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***Euphorbia lamarckii* Sweet, correct name for
E. obtusifolia Poir. non Lam.**

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ABSTRACT: Following rejection of proposal 1349 (in Taxon 49, 2000) to conserve the name *Euphorbia obtusifolia* Poir. non Lam. (Euphorbiaceae), which is extensively used in the bibliography to refer to the most widespread form of “tabaiba” in the Canary Islands, the authors argue that this taxon should now be designated by the legitimate priority name *E. lamarckii*, based on the same nomenclatural type, and express opposition to other proposals defending the use of the heterotypical synonym *E. broussonetii*. The latter name is considered by the authors of this study as an independent taxon with varietal rank under the new combination *E. lamarckii* var. *broussonetii* (Willd. ex Link) Molero & Rovira.

Keywords: nomenclature, wild tabaiba, *Euphorbia obtusifolia* Poir. non Lam., *E. lamarckii*, *E. broussonetii*, Euphorbiaceae, Canary Islands.

RESUMEN: Rechazada la propuesta 1349 (en Taxon 49, 2000) de conservar el nombre *Euphorbia obtusifolia* Poir. non Lam. (Euphorbiaceae), usado ampliamente en la bibliografía para referirse a la “tabaiba” más extendida en las Islas Canarias occidentales, los autores argumentan que para designar actualmente a este taxon debe utilizarse el nombre legítimo y prioritario *E. lamarckii*, basado en el mismo tipo nomenclatural, frente a otras propuestas que defienden el uso del sinónimo heterotípico *E. broussonetii*. Este último nombre es atribuido por los autores de este trabajo a un taxon independiente con rango varietal, bajo la nueva combinación *E. lamarckii* var. *broussonetii* (Willd. ex Link) Molero & Rovira.

Palabras clave: Nomenclatura, Tabaiba salvaje, *Euphorbia obtusifolia* Poir. non Lam., *E. lamarckii*, *E. broussonetii*, Euphorbiaceae, Islas Canarias.

NOMENCLATURAL AND TAXONOMICAL PROPOSAL

E. lamarckii Sweet, Hort. Suburb. London: 107 (1818) var. ***lamarckii***

Typus: "Cette plante croît dans les lieux maritimes de l'Afrique, & est cultivée au Jardin du Roi". "E.mauritanica..." [P-LAM, IDC, fiche 584, row B, N°6], lectotype (Molero & Rovira, 1998b).

≡ *E. virgata* Desf., Tabl. École Bot.: 204 (1804), *nom. illeg.* [non Waldst. & Kit., Descr. Icon. Pl. Hung. 2: 176, 1803]. ≡ *E. obtusifolia* Poir. in Lam., Encyclop., Suppl. 2: 609 (1812), *nom. illeg.* [non Lam., Encycl. 2: 430(1788)].

E. lamarckii var. ***broussonetii*** (Willd. ex Link) Molero & Rovira, ***comb. nov.***

≡ *E. broussonetii* Willd. ex Link in Buch, Phys. Beschreib. Canar. Ins.: 1158 (1828).

Type: "Teneriffa" (B-W n° 9252) ≡ *E. dendroides* var. *broussonetii* (Willd. ex Link) Kuntze, Rev. Gen. Pl. 2: 604 (1891).

= *E. obtusifolia* Poir. var. *wildpretii* Molero & Rovira in Taxon 47: 325 (1998).

DISCUSSION

Following the decision by the Nomenclature Committee for Spermatophyta (Brummitt, 2000) to reject proposal 1349 submitted by Molero & Rovira (1998a) to conserve the name *Euphorbia obtusifolia* Poir., the oldest available legitimate name is *E. lamarckii* Sweet, based on the description and the only existing sheet of *E. mauritanica* sensu Lam. [1778: 418] non L.

Brummitt (2000) comments that this decision was preceded by a intense exchange of additional information and opinions between the Committee, the authors of this study and Dr Bramwell. The latter is opposed to the proposal on the basis of arguments, opinions and an alternative proposal which he submitted to the Committee of Spermatophyta in advance of a study announced for publication in *Botanica Macaronésica* 24 in the year 2000, which has finally come out three years later (Bramwell, 2003).

Basically, Bramwell expresses the view in his article that proposal 1349 is unnecessary and is based on an "optimistic" interpretation of the type specimen of *E. obtusifolia* Poir. preserved in Paris. He considers the sheet, which is of uncertain geographical origin, to be in a deplorable state of conservation which makes it impossible to distinguish, without risk of error, the specimens from Tenerife and the western islands from those of *E. regis-jubae* (*E. pseudodendroides*) from the Atlantic coast of Morocco or even *E. piscatoria* from Madeira. He also argues that the name *E. obtusifolia* Poir has been applied by some authors to two different species from the Canary Islands (*E. obtusifolia* and *E. regis-jubae*) and consequently has been a source of confusion in the past. He suggests that proposal 1349 be rejected and wrongly concludes, in a note at the end of the article, that the name *E. broussonetii* be used instead of *E. obtusifolia* or *E. lamarkii*, despite the fact that this name has seldom been used in the Canarian bibliography (Lindinger, 1926; Bramwell & Bramwell, 2001); he also supports this choice by the fact that this name has recently been used by Carter & Eggli (1997) in the CITES checklist for succulent taxa of *Euphorbia*.

The Committee voted to reject the proposal for conservation, but did not express an explicit opinion about the true identity of the type specimen under dispute. If *E.*

mauritanica sensu Lam. is a specimen of western Canarian origin which can be assimilated to other individuals from Tenerife, as we maintain, the correct name to designate the western Canary Island taxon is *E. lamarckii*. If it is alleged that the specimen of *E. mauritanica* from P-LAM is too young and is in such poor condition that it cannot be used as the nomenclatural type for *E. lamarckii*, as Bramwell asserts in his text, then a proposal must be presented in Taxon forthwith to reject the name *E. lamarckii*, along with its type and this should already have been done.

Now that Bramwell's note has been published (2003), we therefore take the liberty to present certain data in reply to his arguments. These data are complementary to the note published by Molero & Rovira (1998b) and sent at the time to the Committee of Spermatophyta which justify the conservation of the name and nomenclatural type of *E. lamarckii* Sweet, lest its rejection should be under consideration.

The identity of *E. mauritanica sensu* Lam. non L. Lamarck's herbarium sheet contains two plant fragments. One is in a young reproductive state, but not so young as Bramwell claims. It is shown without capsules in the present photo on the IDC card, but when we examined it in the Paris herbarium on 18.12.1989 it possessed a fourth radius surmounted by an immature capsule which was later lost, though it is now difficult to prove this. At this stage, the bracts and cyathia are already fully developed. The fertile fragment displays characters that are typical of populations of *E. lamarckii* from the W and S of Tenerife: acute leaves and bracts, with a simple pleiochasial synflorescence, without secondary radii, and cyathia endowed with glands without corns, truncated or rounded. These characteristics, admittedly, can very occasionally be displayed by some individuals of *E. regis-jubae* from the Atlantic coast of Morocco, and very probably in the Eastern Canary Islands, though among the plentiful herbarium material from these islands we have examined (over a hundred sheets) we have only observed two sheets with a few cyathia with hornless glands and the frequency must therefore be very low. The sub-cyathial bracts are a character of greater diagnostic significance. In the specimen in the Lamarck herbarium they are elliptical-acute and 3.5-4.0 mm long, thus within the limits observed for *E. lamarckii* (2.5-4.5 mm) and out of the range in *E. regis-jubae* (5)5.5-10 mm (Molero & Rovira, 1998b). The material in this sheet in the Paris herbarium is consistent with Lamarck's description (1812) and matches the brief diagnosis on the identifying label in Lamarck's handwriting which accompanies the sheet in the lower left-hand corner. Thus it is undoubtedly the material cultivated in Paris on which Lamarck based his description, and consequently we consider this sheet an obligate lectotype.

Furthermore, Lamarck specifically indicates in his description (and in the label on the sheet) that they are deciduous (undoubtedly the result of his observations of live material cultivated in Paris) and this characteristic is fairly exclusive to *E. lamarckii*. Other characteristics of *E. lamarckii* are the short sub-cyathial (almost sub-sessile) pedicels that can be observed in the sample. A more difficult matter is distinguishing this fruitless specimen in the LAM herbarium from certain specimens of *E. piscatoria* Ait, which normally presents non-bifurcate pleiochasial rays, final order bracts of 3-5 mm and sub-sessile, sub-orbicular to circular truncate cyathial glands, though the bracts are usually obtuse or rounded at the apex (exceptionally acute) and persistent in *E. piscatoria*. It is highly unlikely that it could be this species, in view of the fact that in Lamarck's (1788) whole compendium on *Euphorbia* there is no mention whatever of species of *Euphorbia* from Madeira or cultivated in the Paris Botanical Garden. Though ripe seeds are missing

from the sheet (as happens in many type materials of *Euphorbia*), the aforementioned characters are sufficient to identify the specimen as coming from the western Canary Islands. Moreover, in terms of statistical probability, it is much more likely that a specimen collected at random in the course of an old expedition should correspond to what is usually found on Tenerife rather than to rare specimens that occur with very low frequency levels on the Atlantic coast of North Africa. Bramwell insists that the rare specimen was collected, whereas it is much more likely that it is the Canarian taxon than the African one.

The sheet of *E. mauritanica* is not in optimum condition for a variety of reasons. These include the characteristics inherent to *Euphorbia* materials, which easily disintegrate with the consequent loss of fragments, and the vicissitudes specific to the collections in the P herbarium itself. But the term “deplorable”, used by Bramwell, seems to us an overstatement. Its state does not differ greatly from that observed in other historical herbaria, such as the collection of *Euphorbia* in FI-WEBB, other collections of *Euphorbia* in French herbaria (Lois, Jordan, Rouy, etc.) and in Linnaeus’s own herbarium (LIN). The type material of *E. regis-jubae* in FI-Webb is also in very poor condition; notably, the type of *E. broussonetii* in B-W 9252, which is claimed as valid, is in worse condition than the material in P-LAM.: it displays a single pleiochasial synflorescence with 4 simple radii terminating in a cyathium, two of which have been eaten away while the other two have truncated glands and an unripe capsule; it lacks sub-cyathial bracts. In principle there seems no doubt that the material for *E. broussonetii* is from Tenerife, but were this not so, the specimen could perfectly well be attributed to a hornless specimen of *E. regis-jubae* from Morocco or an individual of *E. piscatoria* with rapidly deciduous bracts from Madeira (such individuals do exist). Undoubtedly some diagnostic characters, such as the structure of the synflorescence and, to a lesser extent, the shape of the glands, are somewhat variable, but the size of the bracts is an excellent character. If the specimen in P-LAM is identifiable, its state of conservation is not a solid argument on which to basis the rejection of the claimed type.

Locality of *E. mauritanica sensu Lam.* and its interpretation in old Floras and Monographs. Lamarck (1788) situates *E. mauritanica* “dans les lieux maritimes de l’Afrique, & est cultivée au Jardin du Roi”; he believes in its African origin and is influenced by the reading of the protologue of *E. mauritanica* L. (1753) “habitat in Africae maritimis”. Thus it is a cultivated plant and it is very likely that Lamarck mistook the register of origin. At any rate this happened with various taxa from the same geographical area in the same work (Encyclop.2, 1789: *E. canaliculata* Lam. (on p. 417, synonym of *E. clava* Jacq.) “croît dans l’Afrique et dans les Iles Canaries” whereas this South African plant does not live in the Canary Islands; or *E. longifolia* Lam. (p. 417, priority name for *E. mellifera* Ait.) “nous la croyons originaire de l’Afrique ou des Iles Canaries”, when we know it is exclusive to the Canary Islands and Madeira. As to other species, such as *E. lanuginosa* Lam., he writes “croît vraisemblablement (probably)...” etc. Obviously, Lamarck mistook the origin of certain specimens cultivated in Paris and, in the case of some species, failed to distinguish between the African coast and the Canary Islands, as happened with the taxon of concern to us here. As to how this spurge reached the Botanical Garden in Paris to be cultivated, this is truly a very difficult mystery to solve.

It seems clear that both Desfontaines and, later, Poiret and Sweet, sought above all to give a new name to *E. mauritanica sensu Lam.*, not to describe a new taxon from some unspecified place on the very long stretch of African coast included in the ambiguous locality of the protologue (between Tanger and the Cape of Good Hope). It has not been demonstrated

that these authors had either direct or indirect knowledge of the plant from the Atlantic coast of Morocco between Safi and Cape Gir. There is no specimen of *E. virgata* in P or FI that was collected or annotated by Desfontaines from the Atlantic coast of Morocco; Desfontaines worked (Chevalier, 1939) on the *regnum tunetanum* ("la Barbarie"), now Tunisia, which in those days was a very long way from the Atlantic coast. Poiret created *E. obtusifolia* by diagnosing it from the true *E. mauritanica* L. and in the synonymy refers to Lamarck's sheet and locality, indicating that he had seen the plant alive in the Paris Botanical Garden; Sweet confined himself to changing the nomenclature, probably without really knowing the taxon.

Webb & Berthelott (1847) were the first to identify *E. obtusifolia* Poir. as a Canarian plant. In the synonymy they refer to the names *E. mauritanica* Lam. and *E. virgata* Desf.. They correctly diagnosed *E. obtusifolia* from *E. regis-jubae*, especially from the shape of the hornless cyathial glands and the bracts. But for unknown reasons probably under the influence of erroneous references in letters, they mixed up the localities ("species est omnino Canariensis"), thus creating confusion among certain later authors which has come down to the present day, notably among compilers of floras and specialists of the vegetation of the islands who did not study the specific taxonomy of these *Euphorbia* in depth. In any case, these errors in identification have been solved in recent decades. But *E. obtusifolia* Poir. was familiar to and correctly identified by earlier authors (*Bourgeau*, exsicc. n. 343 and 1522; *Bornmuller*, Pl. Exicc. Canarienses, 1901) and other more recent researchers (Lid 1967, Jahandiez & Maire 1932, Molero & Rovira 1998b; etc.). Boissier (1862) also used Poiret's binomen to identify the taxon from Tenerife. He included, in a very complete synonymy, the derived homotypical names of *E. mauritanica* Lam. generated by the necessary nomenclatural change, already including the legitimate *E. lamarckii* Sweet and the later heterotypical synonym *E. broussonetii* Willd.

Recently Carter & Egli (1997) used the non priority name *E. broussonetii* Willd. to replace the illegitimate *E. obtusifolia* Poir. in the CITES checklist of succulent taxa of *Euphorbia*. We assume this to be a response to the urgent need to use an available correct name without attempting to resolve the nomenclatural complexities of a controversial taxon. Bramwell uses this a subsidiary argument to support his proposal. But in taxonomy the rule of priority is still in force and must prevail over other non-scientific considerations which can be rectified: it is easier to change the name of this spurge in a future edition of the CITES checklist than to infringe a universally accepted rule.

Variability of *E. lamarckii*. Within *E. lamarckii* we finally distinguish two varieties that present morphological differences associated with their allopatric distribution (Molero & Rovira 1998b). The basic distinctive traits of *E. lamarckii* var. *broussonetii* are its broader leaves, with the apex between obtuse and emarginate (narrowly linear and acute in var. *lamarckii*) and final order bracts with the apex broadly obtuse, rounded or truncate, very shortly mucronate (the apex is attenuate or acuminate and broadly mucronate in var. *lamarckii*). It is distributed in the north of the island of Tenerife and on Gomera, La Palma and Hierro, unlike var. *lamarckii* which occurs only in southern Tenerife. Both taxa are considered at varietal level because some of the diagnostic characters are less marked in the contact areas at the E and W ends of and because we lack precise knowledge of the degree of stability of the diagnostic characters in populations from La Palma and El Hierro. However, several specimens of both taxa from N and S Tenerife retain their distinctive morphological traits after ten years' cultivation in the Blanes Botanical Garden (Barcelona, Spain).

CONCLUSION

The sheet of *E. mauritanica* in the P-LAM herbarium displays the usual morphological characteristics of the populations of the south of Tenerife which have traditionally been attributed to *E. obtusifolia* Poir., and which also apply, with one small variation (var. *broussonetti*), to the N of Tenerife and the other western Canary Islands. Lamarck's imprecise locality does not preclude recognizing its western Canarian origin, and therefore the legitimate priority name for designating the populations of "tabaiba" on these islands is *E. lamarckii*, following the decision taken by the Committee of Spermatophyta to reject proposal 1341. The state of conservation of the sheet, which is not different from many other type materials preserved in historical herbaria, and the relative youth of the specimens, do not prevent their being assimilated to the materials from Tenerife. The rejection of this nomenclatural type opens a dangerous door which could de-legitimize some well established names whose types are in a worse state of conservation than the one of concern to us here.

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