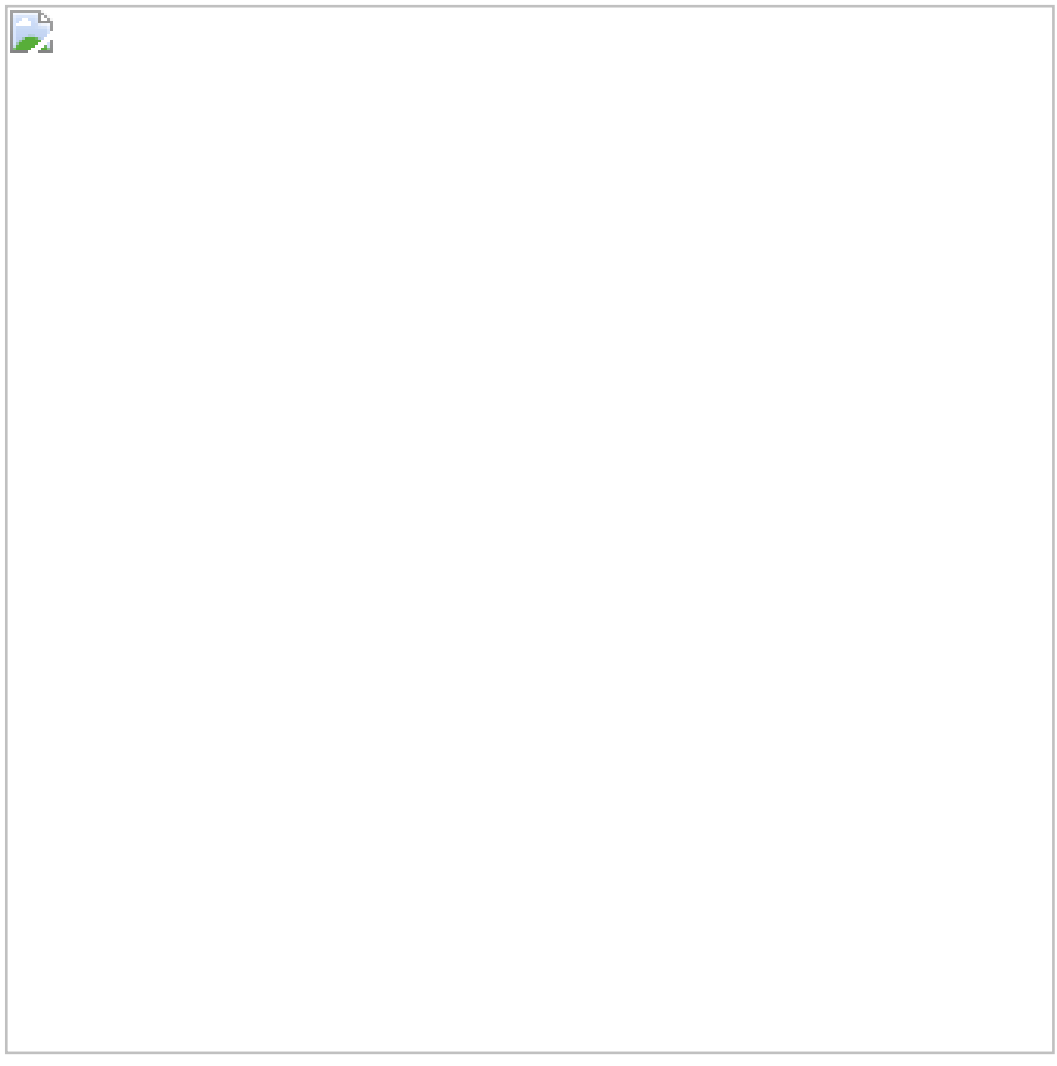

Studies on the Genus Atriplex L. (Amaranthaceae) in Italy. II. Lectotypification of Atriplex Elongata Guss.

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Studies on the genus Atriplex L. (Amaranthaceae) in Italy. II. Lectotypification of Atriplex elongata Guss.

Duilio Iamonico

Abstract

IAMONICO, D. (2012). Studies on the genus Atriplex L. (Amaranthaceae) in Italy. II. Lectotypification of Atriplex elongata Guss. *Candollea* 67: 181-185. In English, English and French abstracts.

Atriplex elongata Guss. *(Amaranthaceae)* is giving as an heterotypic synonym of *Atriplex patula* L. This first name is also lectotypified on a herbarium specimen kept in NAP. The identity of the species is clarified based on literature analysis and examination of type material and other herbarium specimens.

Key-words

AMARANTHACEAE – Atriplex − Typification

Résumé

IAMONICO, D. (2012). Etudes sur le genre Atriplex L. (Amaranthaceae) en Italie. II. Lectotypification d'Atriplex elongata Guss. *Candollea* 67: 181-185. En anglais, résumés anglais et français.

Atriplex elongata Guss. *(Amaranthaceae)* défini comme synonyme hétérotypique d'*Atriplex patula* L. Ce premier nom est lectotypifié sur un spécimen d'herbier conservé à NAP. L'identité de l'espèce est clarifiée et se base sur une analyse de la littérature existante, l'examen du matériel type et d'autres spécimens d'herbier.

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Introduction

Atriplex L. *(Amaranthaceae)* is a genus of about 260 species of annuals, perennials and shrubs mostly distributed in arid and semiarid regions of Eurasia, America and Australia (Sukhorukov & Danin, 2009).

The genus is taxonomically critical, mainly because of its high morphological variability (Al-Turki & al., 2000). Consequently, several species and lower taxa have been described, especially in the past (IPNI, 2008). A first consequence is a nomenclatural disorder caused by the misapplication of names.

Regarding Italy, some species described by Gussone (1844) need clarification. In this paper the identity of *A. elongata* Guss. is discussed.

The work represents the seconf contribute to the comprehensive study on the taxonomy and distribution of the genus *Atriplex* in Italy (Iamonico, 2010).

Materials and methods

The work is based on an extensive analysis of literature, on field investigations, and on the examination of the specimens kept in the following Herbaria: APP, AQUI, BI, CAT, FI, G, LEC, LINN, NAP, PAL, RO and herbarium Zodda (currently in APP). Pictures of Linnean specimens are available on the web (Linnean Society Collections Online, 2009).

Results and discussion

Literature analysis

Atriplex elongata was first described from Sicily (southern Italy) in 1884 *"In argillosis inundatis subsalsis … Agosta!"* (Gussone, 1844). Subsequently, Candolle (1846) reported *A. elongata* as *"Species non satis notæ"*, provided a short description, including a part of the protologue by Gussone (1844) and the locality *"In Sicilia"*. Bertoloni (1854) did not quote *A. elongata* at all. Arcangeli (1882, 1894) reported the species sub *A. laciniata* subsp. *elongata* (Guss.) Arcang. for *"Sicilia"*. Cesati & al. (1884) cited *A. tatarica* var. *elongata* Guss. as *"In Sicilia"*. Caruel (1893) listed only the the genera of *Chenopodiaceae* referring to Bertoloni (1854). Groves (1887) cited the species for *"Littorale di Gallipoli"* (Puglia region) and highlighted that *"[…] mi pare che sia abbastanza distinta da meritare un nome specifico"* [it seems to be different enough to deserve a specific name]. Fiori & Paoletti (1896-1898: 306) indicated *A. elongata* as variety of *A. hastata* L. "*A. hastatum* L. var. *elongatum* (Guss.) Fiori & Paol." in *"Luoghi subsalsi in Sic. ed in T. d'Otranto (Groves)"* [brackish places in Sicily and Terra d'Otranto (Groves)]. Fiori (1925) also accepted the rank of variety, reporting *"A. hastatum* var. *elongatum"* in the same localities by Fiori & Paoletti (1896-1898) they quoted. Moreover he indicated the species as endemic. Zodda (1967) indicated "*A. hastatum* var. *elongatum* (Guss.)" at Tortoreto (Abruzzo region). Zangheri (1976) reported a note after *A. hastata* L.: *"A. elongata Guss. citato per stazioni ± salse di Terra d'Otranto e Sicilia […] Non é più stato ritrovato in tempi recenti, non se si tiene conto in F. E. [Flora Europaea] e rimane entità incerta"* [*A. elongata* Guss. cited for brackish stations in Terra d'Ontranto area and Sicily […] it was not rediscovered in recent times, it is not cited in F. E. [Flora Europaea] and it is to be considered an uncertain entity]. Pignatti (1982) did not code this species in his flora, reporting a note after *A. latifolia* Wahlenb. in which he highlighted that *"A. elongata […] merita studio ulteriore"* [*A. elongata* […] deserves further investigations]. Pignatti (1982) also reported the following localities: *"Sic. ed in Puglia a Gallipoli"*. Greuter & al. (1984) considered *A. elongata* as a doubtful taxon, including it in *A. prostrata* aggr. (the species is recorded only in Italy). Conti & al. (2005) reports *A. elongata* as doubtful species for Italy (Abruzzo, Apulia and Sicily regions) based on Greuter & al. (1984: 400, n. 124). In Conti & al. (2007), *A. elongata* was considered endemic species for Italy although no regional confirmations are reported. Finally, no recent records of *A. elongata* are reported in the floras of Abruzzo (Conti, 1998; Conti & al., 2002, 2006), Puglia (Mele & al., 2006) and Sicilia (Giardina & al., 2007); all these works cite indeed only old records based on Zodda (1967), Groves (1887) and Gussone (1844) respectively.

Typification

The checking of the Herbaria revealed three herbarium sheets collected by Gussone, two in NAP and one in PAL (see selected specimens seen). One of the NAP specimens (Fig. 1) includes three fragments and three labels. Two labels have the same text: *"Caulis differt folia glaucescentia, 13 ottobre Augusta",* while the third one has the text *"11. Atriplex elongata Guss. … Septembri, Octobri … In argillosis maritimis"*. The number '11' matches the number of *A. elongata* given in the protologue as well as the *locus classicus*, Agosta (Gussone, 1844). The fragments might not represent one individual (probably 3), but they are so quite similar and they belong to the same taxon. On the bases on its better condition, the plant on the right was selected as a lectotype of *A. elongata*.

The specimen kept in PAL was collected at Agosta, but this is the only information given in the label; the plant was determined as *A. elongata* and could be considered as original material. However, the specimen consists of a small fragment, without basal leaves and fruiting bracts, and it is too incomplete for determination with sure.

The other specimen in NAP was collected at *"Trapani: sotto il Monte San Giuliano"* in November.

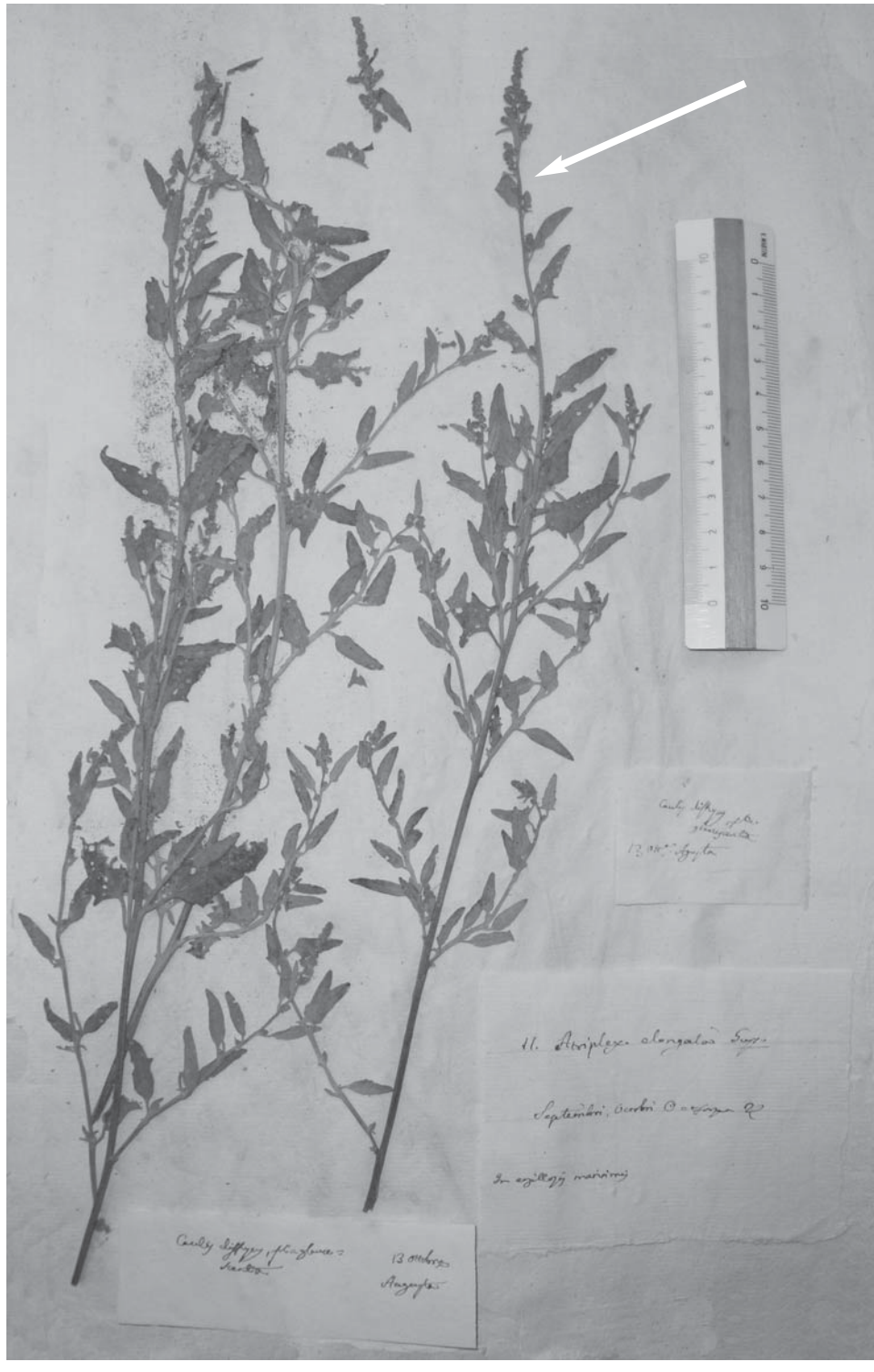

Fig. 1. – Lectotypus of *Atriplex elongata* Guss. (indicated by an arrow, the plant on the right).
[*Gussone s.n.*, PAL] [© Herbarium Neapolitanum, Università Degli Studi di Napoli Federico II. Reproduced with permission]

Atriplex patula L., Sp. Pl.: 1053. 1753.

Lectotypus (designated by TASCHEREAU, 1972): "Patula 6" s.l., s.d. [before 1753], *s.coll.* (LINN [1221.19]!).

= *Atriplex elongata* Guss., Fl. Sicul. Syn. 2: 592. 1844. **Lectotypus** (here designated): **ITALIA. Sicilia:** "Augusta, in argillosis inundatis subsalsis, Septembri-Octobri (ante 1844)", *G. Gussone s.n.* (NAP!), **syn. nov.** (Fig. 1).

Selected specimens of A. elongata. – **ITALIA. Sicily:** Trapani, sotto il Monte San Giuliano, XI s.a., *G. Gussone s.n.* (NAP); Giulia a Agosta, s.d., *G. Gussone s.n.* (PAL).

Taxonomic discussion

Based on the description (GUSSONE, 1844) and the specimens collected by G. Gussone, *A. elongata* can be included in sect. *Teutliopsis* Dumort., the taxa of which are characterized by the presence of herbaceous or cartilaginoid fruiting bracts, which are indistinctly veined and have more or less dentate margins (AELLEN, 1960). In particular, *A. elongata* seems to be related to *A. prostrata* DC. [the rejected name *A. hastata* L. was often misapplied to this species (TURLAND, 1996), but the name *A. hastata* in its strict sense refers to *A. calotheca* (Rafn) Fries, growing along coasts of West and North Europe], to *A. patula* L. and to *A. nilotica* Sukhor.

Atriplex prostrata was described by CANDOLLE (1805: 387 *"[…] long du canal de Saint-Valery […] aux environs du Hâvre"*). According to the protologue, this species is characterized by leaves with prominent lateral lobes and fruiting bracts without tubercules or spines on the dorsal surface. The lectotypification of *A. prostrata* was made by GUSTAFSSON (1976) on a specimen kept in G. The same author gives a detailed description of the species, and as to the fruiting bracts, he indicates that they have "[…] the back from smooth to dentate […]".

Atriplex patula was described by LINNAEUS (1753: 1053) *"in Europae cultis, ruderatis"* as *"ATRIPLEX caule herbaceo patulo, foliis subdeltoideo-lanceolatis, calycibus feminum dicto dentatis"* and lectotypified two centuries later by TASCHEREAU (1972).

Several authors (e.g. AELLEN, 1964; PIGNATTI, 1982; CASTROVIEJO, 1990; AKEROYD, 1993; TAN, 1997; JONSELL, 2001; WELSH, 2003; GELIN & al., 2003) considered these species morphologically related, highlighting leaf base features (truncate in *A. prostrata* vs. cuneate in *A. patula*) as diagnostic. The examination of the types (kept in G and LINN) and several other specimens (see the *specimina visa*) allowed to confirm that this is the only character-state marking the two species. The fruiting bracts are very variable (both in margins and in dorsal surface) and they cannot be used to separate *A. prostrata* from *A. patula*.

Recently, the new species *A. nilotica* (included in sect. *Teutliopsis* Sukhor.) was described by SUKHORUKOV (2010) from *"Aegyptia, Assuan, ad Nili ripas"*. Based on the diagnosis and the examination of the holotype, this species is characterized in having the leaves with base cuneate and margins repando-dentate and the fruiting bracts clearly tuberculate.

The found specimens of *A. elongata* have the fruiting bracts with smooth dorsal surface and proximally entire or dentate margins. The leaves are mostly entire with a cuneate base; only few of them (in the upper part) have two not prominent lateral lobes and obtuse (not truncate) base. Even GUSSONE (1844) indicates *"[…] foliis deltoideo-oblongis, infimis hastatis oppositis (paucis) […]"* [leaves deltoid-oblong, the lower ones hastate opposite (few)].

Based on these observations, *A. elongata* seems to be more related with *A. patula*, although Italian floras (FIORI & PAOLETTI, 1896-1898; FIORI, 1925; ZANGHERI, 1976; PIGNATTI, 1982) and GREUTER & al. (1984) suggest affinity with *A. prostrata*. Regarding *A. nilotica*, *A. elongata* differs from it in having leaves with entire margins and fruiting bracts with smooth dorsal surface.

Another feature reported in literature to distinguish *A. elongata* is the leafless inflorescences (see e.g. PIGNATTI, 1982). This character seems to be inconstant (leaves are lacking or are present in the proximal part of the inflorescences both in *A. elongata*, *A. patula* and *A. prostrata*).

Conclusions

Extensive analysis of literature, careful herbarium investigations and comparison of the protologues allowed to designate a lectotype for the name *A. elongata* and to clarify the identity of this species, that is considered here as a synonym of *A. patula*.

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