

# *Euphorbia candelabrum* auctt.

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## Resum

LEACH, L. C. (1992). *Euphorbia candelabrum* auctt. Collect. Bot. (Barcelona) 21:91-95.

En aquest treball es discuteix informació taxonòmica sobre *Euphorbia candelabrum* Welwitsch i el nom il·legítim *E. candelabrum* Kotschy.

Mots claus: *Euphorbia candelabrum*, Euphorbiaceae, Nomenclatura, Taxonomia.

## Abstract

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The paper discusses the taxonomic data of *Euphorbia candelabrum* Welwitsch and the illegitimate *E. candelabrum* Kotschy.

Keywords: *Euphorbia candelabrum*, Euphorbiaceae, Nomenclature, Taxonomy.

It is considered that no apology is needed for returning to the *Euphorbia candelabrum* auctt. problem as the identities, application and authorities, as well as the synonymy and homonymy, remain unresolved despite extensive discussion in the pages of Garcia de Orta and of Taxon over the years (LEACH 1974, 1986). It has also acquired additional importance since Trémaux's drawings of his *E. canariensis* var. have been formally indicated as the lectotype of the illegitimate *E. candelabrum* Kotschy (CARTER, 1988).

There are two intricately related problems involved:

1) That *E. candelabrum* Welw., an Angolan endemic species, was validly published in Proc. Linn. Soc. 2 : 329 (1855); and Ann. Cons. Ultram., Parte Não Oficial, sér. I : 251 (1856) and consequently antedates all other later uses of the epithet "*candelabrum*" in relation to the species of *Euphorbia* L.

2) That application of the epithet "*candelabrum*" to members of the virtually Pan-African group including such species as *E. candelabrum* sensu Kotschy, *E. ingens* E. Mey. ex Bosis., *E. calycina* N. E. Br., *E. hermentiana* Lem. etc., is illegitimate as well as being exceedingly confused.

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There is not the slightest doubt that *E. candelabrum* Welw. was validly published; the reasons for the acceptance of this view were fully explained by LEACH (1974, 1981 & 1986), the final sentence of the explanation of 1986 pointed out that Welwitsch's list of plants, seeds etc., including those of the "Apontamentos", were identical with Nursery and Botanical Garden seed lists of that period, in which, names provided with a description (usually scanty and seldom agnostic) were validly published and universally so accepted. This alone is sufficient confirmation of the validity of Welwitsch's names published with a description in the *Annaes Conselho Ultramarino* or the *Boletim Cons. Ultramarino*. They were almost always precisely diagnostic as he had an almost uncanny knack of perceiving diagnostic characters, e.g. the unique reddish inflorescence of his *Euphorbia candelabrum*. This was precisely diagnostic at the time and remains almost so, even today. All the descriptions in the much discussed "Apontamentos" were similarly brief but many of the taxa there described are also presently accepted as validly published.

***Euphorbia candelabrum* Welw.** in Proc. Linn. Soc. 2 : 329 (1855), "*candelabra*"; Ann. Cons. Ultram., Parte Não Oficial, sér. I : 251 (1856) et in Bol. Ann. Cons. Ultram. 24 : 251 (1856); Hiern, Cat. Afr. Pl. Welwitsch, 1,4 : 946 (1900) et Leach in Garcia de Orta, Sér. Bot. 2(1):31-35 (1974) et in Excelsa 6 : 16 (1976) et in Taxon 30(2) : 483-485 (1981), et in Taxon 35(4) : 711-713 (1986) et in Euphorbia J. 3 : 91 (1985); Court in Succ. Flora Southern Africa: 19 (1985). Non Kotschy (1857), nom. illegit.

Type: Neotype: *Welwitsch* 641 (LISU! iso. BM! LISC! & PRE! photo. COI! G! K!).

*Euphorbia hermentiana* sensu Pax in Engl. Bot. Jahrb. 34 : 72 & 375 (1904), p.p. quoad specim. *Welwitsch* 641!

*Euphorbia conspicua* N.E. Br. in Fl. trop. Afr. 6(1) : 680 (1912), nom. superfl. et illegit.

TYPE: *Welwitsch* 641 (BM!)

*Euphorbia candelabrum* Welw., is endemic in Angola, with its distribution restricted to the coastal areas, more or less from Benguela to Ambriz; main concentrations occur in the Luanda district where dense stands (woods; Welwitsch) are to be seen. This conspicuous species does not appear to be closely related to any other *Euphorbia* species from western Africa and seems possibly to be nearest in many ways to *E. lividiflora* Leach from the eastern tropical littoral and, although more distantly, to the equally conspicuous *E. robecchii* Pax from east and north-eastern Africa.

If ever a name were qualified for a "*confusum*" label it is *Euphorbia candelabrum* Kotschy (for long erroneously as of Trémaux ex Kotschy). It is obviously the incorrect inclusion of Trémaux in the authority by BOISSIER (1862) which has almost certainly caused most of the almost incredible confusion surrounding this name. This is tacitly admitted by Carter by the omission, in her more recent articles, of Trémaux from the authorship of *E. candelabrum* and in her article of (1985) an effort was made to justify its earlier usage by many authors (a notable exception was Pax!), overlooking apparently that they were merely following the example provided by the prestigious Boissier, which "set the fashion".

It is obvious that N.E. Brown, when writing up *Euphorbia* for the Flora of tropical Africa, accepted the publication date of the name *E. candelabrum* "Trémaux ex Kotschy" as 1852 (i.e. as of Trémaux 1852) but the epithet cannot be attributed to Trémaux as he never mentioned the word *candelabrum* or any form of it in either his description or discussion of the plant he called *E. canariensis* L. var.

Kotschy first applied the epithet *candelabrum* to plants seen when rounding a bend on the river (the White Nile), identifying these plants as *E. candelabrum* Trémaux and providing a description which, although undiagnostic, did differ from that of Trémaux's description of his *E. canariensis* var. in respect of the branches—"wing-angled": Kotschy "scarcely winged" Trémaux—whether Kotschy's or Trémaux's description should apply to the plants drawn by



Trémaux or to those seen by Kotschy I leave to the reader to decide! There is no specimen of either! Trémaux's drawing of a branch is certainly not "winged" —cited by Carter (1985) as "very accurate", it is not clear how the "accuracy" was determined since there was no specimen available for comparison and the plant has apparently not been re-collected! It also seems probable that Kotschy had never seen Trémaux's "Voyages" since he consistently misspelt the author's name Trémeau. It is curious that it was also misspelt in Index Kewensis as Trémaux!

The wing-angled branches and the rocky mountainous habitat of Kotschy's plants suggest a relationship with *E. abyssinica* Gmel. rather than with Trémaux's plant. However, lacking a specimen or any description of flowers or fruits it is scarcely possible even to hazard a guess regarding the specific identity of either Trémaux's or Kotschy's plants (for variability in fruit shapes and sizes see Figure 1). In these circumstances it is considered that to have selected Trémaux's drawings as a lectotype was certainly unhelpful! Fortunately no difficulties are likely to arise as the priority of the name *E. candelabrum* Welw. renders *E. candelabrum* Kotschy illegitimate regardless of its typification.

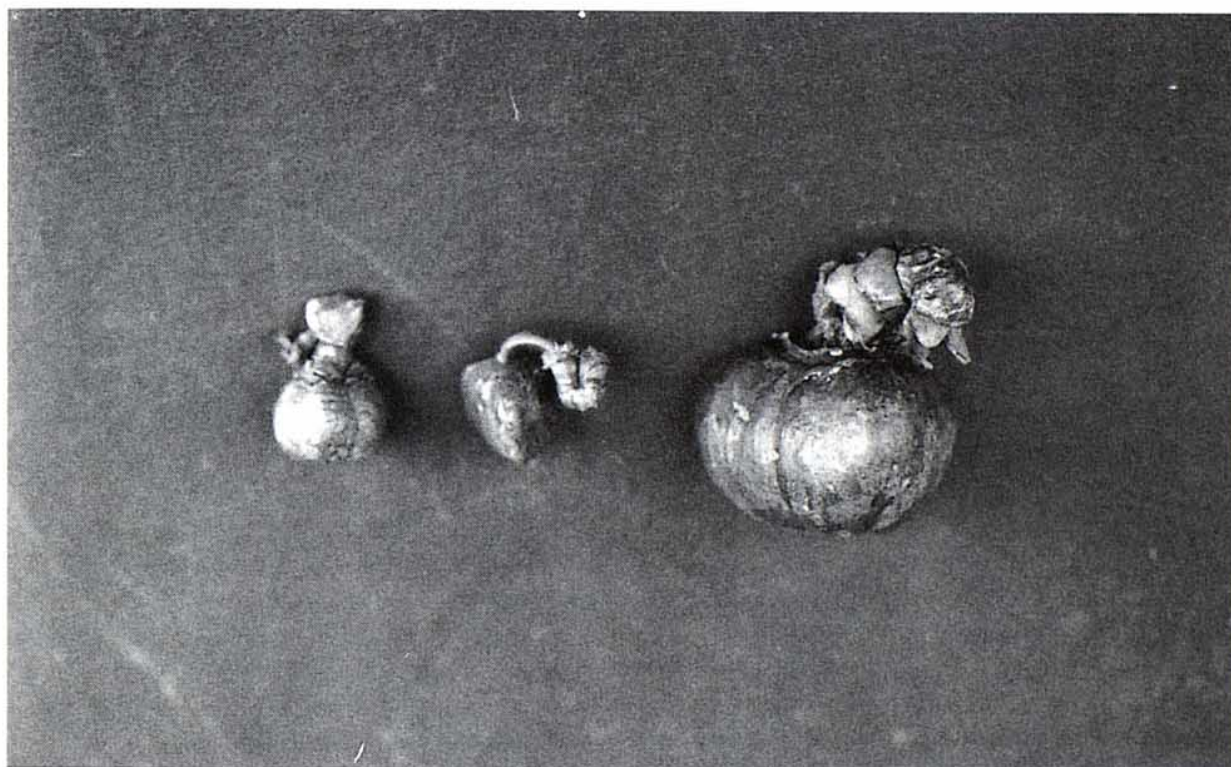


Fig. 1.— Specifically significant variability in shape and size of the infructescences of "*Euphorbia candelabrum* Kotschy" Sensus S. Carter.

There is also some uncertainty concerning Trémaux's locality Kaçane which Carter (1988) confidently equates with the modern Qeissan but Qeissan is south of Roseiras on the Blue Nile  $\pm$  on the Ethiopian border (see Figure 2); however, the co-ordinates of Trémaux's map show Kaçane to be located approximately 220-230 km to the west of Qeissan, i.e. to the west of the White Nile. There seems no reason to doubt the accuracy of Trémaux's map as it was professionally drawn and very detailed. It has not been possible to locate any of the other place or feature names on any available maps of the Sudan which have all been to a much smaller scale; this is not considered necessarily to throw any doubt on the accuracy, maybe Trémaux invented the names so as not to disclose too easily the location of the ancient mines



and "panning" sites. There is a strong suspicion that the north flowing Toumate Riv. (also not located) is actually the White Nile, although the proportions do not suggest a navigable river!

There are, unfortunately, very few diagnostic characters listed in any of the published descriptions of plants in this relationship and even less authoritative information concerning populations or distribution. Populations are usually (of *E. ingens*) very scattered and the collection of good material very difficult. All these factors contribute to the lack of informative specimens.

Common to all members of the group however is a unique fleshy perianth (calyx) which is irregularly 3-lobed (2-lobed in var. *bilocularis*) varies considerably in relation to fruit size and shape, varying in shape, size, thickness and hardness, sometimes becoming almost lignose.

It is the characters of the infructescence which are most reliable for identification purposes. Unfortunately fruiting characters are seldom available in dried material and have, in consequence, scarcely been used for classificatory purposes. A factor which makes the selection of *E. candelabrum* Kotschy (and inclusion of the unidentifiable name) so unsuitable for typification purposes, quite apart from its illegitimacy.

There is no doubt in my mind that *E. candelabrum* should have been classed as unidentifiable and set aside, at least until more nearly complete material became available, instead of becoming the king-pin of the group represented by the widespread, well known and ecologically most important member of the group (? sect. *Calycis*) namely *E. ingens* E. Mey. ex Boiss. which was discovered and named (albeit a nom. nud.) as far back as 1831. In White, Dyer & Sloane, the Succulent Euphorbieae (1941) it was suggested that the species extended into the Rhodesias and possibly into Kenya, which of course it does, but is now based on an unidentifiable single collection the correct name of which is probably *E. calycina* N.E. Br. or possibly *E. murielii* N.E. Br.

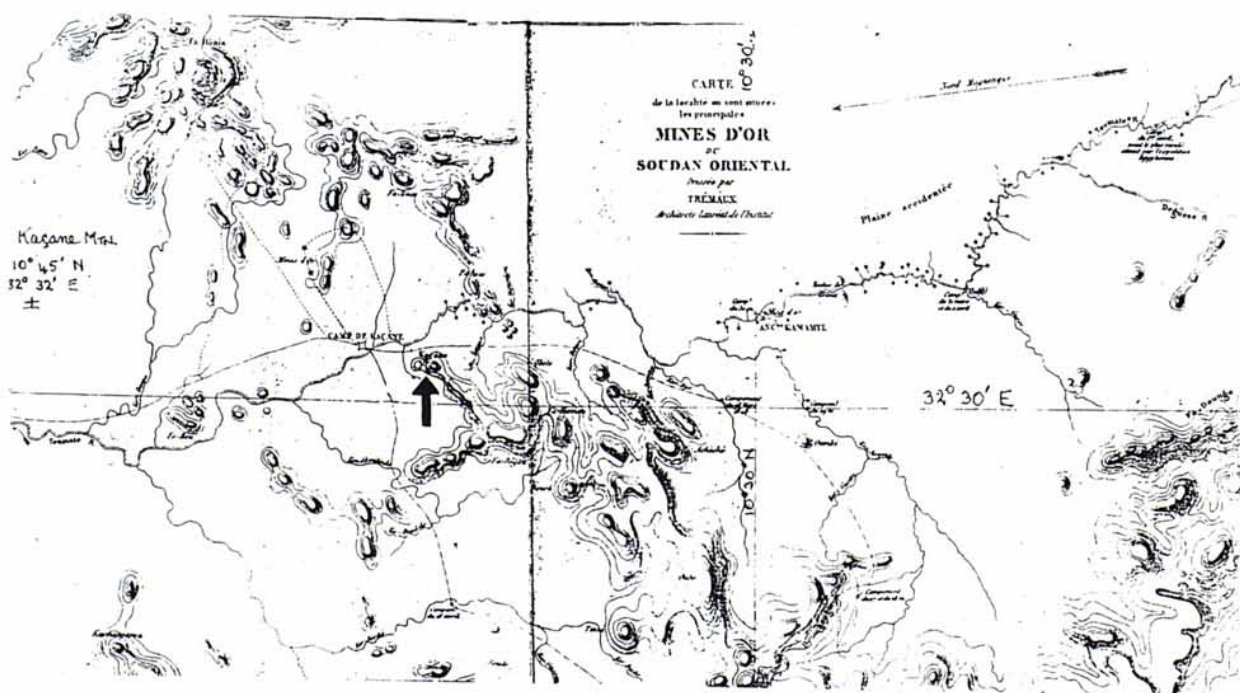


Fig. 2.— Part of the map of Trémaux's voyage to the Sudan, with indication (arrow) of Kaçane (approximately 10°45' N, 32°32' E). The map was marked 'Bulletin de la Société de Géographie, Avril 1850'.

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