

## The identity of *Erythrina princeps*

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### ABSTRACT

An examination of available evidence leads to the conclusion that *Erythrina princeps* A. Dietr. must be regarded as a synonym of *E. humeana* Spreng.

Krukoff and Barnaby in *Phytologia* 25: 17 (1972) have expressed the opinion that *Erythrina princeps* A. Dietr. (1834) and *E. lysistemom* Hutch. are conspecific and that therefore the former name, being the older, should be taken up for this species.

*E. princeps* was described from a plant of unknown origin grown in the Berlin Botanic Garden and unfortunately the specimens known to have existed were destroyed during World War II. However, a photograph of the type specimen was taken in 1929 by the Field Museum of Natural History, Chicago, and their negative No. 2375 is designated by Krukoff and Barnaby as the neotype. At the request of Dr Krukoff, the Field Museum kindly sent me a print from this negative, which is reproduced here, with their permission, as Fig. 1.

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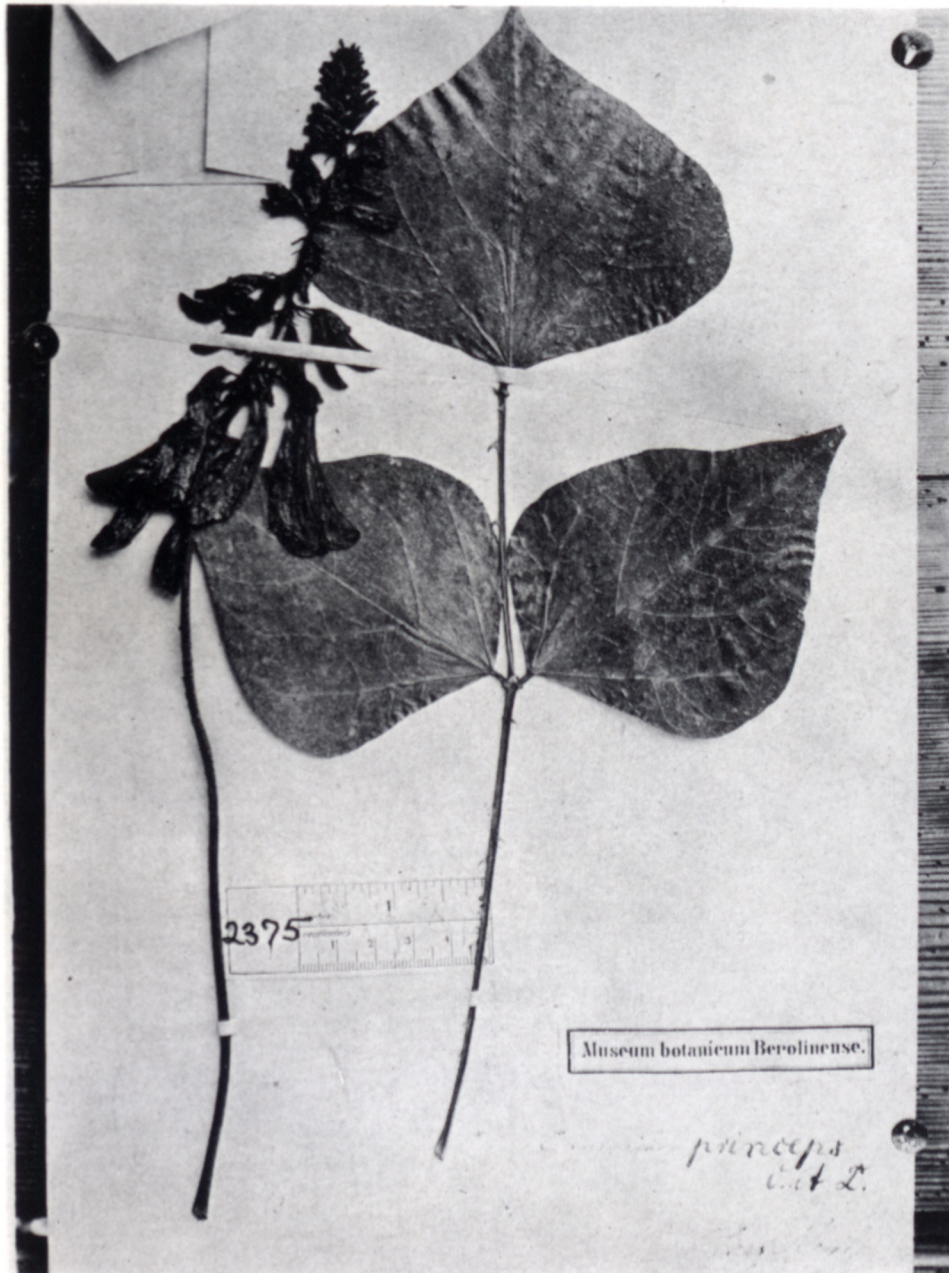


FIG. 1.—*Erythrina princeps* A. Dietr., photograph of the type taken in 1929 by the Field Museum of Natural History, Chicago, and reproduced with their permission.

An examination of this print shows that it does not agree with *E. lysistemon*, which has a dense, compact inflorescence (Fig. 2). In fact, it agrees in all respects with *E. humeana* Spreng. Fig. 3 is a photograph of Bot. Reg. t. 736A (1823), which may be regarded as typifying *E. humeana* (see discussion below), and Fig. 4 shows a modern herbarium specimen of this species.

Before World War II, Dr Krukoff examined a dissected flower from an authentic specimen of *E. princeps* grown in Berlin Botanic Garden in 1844, which was among those destroyed during the war. He describes it as a narrow, declined flower with included androecium that characterizes *E. lysistemon*. It may be pointed out that this characteristic, while serving to separate *E. lysistemon* from *E. caffra*, as was Dr Krukoff's intention, could apply equally well to *E. humeana* as to *E. lysistemon*.

In addition to the markedly elongate inflorescence of *E. humeana*, with spaced verticils of flowers, there is a slight difference in the vexillum shape which assists in distinguishing this species from *E. lysistemon*. In *E. humeana* the vexillum is broadest towards the apex producing an obtuse or clavate appearance while, in *E. lysistemon*, the vexillum is broadest near the middle and tapers towards the apex. In this respect also, the type of *E. princeps* resembles *E. humeana*.

An important character worth noting is the presence of prickles on the petiole, showing in the type of *E. princeps* and mentioned in the original description. This is a constant characteristic of *E. humeana* but in *E. lysistemon* the presence of an occasional prickle on the petiole may be regarded as exceptional.



FIG. 2.—*Erythrina lysistemon* Hutch. (Codd 7987 from Mqanduli) showing the dense, compact inflorescence of this species.



FIG. 3.—A photograph of Bot. Reg. t.736A (1823), lectotype of *E. humeana* Spreng.

Historically it is most unlikely that *E. lysistemon* could have been grown to the flowering stage in Europe by 1834. It has been observed here in Pretoria that this species takes at least 10 years from sowing to flowering, which would necessitate its introduction to Europe before about 1824. *E. lysistemon* reaches its southernmost distribution in the Transkei, a region unexplored botanically before Drege made his momentous journey from the eastern Cape Province to Natal in 1832. Although *E. lysistemon* is common near "Port Natal", this territory was also virtually unexplored until the arrival in 1838 of the naturalists, Krauss and Wahlberg.

There is no evidence that *E. lysistemon* was successfully cultivated in Europe until the latter part of the 19th century and than possibly only in the Mediterranean region. As stated by Krukoff and Barnaby, *E. princeps* (i.e. *E. humeana*) was widely grown in European stoves by the mid 19th century.

*E. humeana* was originally figured in England as *E. caffra* in Bot. Reg. 9: t. 736 A & B (1823): "introduced into this country by Sir Abraham Hume, in whose collection at Wormleybury the drawing was made", and in Bot. Mag. t.2431 (1823): "flowered for the first time, we believe, in the Count de Vandes stove." Both publications appeared on 1 September 1823. In 1826 C. Sprengel realised that the figured plant was distinct from *E. caffra* and renamed it *E. humeana*. In his protologue Sprengel refers only to "Bot. Vag.", which may be interpreted as Bot. Mag. However, it seems probable that he was aware of both plates because only in the Bot. Reg. text is the name Hume mentioned. The Bot. Reg. plate No. 736A is, therefore, selected as the lectotype.

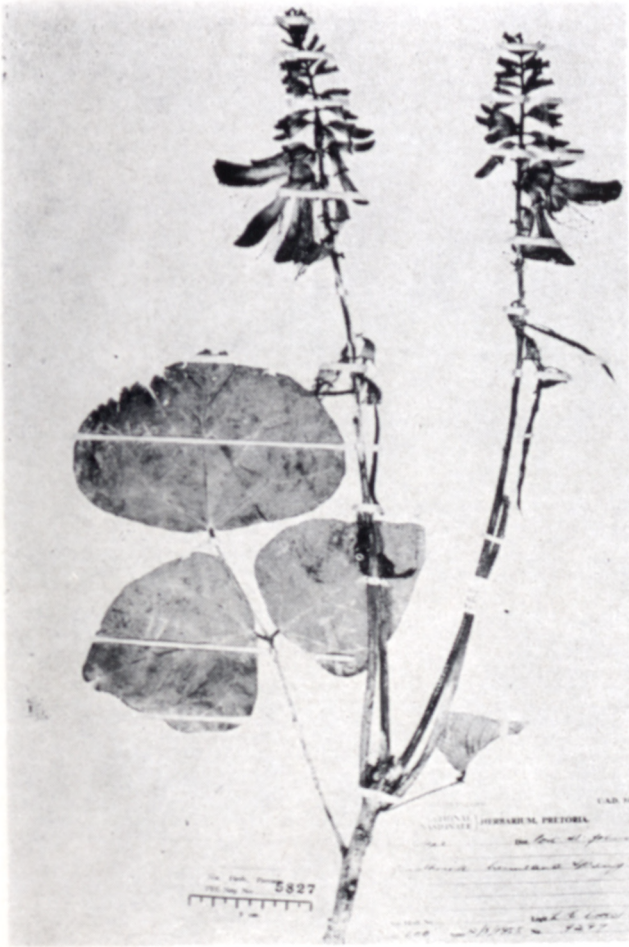


FIG. 4.—*Erythrina humeana* Spreng., a modern herbarium specimen from the eastern Cape Province (Codd 9297).

The species is distributed from Albany and Bathurst districts to Natal and northwards to Swaziland, eastern Transvaal, Mozambique, Rhodesia and Malawi. The typical form, with broadly ovate leaflets, occurs in the eastern Cape Province while, further north, a form with hastate leaflets is found (Fig. 5). This form has been described as *E. raja* Meisn. (after *Raja*, a genus of fishes, in allusion to the aculeate petioles) and as *E. hastifolia* Bertol. f. but, because there are intermediates, it is felt that this form is not worthy of separate taxonomic status. The synonymy relating to *E. humeana* is shown below.

*Erythrina humeana* Spreng., Syst. Veg. 3: 243 (1826); Sim, For. Fl. P.E.A. 43 (1909); Phillips in Flow. Pl. S. Afr. 3: t.112 (1923); Marloth, Fl. S. Afr., 2, 1: 81, t.29 (1925); Collett in Bothalia 4: 225



FIG. 5.—*Erythrina humeana* Spreng., illustrating the form with hastate leaflets described as *E. raja* Meisn. and *E. hastifolia* Bertol. f. (Codd & Dyer 4636 from north-eastern Transvaal).

(1941); Codd, Bot. Surv. S. Afr. Mem. 26: 72, t.67 (1951); Batten & Bokelmann, Wild Flows. E. Cape 78, t.66 (1966); Hennessy, S. Afr. Erythrinas 21, t.6 (1972). Lectotype: Bot. Reg. 9: t.736A.

*E. caffra* sensu Ker, Bot. Reg. 9: t.736 (1823); sensu Sims in Bot. Mag. t.2431 (1823); sensu DC., Prodr. 2: 412 (1825), partly; sensu Reichb., Fl. Exot. 5: t.312 (1836).

*Erythrina princeps* A. Dietr. in Otto & Dietr., Allg. Gartenzeitung 2: 305 (1834).

*E. humei* E. Mey., Comm. 151 (1836); Harv. in Fl. Cap. 2: 237 (1862); Bak. in Fl. Trop. Afr. 2: 182 (1871); Bak. f., Leg. Trop. Afr. 370 (1929). — var. *raja* (Meisn.) Harv., l.c. (1862). — var. *hastifolia* (Bertol. f.) Bak. f., l.c. (1929).

*E. raja* Meisn. in Hook. Lond. J. Bot. 2: 96 (1843). Type: Port Natal, Krauss.

*E. hastifolia* Bertol. f. in Mem. Acc. Sc. Bolog. 2: 568, t.38 (1850).

