



Typification of *Glycine tomentella* (Fabaceae: Phaseoleae) with comments on its internal groups

SIMON T. GUNNER & JEFF J. DOYLE

L.H. Bailey Hortorium, Department of Plant Biology, Cornell University, 412 Mann Library, Ithaca, NY 14853, USA. E-mail: stg35@cornell.edu

L.H. Bailey Hortorium, Department of Plant Biology, and Department of Plant Breeding & Genetics, Cornell University, 412 Mann Library, Ithaca, NY 14853, USA. E-mail: jjd5@cornell.edu

Abstract

The legume *Glycine tomentella* had not been typified according to the rules of nomenclature for many years after it was described. While typification was attempted rather recently, the designated type material is currently missing. An appropriate replacement type is designated herein. Furthermore, the presence of intersterile, morphologically and molecularly diverged groups within the *G. tomentella* polyploid complex warrants an historical review and current perspective. The type material of this mainly Australian species is identified as belonging to a polyploid genome group that is found in Taiwan.

Introduction

An outstanding congener of the cultivated soybean, *Glycine tomentella* Hayata (1920: 29) is noteworthy both for its agricultural (Broué *et al.* 1982, Soria-Guerra *et al.* 2010a, b) and evolutionary (Singh *et al.* 1998a, Doyle *et al.* 2002) qualities. The species was originally described as *Leptolobium tomentosum* Benth (1837: 125) before being moved to *Glycine* Willd. (1802: 854, 1053). It remained for a century as *G. tomentosa* (Benth.) Benth (1864: 245) until this name was shown by Hermann (1962) to be a homonym of *G. tomentosa* Linnaeus (1753: 754) and the taxon was therefore renamed. Since Benth's work *G. tomentella* has been considered a core member of *Glycine*, which has grown to include 28 taxa by recent count (Pfeil *et al.* 2006).

The Japanese botanist Bunzo Hayata was a skilled taxonomist and devoted collector of plants from the island of Formosa (Taiwan; Republic of China). He published the first volume of *Icones Plantarum Formosanmarum nec non et Contributiones ad Floram Formosanam* in 1911 while a Lecturer in the Department of Botany at the Imperial University of Tokyo (Ohashi 2009). His visits to Taiwan and European herbaria holding Taiwanese collections resulted in ten volumes of *Icones*. The ninth (Hayata 1920), published while Hayata was an Associate Professor at the University, coincided with his being awarded the Prince Katsura Commemoration Prize that same year from the Imperial Academy of Japan for his efforts to document the flora of Formosa.

Typification History

No type was indicated by Hayata when *G. tomentella* was published in the ninth volume of *Icones* (Hayata 1920). He only mentioned that the new species inhabited “Tainan, Takao, Akao.” Sasaki (1930), working for the Department of Forestry in Formosa, reviewed Hayata's nomenclature and identified three type specimens from a collection of plants initially organized by Hayata—“Tainan **Takaki* 13273; Takao **Matuda* 13274; Akô **Sôma* 13275.” These specimens were each indicated as a type by an asterisk and were specimens collected by Takaki (=Takagi in TAIF type specimen database; TAIWAN, Tainan, May 1915, *Takaki s.n.* [TAIF! herbarium no. 13273]); Matsuda (=Eiji Matsuda in TAIF database; TAIWAN, Kaohsiung [=Takao], September 1915, *Matsuda s.n.* [TAIF! herbarium no. 13274]); and T. Soma (=Tadasaburo Soma in TAIF database; TAIWAN, Pingtung [=Akao, =Akô], September 1916, *T. Soma A5* [TAIF! herbarium no. 13275]).

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