

VERBASCUM OSBECKII L. AND THE
TRIGUERA-SPECIES (SOLANACEAE). A REVISION

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Resumen. El casual descubrimiento de la coespecificidad de *Blattaria purpurea* (Osbeck, 1751) y *Verbascum osbeckii* Linnaeus 1753, ha conducido al estudio del género *Triguera* Cavanilles 1786, al que pertenece esta especie. Se adopta la opinión de ROTHMALER (1940) de que se trata de un género monoespecífico, en contra de la de HAWKES en el tercer volumen de *Flora Europaea* (1972), y a pesar de que no se ha resuelto el problema de las relaciones de *Triguera inodora* Cavanilles 1786. El nombre correcto de la especie de este género es *Triguera osbeckii* (L.) Willkomm 1870. Se propone una enmienda al párrafo del Código que trata de la conservación de *Triguera* Cavanilles, 1786.

Summary. Our discovery by chance of the conspecificity of *Blattaria purpurea* (Osbeck, 1751) and *Verbascum osbeckii* Linnaeus 1753, led to a study of the genus *Triguera* Cavanilles 1786, to which the species belongs. ROTHMALER's opinion (1940), that the genus is monotypic is adopted, contrary to the opinion of HAWKES in the third volume of *Flora Europaea* (1972), and despite the unsolved problem of the relationship of *Triguera inodora* Cavanilles 1786. The correct name of the one species is *Triguera osbeckii* (L.) Willkomm 1870. Its distribution is illustrated. An emendation of the passage in the Code concerning the conservation of *Triguera* Cavanilles 1786 is proposed.

In his letter to LINNAEUS on 26 February 1751, published in *Lärda Tidningar*, OSBECK reports on a plant from South Spain (partly translated from Swedish): «*Blattaria purpurea*, a pentandrious plant looking very much like *Polemonium* Hort. Ups., which, however, it cannot be, because of the following description. Caulis procumbens trigono nervosus, pedunculo trifidi ex alis. Calix semi-5 fidus lanatus, laciniis lanceolato acutis. Stam. Filamenta brevissima, valvulo germen tegenti infidentia. Antherae filamentis longiores, oblongae, erectae. Pist. Germen subrotundum. Stylus staminibus longior, stigma simplex, acutum. Folia sunt ovata, serrata profunde, inferiora pedunculata, superiora sessilia, minora. The whole plant has a strong smell of musk. The

species occurred only once, in an inundated outlying field». The question of the identity of this plant arose, for historical reasons, at our institute, but was not solved until, for other reasons, LINNAEUS's *Verbascum osbeckii* (1753) was viewed in the microfilm edition of his herbarium in Stockholm. The explanation resulted in this paper.

The sheet in Stockholm (figs. 1 & 2) is annotated *Triguera ambrosiaca* Cav. Besides the annotation it bears the inscription by LINNAEUS on the front: «*Verbascum 8 myconi*», *myconi* being deleted and substituted by *osbeckii* written by A. DAHL, and «Linn. p.p.» On the back of the sheet LINNAEUS has written «ex Hispania. Osbeck». At the bottom of the sheet is written «a Linné P.» by A. DAHL. A third inscription tells us that the sheet later ended up in ALSTROEMER's herbarium. The specimen is probably a duplicate of the one which OSBECK (1757) recorded having collected in an inundated outlying field, on 8 February 1751, as we know from LINNAEUS's letter to OSBECK on 5 July 1752 (unpubl.) that one of the plants which was enclosed in OSBECK's letter of 26 February 1751 was a *Verbascum* or *Blattaria*, named *osbeckii* by LINNAEUS in a footnote.

A second sheet is in LINNAEUS's herbarium in the Linnean Society of London, bearing the inscription «Salee» (meaning unknown to authors) in the hand of LINNAEUS and some inscriptions by SMITH, but none of them tells us the origin of the specimen. The same is true of the specimen which we have in our herbarium in Copenhagen which is inscribed «*Verbascum osbeckii*» and «Dahl a Linné» by DAHL. Our conclusion is that the specimen in LINNAEUS's herbarium in Stockholm is the holotype of *Verbascum osbeckii* L. 1753.

Taxonomically, however, this specimen must, as indicated by the annotation on the type sheet, be referred to the solanaceous genus *Triguera*. In the most recent treatment of the genus (HAWKES, 1972) it is regarded as the separate species *T. osbeckii* (L.) Willk. LINNAEUS's specimen in our herbarium, however, keys out as *T. ambrosiaca* Cav., another species accepted by HAWKES. This fact, supported by OSBECK's record of the smell of musk and the hairy calyx, the last character also entered in LINNAEUS's nomen specificum in 1753, made us begin suspecting, that the sheet in Stockholm should also be referred to *T. ambrosiaca*, as indicated by the annotation. Our suspicions were confirmed when we had the sheet on loan. Further, both sheets appeared to be conspecific with CAVANILLES's type of *T. ambrosiaca*. Consequently the epithet *osbeckii* must be adopted for this species.

The now conserved generic name *Triguera* was published by CAVANILLES (1786) together with the two species *T. ambrosiaca* and *T. inodora*. GMELIN

(1791) added *T. baccata* as the third and last species ever established in the genus.

In the literature much confusion has taken place concerning the taxonomy and nomenclature of the *Triguera* species and *Verbascum osbeckii*, even if a correct taxonomic concept was, in fact, reached within 40 years of the publication of the genus *Triguera*. ROEMER and SCHULTES (1819) give *T. baccata* Gmel. as a synonym of *T. ambrosiaca* Cav., and SPRENGEL (1825) regards *V. osbeckii* L. as a synonym of that species, both retaining, however, the epithet *ambrosiaca*.

A good treatment of the genus was published by MIERS (1849), who lists both *T. baccata* Gmel. and *V. osbeckii* L. as synonyms of *T. ambrosiaca* Cav. He includes, however, by the reference to *V. osbeckii* L. in LINNAEUS (1762), *Blattaria orientalis*..., which LINNAEUS by mistake had included in his *V. osbeckii* from 1753. DUNAL (1852) regards *V. osbeckii* L. (1762) as a synonym of *T. baccata* Gmel.

Publishing the combination *Triguera osbeckii* with the synonyms *V. osbeckii* and *T. baccata*, WILLKOMM (1870) is the first to take the nomenclatorial consequences of the conspecificity of *V. osbeckii* and one of the *Triguera* species that is in accordance with our present Code. He regards *T. ambrosiaca* as a separate species. More than one hundred years elapsed since SPRENGEL stated that *V. osbeckii* was a synonym of *T. ambrosiaca*, before this concept was adopted again and this time nomenclaturally in accordance with the Code. In their *Catalogue des plantes du Maroc*, JAHANDIEZ & MAIRE (1934) give *T. ambrosiaca* as a synonym of *T. osbeckii* (L.) Willk.

Having had on loan most of the herbarium specimens of *Triguera*, we claim that the genus is monotypic. The variation within the one species does not even warrant an infraspecific classification.

The types of *T. inodora* Cav. and *T. baccata* Gmel. are unknown. The latter species, however, can be safely referred to *T. osbeckii* (L.) Willk. on basis of the protologue, but the identity of *T. inodora* Cav. is problematic. According to the protologue, important characteristics are glabrous pedicels and calyx, absence of tooth terminating the corolla lobes and entire leaves. We have observed no such characters among the specimens of *Triguera* examined, nor a filament tube shorter than the ovary in *T. ambrosiaca*. The tube is, in fact, slightly constricted towards the rim, so that the ovary when enlarging should break the tube to exceed it. Instead the tube and corolla fall off. Though hardly a *Triguera*, or if so undoubtedly a paramorph of *T. osbeckii* (L.) Willk. since collected only once, the question of the identity of *T. inodora* Cav. must so far be considered unsolved. PAU's conclusions

(1926) concerning the identity of the species are too fanciful to be taken seriously.

LINNAEUS's mistake (1762) that he included in *Verbascum osbeckii* *Blattaria orientalis*, *bugulaefolia*..., has also caused inaccuracies as to the synonyms given by various authors of that species, which, in fact, is *Celsia bugulifolia* (Lam.) Jaub. & Spach. according to a recent article by HUBER-MORATH (*Denkschr. Schweiz. Naturf. Ges.*, 87. 1971).

CAVANILLES pointed out himself on his publication of *Triguera* 1786 that he had used that name the year before for a different genus which, as he had found out in the meantime, had already been named *Solandra* Sw. Anyway, he created in our present day sense a later homonym, which has now been conserved against *Triguera* Cav. 1785 in accordance with Art. 14 of the Code.

Tiguera Cav. appeared in the list of names proposed for conservation prepared by M. L. GREEN (1935), but was apparently not published as an officially approved conserved name until the 1952-Code.

Before this time ROTHMALER (FONT-QUER & ROTHMALER, 1940), by application of the article concerning later homonyms, had rejected *Triguera* Cav. 1786, renaming the genus *Fontqueriella* Rothm. He regarded the genus as monotypic, the only species being *F. osbeckii* (L.) Rothm. (basonym: *Verbascum osbeckii* L.) synonymous with *T. ambrosiaca* Cav. He did not present his view on *T. inodora* Cav. and *T. baccata* Gmel. According to the present Code, *Fontqueriella* is a superfluous name and as such must be rejected.

As to the entry in the Code concerning the conservation of 7392 *Triguera* Cav., we suggest that it should read like this in order to be complete:

Triguera Cavanilles, *Diss.* 2 (append.):

I. t. A, 1786.

T.: *T. ambrosiaca* Cavanilles (typ. cons.)

(syn. tax.: *Verbascum osbeckii* Linnaeus,

T. osbeckii (Linnaeus) Willkomm).

TRIGUERA Cav.

Besides perhaps *T. inodora* Cav. the only alien element included in the genus is *Blattaria bugulaefolia*, either mentioned by that name by various authors or by reference to TOURNEFORT or BUXBAUM. It should be excluded from all entries in the synonymy that follows.

TRIGUERA Cav., *Monad. Class. Diss. Dec. 2*, app.: I, t. A. 1786 nom. cons.; Schreb., *L. Gen. Pl.*, ed. 8, 1: 144. 1789; Juss., *Gen. Pl.*: 125. 1789; Gis., *Praelect.*: 384, 391. 1792; Batsch, *Tab. Affin. Regni Veg.*: 196. 1802; Hedw., *Gen. Pl.*: 127. 1806; Spreng., *Anl. Kenntn. Gewächse*, ed. 2, 2: 457. 1817; Reichenb., *Consp. Regni Veg.*: 125. 1828; Spreng., *Gen. Pl.*, ed. 9, 1: 139. 1830; Bartl. & Wendl., *Ord. Nat. Plant.*: 195. 1830; Endl., *Gen. Pl.* pt. 9: 668. 1839; Dietr., *Synops. Pl.* 1: 563, 637. 1839; Meisner, *Pl. Vasc. Gen.*: 183, 276. 1840; Endl., *Ench. Bot.*: 332. 1841; Walp., *Rep. Bot. Syst.* 3: 956. 1845; Miers, *Hooker's J. Bot. Kew Gard. Misc.* 1: 65. 1849; Miers, *Ann. Mag. Nat. Hist. ser. 2*: 2: 179. 1849; Benth. & Hook., *Gen. Pl.* 2: 897. 1876; Dalla Torre & Harms, *Gen. Siph.*: 449. 1904; Láz. Ibiz., *Compend. Fl. Española*, ed. 2, 2: 513. 1907; Green in Rehder & al., *Bull. Misc. Inform.* 1935: 523; Gal. & Valdés, *Lagascalía* 1: 7. 1971.—**Type species:** *Triguera ambrosiaca* Cav. (typ. cons.).—**FONTQUERIELLA** Rothm. in Font-Quer & Rothm., *Brotéria* 36: 150. 1940 nom. illeg., superfl.—**Type species:** *Triguera ambrosiaca* Cav. (typ. cons.).

Triguera osbeckii (L.) Willk.

Triguera osbeckii (L.) Willk. in Willk. & Lange, *Prodr. Fl. Hisp.* 2: 524. 1870; Amo y Mora, *Fl. Fan. Iberica* 3: 376. 1872; Pérez Lara, *Fl. Gaditana*, 1886; Willk., *Suppl. Prodr. Fl. Hispanicae*: 169. 1893; Láz. Ibiz., *Compend. Fl. Española*, ed. 2, 2: 513. 1907; Gherzi y Vila, *Cat. Pl. Cádiz*: 172. 1915; Jahand. & Maire, *Cat. Pl. Maroc* 3: 659. 1934; *Bull. Alpine Gard. Soc. Gr. Brit.* 6: 56, 172, 252. 1938; Quezel. & Santa, *Nouv. Fl. Algérie* 2: 826, t. 2442. 1963; Hawkes in Tutin & al. (eds.), *Fl. Europaea* 3: 200. 1972.—*Verbascum osbeckii* L., *Sp. Pl.* 1: 179. 1753; Osbeck, *Dagb. Ostindisk Resa*: 52. 1757; L., *Sp. Pl.*, ed. 2, 1: 255. 1762; Gmel., *L. Syst. Nat.*, ed. 13, 2: 378. 1791; Willd., *L. Sp. Pl.*, ed. 4, 1: 1006. 1798; Pers., *Synops. Pl.* 1: 216. 1805.—**Fontqueriella osbeckii** (L.) Rothm. in Font-Quer & Rothm., *Brotéria* 36: 151. 1940.

Blattaria purpurea [Osbeck, *Lärda Tidn.* 1751: 135].

Triguera ambrosiaca Cav., *Monad. Class. Diss. Dec. 2*, app.: II, t. A. 1786; Lam., *Tabl. Encl. Bot.* 1: t. 114. 1792; l. c. 3: 10. 1794; Willd., *L. Sp. Pl.*, ed. 4, 1: 839. 1798; Jaime Saint-Hil., *Expos. Fam. Nat.* 1: 287. 1805; Pers., *Synops. Pl.* 1: 218. 1805; Poir., *Encycl. Méth. Bot.* 8: 99. 1808; Roem. & Schult., *L. Syst. Veg.*, ed. nova, 4: 698. 1819; Spreng., *L. Syst. Veg.*, ed. 16, 1: 661. 1824; Poir. in Levr. (ed.), *Dict. Sci. Nat.* 55: 308. 1828;

Don, *General Syst.* 4: 480. 1837; Webb, *Iter Hispaniense*: 27. 1838; Dietr., *Synops. Pl.* 1: 637. 1839; Boiss., *Voy. Bot. Espagne* 2: 437. 1839; Walp., *Rep. Bot. Syst.* 3: 124. 1844; Miers, *Hooker's Jour. Bot. Kew Gard. Misc.* 1: 6. 1849; Miers, *Ill. S. American Pl.* 2: t. 75. 1849-1857; Dunal in DC., *Prodr.* 13. pt. 1: 22. 1852; Walp., *Ann. Bot. Syst.* 3: 175. 1852; Willk. in Willk. & Lange, *Prodr. Fl. Hispanicae* 2: 524. 1870; Amo y Mora, *Fl. Fan. Ibérica* 3: 375. 1872; Benth. & Hook., *Gen. Pl.* 2: 897. 1876; Pérez Lara, *Fl. Gaditana*: 310. 1886; Colm., *Enum. Pl. Hispano-Lusitanica & Baleares* 4: 137. 1888; Batt. & Trab., *Fl. Algérie* 2: 619. 1890; Wettst. in Engl. & Pr., *Nat. Pfl.* 4(3b): 16. 1891; Willk., *Suppl. Prodr. Fl. Hispanicae*: 169. 1893; Batt. & Trab., *Fl. Algérie & Tunisie*: 240. 1904; Láz. Ibiz., *Compend. Fl. Española*, ed. 2, 2: 513. 1907; Ghersi y Vila, *Cat. Pl. Cádiz*: 172. 1915; Batt., *Contr. Fl. Atlantique*: 63. 1919; Batt. & Jahand., *Bull. Soc. Hist. Nat. Afrique Nord* 12: 145. 1921; Murb., *Acta Univ. Lund ser. 2.* pt. 2, 19: 35. 1923; Pau, *Monde Pl. (Toulouse) sér. 3*, 48: 6. 1926; Caball., *Fl. Anal. España*: 406. 1940; Guinea López, *Fl. Básica*: 113, t. 1130c. 1961; Stocken, *Andalusian Flow.*: 50 (photo), 60, 78, 147, 164. 1969; Hawkes in Tutin & al. (eds.), *Fl. Europaea* 3: 200. 1972.

Triguera baccata Gmel., *L. Syst. Nat.*, ed. 13, 2: 338. 1791; Dunal in DC., *Prodr.* 13: 22. 1852; Colm., *Enum. Pl. Hispano-Lusitánica & Baleares* 4: 138. 1888.

Despite our inability to present the identity of *Triguera inodora* Cav. we add for the sake of completeness the synonymy and literature of that species.

Triguera inodora Cav., *Monad. Class. Diss. Dec. 2*, app.: III. 1786; Lam., *Tabl. Encycl. Bot.* 3: 10. 1794; Willd., *L. Sp. Pl.*, ed. 4, 1: 839. 1798; Pers., *Synops. Pl.* 1: 218. 1805; Poir., *Encycl. Méth. Bot.* 8: 100. 1808; Roem. & Schult., *L. Syst. Veg.*, ed. nova, 4: 698. 1819; Spreng., *L. Syst. Veg.*, ed. 16, 1: 661. 1824; Poir. in Levr. (ed.), *Dict. Sci. Nat.* 55: 308. 1828; Don, *General Syst.* 4: 480. 1837; Dietr., *Synops. Pl.* 1: 637. 1839; Walp., *Rep. Bot. Syst.* 3: 124. 1844; Miers, *Hooker's Jour. Bot. Kew Gard. Misc.* 1: 67. 1849; Dunal in DC., *Prodr.* 13: 22. 1852; Walp., *Ann. Bot. Syst.* 3: 175. 1852; Willk. in Willk. & Lange, *Prodr. Fl. Hispanicae* 2: 524. 1870; Amo y Mora, *Fl. Fan. Ibérica* 3: 375. 1872; Benth. & Hook., *Gen. Pl.* 2: 897 (discuss.). 1876; Colm., *Enum. Pl. Hispano-Lusitánica & Baleares* 4: 137. 1888; Láz. Ibiz., *Compend. Fl. Española*, ed. 2, 2: 513. 1907; Pau, *Monde Pl. (Toulouse) sér. 3*, 48: 6. 1926; Hawkes in Tutin & al. (eds.), *Fl. Europaea* 3: 200. 1972.—**Nicotiana inodora** (Cav.) Pau, *Monde Pl. (Toulouse) sér. 3*, 48: 6. 1926.

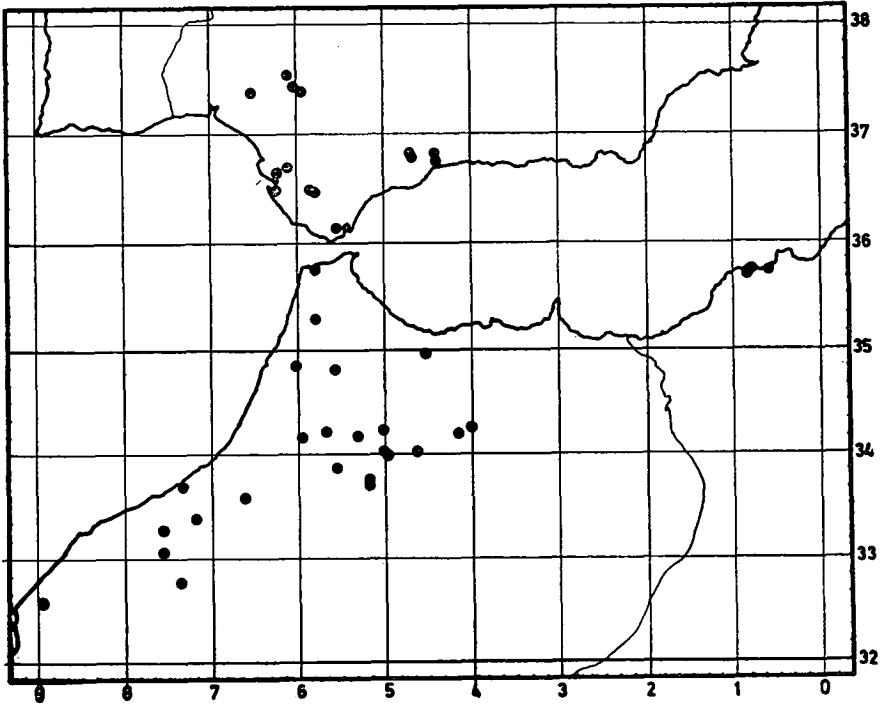
Tap-rooted, annual herb, erect, 7-56 cm. high, simple or more often branching at the middle part of the stem, or with a similar main stem and ascending, basal branches approaching the height of the main stem, or less often main stem not developed only ascending branches present. Stems and branches subsulcate, glabrous or often with scattered hairs on upper part, rarely all over, very rarely villous. Hairs on all parts of the plant uniseriate, whitish, or often brownish. Leaves alternate, sessile, pinnate, glabrous above or with a few hairs near tip, more or less villous on the margin and on nerves beneath, at least as young, rarely on lamina, usually decurring, basal leaves longer than stem leaves, spatulate, crenate-obscurely crenate-subentire, passing gradually but rather soon into obovate-elliptic-ovate, rarely broadly ovate stem leaves, which are coarsely crenate-dentate, rarely lobed, very rarely subentire, but usually entire on basal $1/4-1/2$, rarely also on apical $1/4$, apex acute-rounded - broadly rounded, base attenuate-cuneate - very broadly rounded, 2,4-6,5 x 1,6-4,8 cm. Internodes usually shorter than leaves. Inflorescences biflorous, extra-axillary, usually 5-8 in number on upper half or third of stem, rarely lower, alternating with usually 3 leaves, peduncle 1,5-3,5 (-6) mm. in flower, 4-6 (-8) mm. in fruit, lower flower inserted usually below the middle of peduncle, 0,5-2 (-3,5) mm. from the base in flower, 1,5-2 (-6) mm. in fruit, upper flower at the very tip, insertions surrounded by mostly conspicuous, bullate-lobed, usually slightly hairy excrescences, often decurring towards the base of the peduncle, pedicels 6-13 (-20) mm. in flower, up to 25 mm. in fruit. Flowers nodding, zygomorphic. Calyx campanulate, hirsute on the outside, glabrous on the inside, persistent, total length in flower 6,5-10,5 mm., in fruit up to 17 mm., tube 1-3 mm., lobes 5, ovate-triangular, acute-obtuse, 5-9 x 2-4 mm., unequally wide, 1-nerved, slightly keeled. Corolla purple, basal part of tube yellowish, obliquely infundibular with a bend at the middle posteriorly, and straight-slightly upwards curved anteriorly, total length 13-22 mm. and 17-27 mm. respectively, glabrous except for scattered hairs on the outside along the midvein to each lobe; lobes 5, very broadly rounded, often retuse, 4-9 mm. long, 10-15 mm. wide, terminating in a triangular, c. 1 mm. long and broad, dorsally villous tooth. Stamens 5, slightly dimorphic, filament tube membranous, slightly oblique, distally narrowed, 1-2 mm. long, enclosing the ovary, in young flowers exceeding it by up to 1 mm., inserted on the corolla tube 0,5-1 mm. from the base, 4 posterior filaments 0,5-1,5 mm. long, anterior usually a little shorter, anthers yellow, narrowly ovate, base cordate, tip emarginate-bicorn, 4 posterior 4-5 mm. long, anterior slightly shorter, introrse, dehiscing by longitudinal slits, widened and almost porelike near the tip. Ovary superior, subglobose, 1-2 mm. long,

imperfectly 2-celled, placenta basal-axile, ovules 5-15 in each locule, style straight, subulate, 5-7 mm. long, persistent, stigma capitate. Fruit dry, thin-walled, globose, 10-13 mm. wide, seeds 4-8 (-14), brown, cochleate, favose, c. 5 x 4 x 2 mm., embryo terete, spiral, embedded in albumen.

All specimens cited have been studied and, with the exception of the specimens in COI, LD and LINN annotated by us. (?) indicates that we may not have deciphered correctly the word preceding it because of a difficult handwriting on the label. A collector's name and a question mark in brackets, indicate that the specimen in question has most probably been gathered by that collector, even though his name does not occur on the label.

ALGERIA. Champs incultes bordant le ruisseau de la Ferme des Andalouses, près d'Oran, 21.III.1852, *Balansa* 212 (C, COI, G, K, MPU, P, W); friches des terres argileuses des bornés de l'O. Hammadi (El Ançor), *Doumergue* (MPU, P); Oran, *herb. Dunal* (MPU); Oued Eufra (?), *Munby* (MPU); in pratis argillosis in Africa boreali primus inveni, Oran, III.1852, *Munby* (MPU); in Barbaria primus inveni in pratis argillosis, Oran, IV.1852, *Munby* (P); in pascuis argillosis, Oran Martio fl. raro, III.1856, *Munby* 99 (BM, G, P); Oran, printemps 1873, *Schlumberger* (L); Oran, Les Andalouses, *Trabut* (MPU); Oran, bords des champs argileux dans la plaine des Andalouses, 7.III.1869, *Wariou* (G, K, P).

MOROCCO. El Hadjeb, 2.V.1914, *Biau* (P); Oued Legota (?) ou Oued Bou (?) Kachond (?), nouveau pour la Maroc, *herb. Brives* (MPU); near Rich, corolla intense violacea, annual, 29.IV.1939, *Davis* 615 (K); Tangier to Meknes, Khanat Habefsi (?), IV.1880, *Drummond-Hay* (K); Tangier to Meknes, Oued el Hamayin (?), S. of Cerrila (?), IV.1880, *Drummond-Hay* (K); hab. in arvis derelictis pr. emporium Sok-el-Jemis (Sahel) c. El Araix, 25.III.1930, *Font-Quer* 586 (G, M, S); Petitjean, clayey foothills, cultivated ground, IV.1935, *Garnett* 18/6 (BM, M); Petitjean, 5.IV.1934, *Garnett* 32/5 (BM); région Chaouia, «tirs» de l'Oued Nefifik, 150 m. alt., III.1932, *Gattefossé* (S); terres argileuses noires (tirs) près Boucheron, Chaouia, 20.V.1936, *Gattefossé* (G, K, MPU, P, RAB); de *Gironcourt* 671 (P); Rabat-Meknes, fls. purple, erect, 15-18", soil red, 4.IV.1931, *Alice & Godman* 19; NO de Fez, *Grant* VI. 1888 (P); vallée de l'oued Mikes, 19.V.1888, *Grant* (P); Zaer, Marchand, terres argileuses, 400 m., 22.IV.1927, *Jahandiez* 20 (BM, G, LD, VI.1888, *Grant* (P); vallée de l'oued Mikes, 19.V.1888, *Grant* (P); Zaer, M, MA); Lalla Mimouna du Gharb, champs, 4.III, *Jahandiez* 51; Djebala, champs cultivés, 7.V.1929, *Jahandiez* 144 (BM); Berreschid, champs, II-III, *herb. Laisney* (RAB); M. marues miocènes entre Fés et la vallée de l'Innaouen



Total distribution of *Triguera osbeckii* (L.) Willk.

(?), 13.IV.1921, *Maire* (MPU); camp Marchand, champs argileux, 22.IV.1925, *Maire* (MPU); pont sur l'oued Sebou au Nord de Fez, 24.IV.1933, *Maire & Wilczek* 932 (G); in arvis argillaceis ad pontem Suburis inter Fés et Moulay-bouchta, 24.IV.1933, *Maire & Wilczek* (MPU); Moyen Sebous Meknés, bord de la R 34 (deviation Rabat-Midelt), 2.IV.1963, *Mathy* 438 (RAB); North Marocco, 1886, *H. N. Moseley* (or *Drummond-Hay* ?) (K); Fez, in arvis, I.1912, *Mouret* 2371 (a second sheet of 2371 is labelled: Dar Mahrez, près Fez, I.1913) (P); Chaouia, Dar-bel-Hamri, 15.III.1921, *Murbeck* (LD); Settat, Bir Jdour (?) in segetibus, 26.V.1912, *Pitard* 1758 (P); Col de Touahar entre Taza et Fez, 24.III.1921, *Rodié* 140 (MPU); entre Taza et Fez, près du col de Touahar, 24.III.1921, *Romieux* 1405 (G); 5 Km. ad orient. a Taza, in agro derelicto, ca. 600 m.s.m., 28.IV.1936, *Samuelson* 7190 (K, S); 5 Km. ad bor.-occid. ab El Hajeb, in agro argilloso, ca. 650 m.s.m., 7.V.1936, *Samuelson* 7479 (S); Rhaid Sud, environs Souk el Arba du Rhaid, 11.III.1952, *Sauvage* (RAB); lecta mense Majo 1803, Imperio Marrocano, *Schousboe* (P); Fez, III.1930, *Trethewy* 334 (K); Petitjean, III.1935, *Trethewy* 380 (K); Tangier, not seen here previously by A. W. T., III.1936, *Trethewy* 340 (K);

Bir (?) Allal (?), Beni Gorfet, 21.III.1925, *Vidal* (MA); CN-Terres grasses à la base du Ibel Thrat, près Fes, 9.III.1947, *Vindt* 202 (RAB); Eastern slope, about 10 Km. North of Ouezzane, Rif Mountains, area of Zanddeuila, petals very darkly violet, conspicuous, very local along roadside, in front of barley fields, loamy clay, 14.IV.1961, *De Wilde, De Wilde & Dorgelo* 1573 (BM); récoltés à Lalla Mimouna du Gharb, inodore, 4.III.1920, no collector (compare with *Jabandiez* 51) (MPU); Zaers, près Marchand, dans les tirs, 9.III.1926, illegible collector (RAB).

SPAIN. Casas Viejas (pr. Cádiz), IV.1914, *Beltrán* (MA); prope Sevillam in argillosis, VI.1849, *Boissier* (G); prope Sevillam, 1849, *Boissier & Reuter* (C, COI, G, K, P, UPS, W); Palma del Condado (Huelva), inter segetes, 18. III.1968, *Borja* (MA); cultivos de cereales cerca de La Palma del Condado (Huelva), 17.III.1968, *Borja, Mansanet & Izco* (COI, MAF); champs argileux à Medina Sidonia, 2.V.1849, *Bourgeau* (C); dans le champs argileux à Medina Sidonia, 21.III.1849, *Bourgeau* 351 (BM, COI, G, K, LD, LIVU, MPU, P, RAB, UPS); hab. circa Hispalim = Sevilla, floret vere, 1841, *Boutelou* (M); Caños de Meca, 25'-50', roadside, stones and red clay, 1.IV.1959, *Brinton-Lee* (K); Cádiz: entre Medina Sidonia y Alcalá de los Gazules, a 8 Km. de Alcalá de los Gazules, 13.V.1971, *Cabezudo, Domínguez & Talavera* 261.71 (SEV); Sevilla, 15.V.1885, *herb. de Coincy* (P); Sevilla, camino viejo de Castilleja, III, *Colmeiro* (C); campos arcillosos de Sevilla, IV-V, *Colmeiro* (MA); Sevilla, *Colmeiro* (G, MA); Campos de Itálica, 19.IV.1897, *Eguía* (MA); Sevilla, Gerena, bordes de la carretera y cultivos de cebada, 12.III. 1968, *Galiano, Silvestre & Valdés* (SEV); Sevilla, La Pañoleta, 9.IV.1972, *Galiano, Valdés, Cabezudo & Talavera* 225.72 (C); Málaga, Pizarra, Alhaima, bordes de acequias, 90 m.s.m., 14.IV.1969, *Gibbs, Silvestre & Valdés* (SEV); Málaga to Alora, near Pizarra, roadside and waste ground, 14.IV.1969, *Gibbs, Silvestre & Valdés* 1077.69 (BM); Jerez de la Frontera (Cádiz), XI.1892, *D. M. Higgins* (BM, LIVU, MA); Jerez, 1893, *D. M. Higgins* (BM); regnum Granátense, prov. Malacitanæ in agris argillos pr. Alora, rarissime, 26.V. 1879, *Huter, Porta & Rigo* (G); Castilleja, pr. Sevilla, 2.III.1852, *Lange* (P, UPS), 3.III.1852 (C), without date (S); El Torbiscal (Sevilla), 27.III.1968, *Malato-Beliz* (SEV); Sevilla, 10.IV.1910, *herb. Martínez* (MA); Sevilla, IV. 1902, *herb. Más y Guindal* (MAF); 1860, *McLeay* (K); in locis cultis, Jerez (Cádiz), 12.IV.1946, *Muñoz Medina* (S); prov. de Cádiz, terrenos incultos del Cortijo de Santa María del Pino, cerca de Jerez de la Frontera, 12.IV. 1946, *Muñoz Medina* 280 (MA, MAF); prov. Cádiz: Wegränder des Santuario de Nuestra Sra. de la Luz nördlich Tarifa, 11.IV.1968, *Merxmüller & Lippert* (M); prov. Cádiz, Brachäcker etwa 7 Km. östlich Medina Sidonia an

der Strasse nach Alcalá, 10.IV.1968, *Merxmüller & Lippert* (M); ex Hispania, *Osbeck* (S, holotype of *Verbascum osbeckii* L.); legi in pascuis aquosis extra urbem Puerto de Santa María in Hispania, 8.II.1751, *Osbeck* (S, isotype of *Verbascum osbeckii* L.); Salee (*Osbeck* ?) (LINN, isotype of *Verbascum osbeckii* L.); (*Osbeck* ?) (C, isotype of *Verbascum osbeckii* L.); in argillosis ad camino de Lebrija prope Jerez, 24.IV.1875, *Pérez Lara* (MAF); champs de Blod (?) entre Tariffe & Vejer de la Frontera, *Pignante* (G); Málaga, 48 (year or coll. no. ?), *Prolongo* (W); in argillosis pr. Sevilam, VI.1849, *Reuter* (P); (*Trigueros* ?) (MA, holotype of *Triguera ambrosiaca* Cav.); (P-JUSS, P-LAM, isotypes of *T. ambrosiaca* Cav., both sent by *Cavanilles*); habitat Hispali (Sevilla), 1797 (*Trigueros* ?) (MA); circa Malagam, *Webb* (K); Málaga, 1844, *herb. Willkomm* (COI); prope urb. Sevilla, 1844, *herb. Willkomm* (COI); in Hispania provincia boetica, no collector (UPS); se cría en Sevilla, 1802, no collector (MPU); Vega de Triana (Sevilla), III.1902, no collector (MAF); Sevilla, no collector (MA); ad ripas fluminis Guadalhorce, etiam legi olim prope Alora, 20-25.IV.1938, no collector (G); Country unknown: *herb. Moricand* (G); *herb. Pavón* (BM); 1853, *Seidensticker* (G); *herb. de Ventenat* (G); 1802, no collector (G); cultivated material: *herb. Neyraut* (MPU); *herb. Swartz* (S); hort. Valegres, 1850 (G).



Verbasum obovatum (L.) Willd.
 Holotype of *Verbasum obovatum* L.
 No. 11
 Det. Dr. G. Thomsen
 2. 2. 1972



Botanical Museum of the University of Copenhagen
 Reg. no.

58
Verbasum
 & *Obovatum*
 Sp. P. 179
 (good plant: common)
 Struve = *Verbasum Obovatum* Willd.?
 = *Verbasum obovatum* L. Willd.?
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Fig. 1.—Holotype of *Verbasum obovatum* L. Front of sheet.
 The light square is due to screening.

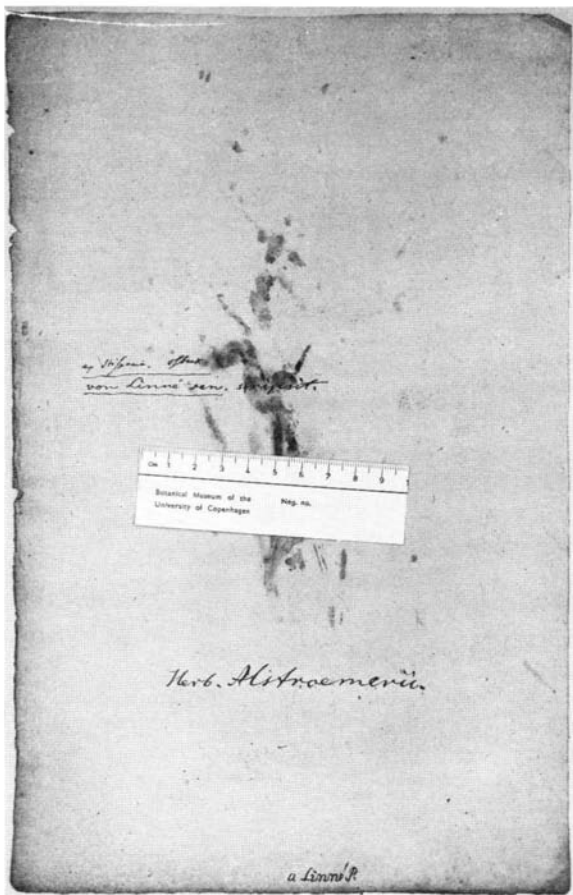


Fig. 2.—Holotype of *Verbasicum osbeckii* L. Back of sheet.



Fig. 3.—*Triguera ambrosiaca* Cav. reproduced from Miers, *Ill. S. American Pl.*, 1849-57.