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Lectotypification of the name *Tetraphis pellucida* Hedw. (Bryophyta)

Michelle J. Price

Abstract

PRICE, M. J. (2010). Lectotypification of the name *Tetraphis pellucida* Hedw. (Bryophyta). *Candollea* 65: 15-19. In English, English and French abstracts.

Selection of a lectotype for the name *Tetraphis pellucida* Hedw. (Bryophyta, Tetraphidaceae) is necessary as two original Hedwig herbarium sheets, containing multiple stems, are present in the Hedwig-Schwägrichen collection housed in G. Protologue information and label information do not entirely correspond for either of the herbarium sheets, however a stem of *Tetraphis pellucida* from one of the two sheets resembles the stem depicted in Hedwig's original illustration. This stem conforms to the protologue as well as to the modern concept of this taxon and is proposed as the lectotype for this name herein

Key-words

BRYOPHYTA – *Tetraphis pellucida* – Typification – Hedwig

Résumé

PRICE, M. J. (2010). Lectotypification du nom *Tetraphis pellucida* Hedw. (Bryophyta). *Candollea* 65: 15-19. En anglais, résumés anglais et français.

Il est nécessaire de désigner un lectotype pour le nom *Tetraphis pellucida* Hedw (Bryophyta, Tetraphidaceae). En effet, le matériel original conservé dans la collection Hedwig-Schwägrichen à G est constitué de deux planches d'herbier originales comprenant de multiples tiges. Les informations mentionnées sur les étiquettes ne correspondent pas tout à fait aux informations du protologue. Cependant, l'une des planches contient une tige de *Tetraphis pellucida* ressemblant à celle représentée dans l'illustration originale de Hedwig. Comme cette tige est conforme au protologue et correspond bien au concept moderne de ce taxon, elle est proposée comme lectotype.

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Introduction

Tetraphis pellucida Hedw. belongs to the *Tetraphidales* that contains the *Tetraphidaceae* with its two genera *Tetraphis* Hedw. (*T. geniculata* Milde, *T. pellucida*) and *Tetradontium* Schwägr. (*Tetradontium brownianum* (Dicks.) Schwägr., *T. ovatum* (Funck) Schwägr., *T. repandum* (Funck) Schwägr.) which are characterized by a unique peristome structure: four wedge-shaped, erect peristome teeth that are composed of layers of whole cells.

The genus *Tetraphis* was first described by HEDWIG (1782), based on its sporophytic characteristics, for the taxon previously treated by LINNAEUS (1753) as *Mnium pellucidum* and representing the first use of its specific epithet. HEDWIG (1801) later reused his concept of *Tetraphis* (*Peristomium simplex: dentibus quatuor pyramidalibus*) and provided a more lengthy description of *T. pellucida* (HEDWIG, 1801: 46). He included references to this entity from the earlier works of VAILLANT (1723: 130), OEDER (1766: tab. 300), HALLER (1760: 118, 1768: 56), DILLENIIUS (1741: 232), LINNAEUS (1753: 157), GMELIN (1792: 1327), SCHMIDEL (1747: 13) and BRIDEL (1798: 48). Literature information in BRIDEL (1798: 48) consists of an extensive list of local, regional or country-wide Floras that treated this entity, including the various denominations under which it was recognised over time. From the 37 literature sources the earliest mention of it was traced to PLUKENET (1691) dating up to the publications of GESSNER (1795) and HOFFMANN (1796) which appeared just before Bridel's own work.

When HEDWIG (1801) was designated as the starting point of moss nomenclature (excepting *Sphagnum* L.) 294 names of an earlier origin were assigned to Hedwig (372 names are contained within this publication, including three *Sphagnum* species and 75 taxa that were newly described by Hedwig himself). The Hedwig material in the Hedwig-Schwägrichen herbarium in G became of critical importance as it thus consisted of the “new” types (syntypes) of many of the widespread and common European-North American mosses. The typification of material from the Hedwig-Schwägrichen herbarium and difficulties that can be encountered with it have been discussed in GEISSLER (2000) and PRICE (2002, 2005). Some practical considerations are also necessary when working with the material in the Hedwig-Schwägrichen collection as the plants have been pressed and glued onto the sheets and they are often either sparse or fragile or both. The Hedwig types in the Hedwig-Schwägrichen collection should thus be considered as “oligotypes” sensu HUHTINEN (1994), based on both their historical significance and their nature. Substantial efforts to typify Hedwigian moss names have been made (CARDOT, 1899; KOPONEN, 1979; FRISVOLL, 1984, 1986; FRAHM & GEISSLER, 1985; GEISSLER & FRAHM, 1995; PURSELL, 1986; BEDNAREK-UCHYRA & UCHYRA, 1994; FIFE, 1996; HEDENÄS

& GEISSLER, 1999; LEWINSKY-HAAPASAARI & ISOVIITA, 1999; GEISSLER, 2000; PRICE, 2002; YIP, 2002; EDERRA, 2006). However, over a third of the Hedwig moss names have yet to be critically examined (see PRICE, 2005). Despite its morphological distinctiveness and rather ubiquitous presence on decayed tree stumps in wooded areas across the northern hemisphere the name *Tetraphis pellucida* was amongst these.

A lectotype for *Tetraphis pellucida* Hedw.

Designation of a lectotype for this Hedwigian moss name is necessary as two original Hedwig herbarium sheets containing potential type material for *T. pellucida* are present in G, each with multiple stems or groups of stems attached (see PRICE, 2005: 331, 332). The protologue does not contain specific locality information and neither does it correspond with the label information on either of the herbarium sheets, as frequently encountered in this collection (PRICE, 2005: 10). The hand-drawn plate in HEDWIG (1801: tab. VII, fig. 1. a-f, copied in Fig. 1) closely resembles an individual shoot (second shoot from left, upper row) from herbarium sheet 1 [G00040314], see Fig. 2. Label information, written in the hand of Hedwig, contains references to the earlier descriptions of this taxon in LINNAEUS (1753) and DILLENIIUS (1741). Careful examination, with minimal manipulation, of the material available on this sheet confirmed that the all specimens present belong to *T. pellucida*. In this case, herbarium sheets have not been annotated by Schwägrichen indicating that all specimens represent original material as seen by Hedwig.

Tetraphis pellucida Hedw., Sp. Musc. Frond.: 45, Tab. VII, Fig. 1, a-f. 1801.

Lectotypus (designated here): s.loc., s.d., s.coll. (G! [G00040314]).

Protologue. – “Locis umbrosis udis, truncos deiectos putrescentes, praecipue montosarum regionum”.

Label information. – “*Mnium pellucidum* caule simplici foliis ovatis Linn. Spec. plant. 2. p. 1574. n.1. *Mnium serpilli* foliis tenuibus pellucidis Dill. Hist. Musc. 232. t.31. f.2. *Tetraphis pellucida* Spec. Musc. p. t. f.”.

Note on the lectotype. – The second stem from the left in the group of specimens located at the top left (upper row) of the herbarium sheet [G00040314] is here designated as the lectotype (Fig. 2). The illustrated specimen (see Fig. 1) from sheet G00040314 conforms to Hedwig's original description of *T. pellucida* and to the generally accepted modern taxonomic concept of it.



Fig. 1. – Plate from HEDWIG (1801) (Tab. VII, Fig. 1. a-f) of *Tetraphis pellucida* (illustrations on left-hand side of the plate).

[Annotation: Fig. 1. planta nativa magnitudine, f. a. frugifera aucta o., fig. b. folium inferius et folium perigonale medium. f. d. Calyptra ad augm. II. f. e. Sporangium operculatum, l. fig. f. Sporangii summitas cum peristomio; augm. III]

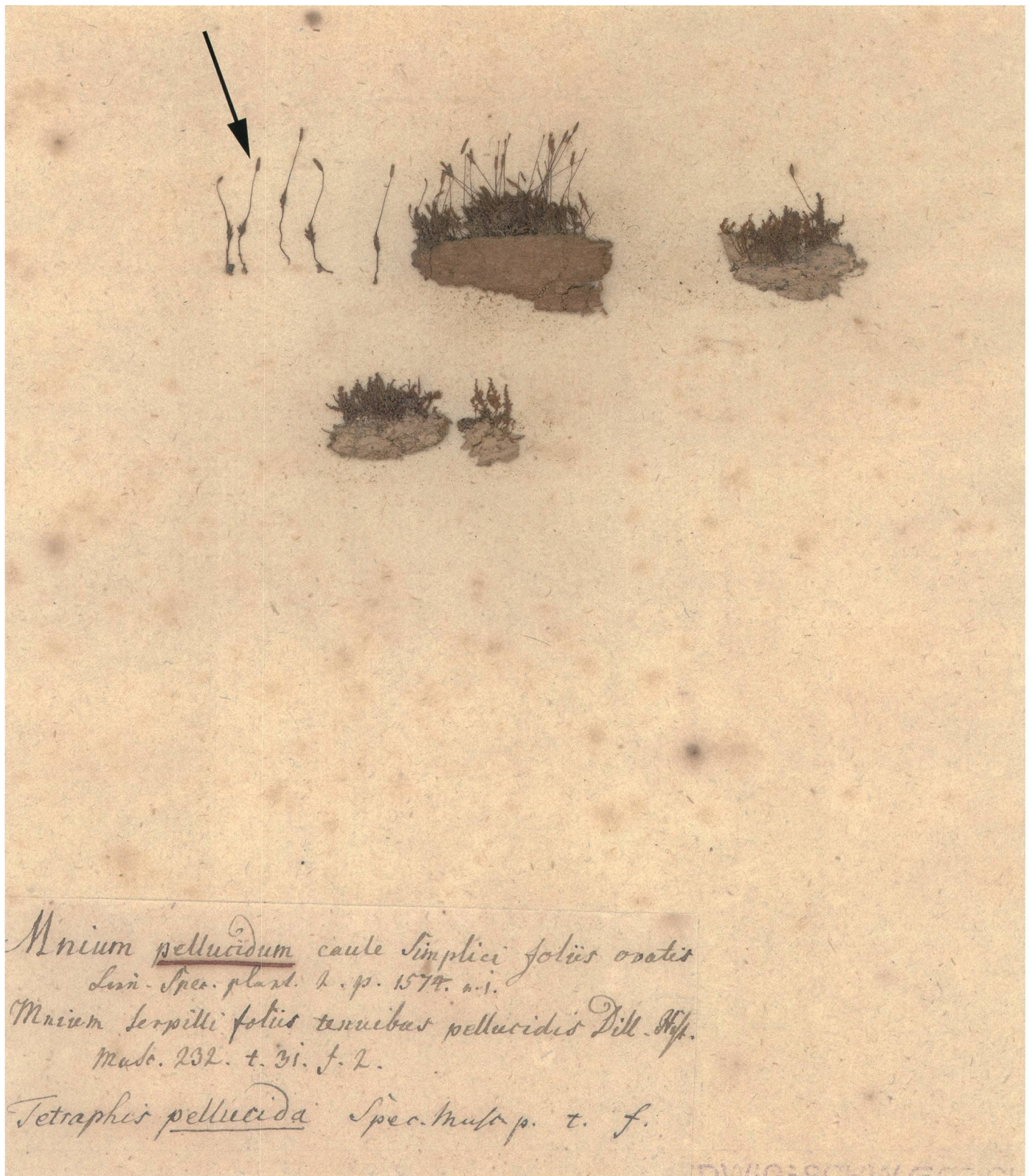


Fig. 2. – Hedwig herbarium sheet [G00040314] (G) containing the lectotype of *Tetraphis pellucida* Hedw. in the upper row of specimens: second stem from the left in the group of stems at the top left of herbarium sheet (indicated with an arrow).

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