

Typification of *Medicago monantha* (Fabaceae) and *Physalis lagascae* (Solanaceae)

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Abstract: While identifying several unidentified herbarium specimens of *Medicago* L. and *Physalis* L. at BLAT, followed by a critical analysis of the protologues of *Trigonella monantha* C.A.Mey. (= *Medicago monantha* (C.A.Mey.) Trautv.) and *Physalis parviflora* Lag. (replaced synonym of *Physalis lagascae* Roem. & Schult.) revealed that these names need to be typified. As a result, lectotypes are designated for these names from the respective collections of C.A. von Meyer and M.Y. Segura Lagasca.

Keywords: Azerbaijan, Lagasca, Lectotype, *Medicago*, Meyer, Nova Hispania, *Physalis*.

Introduction

Medicago L. (Fabaceae) is represented by 90 accepted species including six hybrids distributed across the temperate and subtropical Eurasia, North Africa to Mauritania, Eritrea to South Africa and *Physalis* L. (Solanaceae) is represented by 95 accepted species occurring over both northern and southern America, Afghanistan, India, Nepal, Bhutan, and north-central China (POWO, 2023).

A critical study of the protologues of *Trigonella monantha* C.A.Mey. (basonym of *Medicago monantha* (C.A.Mey.) Trautv.) and *Physalis parviflora* Lag. (replaced synonym of *Physalis lagascae* Roem. & Schult.), revealed that types were not cited for these names. Hence, to stabilize the application of these two names, it is necessary to designate nomenclatural types for both the names.

Materials and Methods

The concept of the “original material” has been followed according to Art. 9.4 of the Shenzhen Code (Turland *et al.*, 2018) and the use of acronyms of the herbaria is according to the Index

Herbariorum (Thiers, updated continuously). The high-resolution digital images of the herbarium specimens housed at BM, BR, C, FI, G, IH, LD, LE, MA, and MEXU were examined carefully.

The protologues of *Trigonella monantha* C.A.Mey. (the basonym of *Medicago monantha* (C.A.Mey.) Trautv.) and *Physalis parviflora* Lag. (replaced synonym of *P. lagascae* Roem. & Schult.) were interpreted accurately so as to understand the actual intentions of the authors while describing the respective plant names. The original materials of *Trigonella monantha* belonging to Meyer's collection at LE and the herbarium specimens at MA annotated by Lagasca as *Physalis parviflora*, were confirmed respectively with the handwriting samples of Meyer (Lipschitz & Vasilchenko, 1968) and Lagasca (Burdet, 1976). The provisions of the Shenzhen Code (Turland *et al.*, 2018) are applied for the designation of nomenclatural types of the names concerned herein.

Typification

Medicago monantha (C.A.Mey.) Trautv., Index Seminum [Kiev] 1840: 6, 4. 1841. *Trigonella monantha* C.A.Mey., Verz. Pfl. Casp. Meer. 137. 1831. *Lectotype* (designated here): AZERBAIJAN, in Campis et Collibus ficcis lapidofis pr. Pag: Swant, 20.06.1830, C.A. Meyer 148 (LE [LE01015986 digital image!]); *isolecto* (LE [LE01015985 digital image!]).

Fig. 1

Notes: *Trigonella monantha* C.A.Mey. was published by the Russian botanist and explorer, Carl Anton von Meyer (1831) which was subsequently transferred to *Medicago* by Trautvetter (1841). In the protologue, Meyer (*l.c.*) did not cite any specimens but provided a reference to the locality “Prope Lenkoran et prope pagum Swant (alt. 670 hexap.)”. According to

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Fig. 1. Lectotype of *Trigonella monantha* C.A.Mey. (≡ *Medicago monantha* (C.A.Mey.) Trautv.) (LE [LE01015986] digital image!) © Komarov Botanical Institute of RAS, St. Petersburg.

Staffeu and Cowan (1981), the herbarium and types of Meyer are housed at LE, and two relevant sheets (LE01015985, LE01015986) were traced, bearing collection number 148. These two specimens, though were not cited in the protologue, most likely were used/studied by C.A. Meyer while describing *T. monantha*. Both specimens can be considered as uncited original material under Art. 9.4 of the Shenzhen Code (Turland *et al.*, 2018). Among them, the specimen (LE01015985) bears an annotation (dated 17.04.1986) by E. Small as *T. monantha* C.A.Mey. with a note “presumably the holotype unless there is another specimen so designated at LE, in which case this is an isotype” which is inconsistent with the provisions of article 9.1 of the Shenzhen Code (Turland *et al.*, *l.c.*). In the absence of the holotype, the specimen (LE01015986) is designated here as the lectotype.

Physalis lagascae Roem. & Schult., Syst. Veg., ed. 15 bis 4: 679. 1819. *Physalis parviflora* Lag., Gen. Sp. Pl. 11, no. 147. 1816, *nom. illeg., non* R.Br., 1810.

Lectotype (designated here): SPAIN, Madrid, Hort. Reg. Matr., *s.d.*, *s.coll. s.n.* (MA [Acc. no.: 237731] digital image!).

Fig. 2

Notes: Lagasca (1816a) described *Physalis parviflora* Lag. based on the plants cultivated in the Botanical Garden of Madrid in the year 1815 from the seeds procured most likely from Mexico (Nova Hispania). The name was illegitimate being a later homonym of *P. parviflora* R.Br. Subsequently, the replacement name *Physalis lagascae* Roem. & Schult. was published by Roemer and Schultes (1819). Here the type of *Physalis lagascae* would be that of *Physalis parviflora* (see Art. 7.4, Ex. 4, Turland *et al.*, 2018). In the absence of any specimen cited in the protologue of *Physalis parviflora*, it is necessary to designate a nomenclatural type to stabilize the precise application of the name from the specimens seen and annotated by Lagasca while describing *P. parviflora*. After the publication of *Physalis parviflora*, during his flight from Madrid to Gibraltar, Lagasca's original herbarium was destroyed in the year 1822 (Staffeu & Cowan, 1979). However, the original



Fig. 2. Lectotype of *Physalis lagascae* Roem. & Schult. (MA [Acc. no.: 237731] digital image!) © Real Jardín Botánico - Consejo Superior De Investigaciones Científicas (RJB-CSIC).

material of *P. lagascae* at MA (where Lagasca was known to work) has remained overlooked to date.

Two specimens (Acc. nos. 237723, 237731), each bearing an annotation as *P. parviflora* in Lagasca's handwriting (Burdet, 1976) could be traced at MA. Though these two specimens are without any collection details, the collection locality (ex Hortus Regius Matritensis meaning from the Royal Garden of Madrid) in Lagasca's handwriting (Burdet, 1976) on the herbarium specimen with Acc. no. 237731 and the reference to *P. parviflora* in the Lagasca's List (1816b) prefixed by "*" and suffixed by H.R.M. indicate that live plants were cultivated in the Botanical Garden of Madrid and were available to Lagasca while describing *P. parviflora*. This specimen is more consistent with the protologue in having an apparently sprawling–procumbent habit, divaricate branching, weak, ridged branches, and ovate–obovate leaves with oblique bases and could be considered as its original material. Hence, the specimen with Acc. No. 237731 is selected here as the lectotype of *P. lagascae* under Art. 9.4 of the Shenzhen Code (Turland *et al.*, 2018). The specimen with Acc. no. 237723 without any collection locality is more allied to *P. pruinosa* L. and has an apparently erect habit with glandular–hairy aerial parts and more or less circular leaves.

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