



Original article

Thalictrum acutifolium (Hand.-Mazz.) B. Boivin: a new record to the flora of the Jeju-do, Korea

Dong Chan Son, Minjung Joo, Kang-Hyup Lee, Jun-Soo Han, Kae Sun Chang*

Division of Forest Biodiversity and Herbarium, Korea National Arboretum, Pocheon, Republic of Korea

ARTICLE INFO

Article history:

Received 19 August 2016

Received in revised form

27 September 2016

Accepted 26 October 2016

Available online 20 January 2017

Keywords:

Korea

lectotypification

new distribution

Ranunculaceae

Thalictrum acutifolium

ABSTRACT

Thalictrum acutifolium (Hand.-Mazz.) B. Boivin is hitherto known as an endemic species of China. However, recently we found another population in Jeju-do, Korea. This species is closely related to *Thalictrum tuberiferum* Maxim., having characters such as 2- or 3-ternate leaves, whitish stamens with clavate filaments, and stipitate achenes, but distinguished from the latter by the following features: rootlets lacking tubers, stoloniferous, alternate cauline leaves, apex acuted leaflets, and ovate-shaped sepals with whitish color. Here, we provide its description, illustrations, and photographs as a new record species in Korea. Also, a lectotype is designated for *T. acutifolium* based on the material conserved at the University of Vienna (WU).

Copyright © 2017, National Science Museum of Korea (NSMK) and Korea National Arboretum (KNA). Production and hosting by Elsevier. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Introduction

Thalictrum L. belongs to the family Ranunculaceae, consists of about 330 species distributed in the Northern Hemisphere, South America, and Africa (Park and Lee 2007; Tamura 1953, 1993). Generally well known as a meadow rue, this genus has great medicinal value because it contains high levels of thaliblastin (thalicarpine), which has anticancer properties (Chen et al 1993; Pajeva et al 2004).

In Korea, 18 taxa are currently recognized (Park and Park 2008, 2009). These are distinguished by several morphological characteristics, such as rootlet shape, specialized stem, leaflet shape, filament shape, winged stigma, achene expansion, pericarp thickness, etc. (Park and Park 2008).

During extensive field surveys for floristic research in Jeju-do located in Republic of Korea, we collected an unidentifiable meadow-rue plant that is characterized by having stolon, alternate cauline leaves, and apex acute leaflet. After examining the floras of various regions and herbarium specimens of Korea and adjacent countries as well as relevant literatures (Fu and Zhu 2001; Kadota 2006; Nevskii 1937; Park and Lee 2007; Park and Park 2008), and

we concluded that this plant has never been recorded in Korea before and is *Thalictrum acutifolium* (Hand.-Mazz.) B. Boivin, which is found in SE China.

Meanwhile, when Handel-Mazzetti (1926) described this species, a single gathering (Handel-Mazzetti 11173) was cited in the protologue. On that basis, after examining herbaria (WU, E, S, NY, and US), we found seven sheets in which the collection numbers were the same, whereas collection dates were different. All these specimens are syntypes under Article 9.5 of International Code of Botanical Nomenclature (McNeill et al 2012).

Hence, we report *T. acutifolium* (Hand.-Mazz.) B. Boivin as a new distributional record for the flora of Korea. In addition, according to Article 9.2 of the International Code of Botanical Nomenclature (McNeill et al 2012), we designate below the specimen Handel-Mazzetti 11173 at WU as the lectotype of *T. acutifolium*.

Taxonomic accounts

Thalictrum acutifolium (Hand.-Mazz.) B. Boivin, Rhodora. 46: 364. 1944.

(Figures 1 and 2)

≡ *Thalictrum clavatum* var. *acutifolium* Hand.-Mazz., Akad. Wiss. Wien Sitzungsber., Math.-Naturwiss. Kl., Abt. 1, 63: 1. 1926.

Lectotype (designated here). China: Prov. Hunan austro-occid. In monte Yün-schan prope urbem Wukang, copiose. Substr. schisto

* Correspondence author. Tel.: +82 31 540 1074; fax: +82 31 540 1070.

E-mail address: natu17@korea.kr (K.S. Chang).

Peer review under responsibility of National Science Museum of Korea (NSMK) and Korea National Arboretum (KNA).

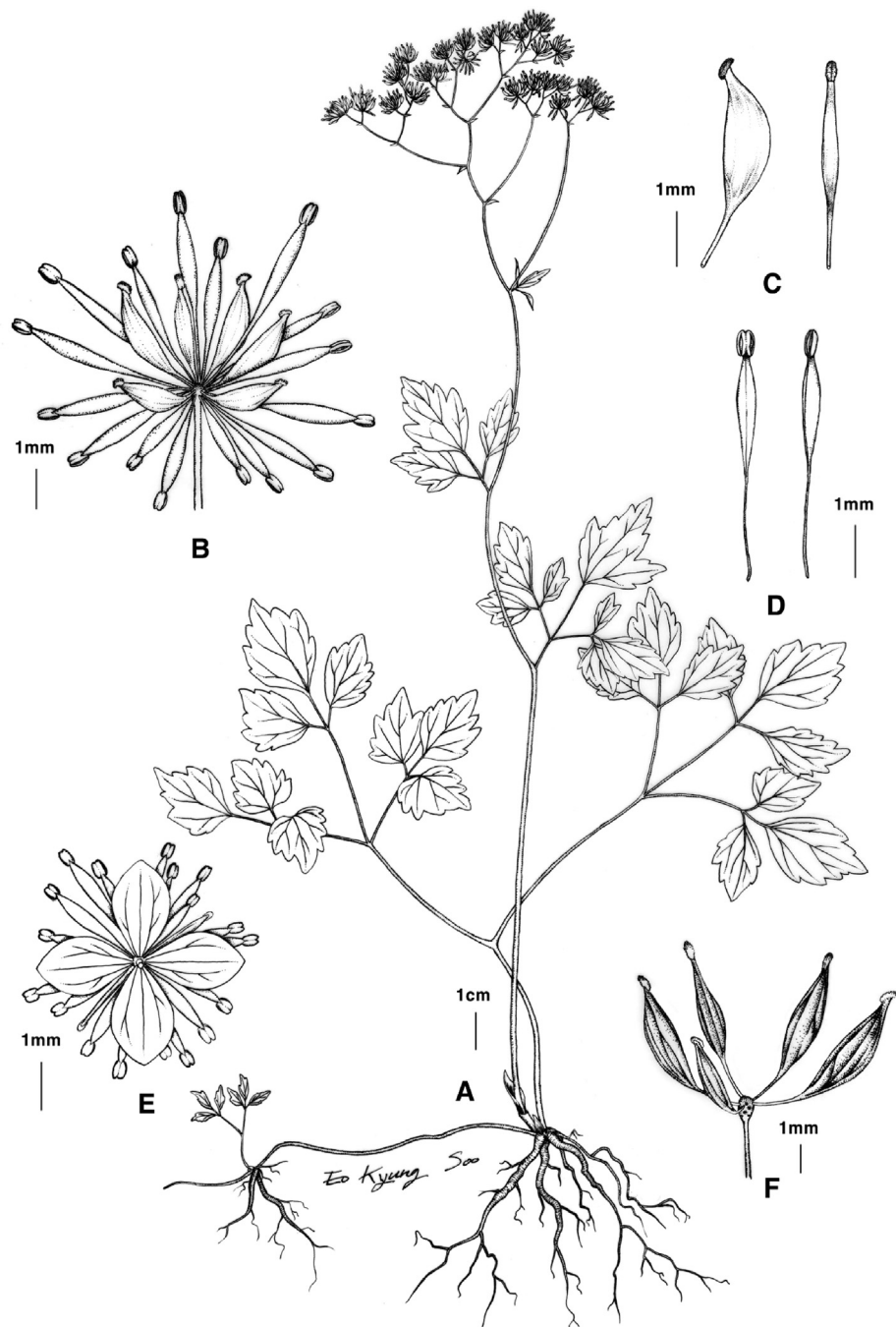


Figure 1. Illustrations of *T. acutifolium* (Hand.-Mazz.) B. Boivin. A, plant; B, flower; C, pistil; D, stamen; E, sepals; F, fruit.

Download English Version:

<https://daneshyari.com/en/article/8848829>

Download Persian Version:

<https://daneshyari.com/article/8848829>

[Daneshyari.com](https://daneshyari.com)