

**STEPHANI'S USE OF THE "SPRUCEAN" SUBGENERIC
NAMES IN *LEJEUNEA*, 1888–1893**

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Gradstein et al. (1982) propose to conserve four generic names of Lejeuneaceae: *Lopholejeunea* (Spruce) Schiffn., *Acrolejeunea* (Spruce) Schiffn., *Trachylejeunea* (Spruce) Schiffn. and *Taxilejeunea* (Spruce) Schiffn., each of which was introduced as a subgeneric name in *Lejeunea* by Spruce (1884), and subsequently raised to generic rank by Schiffner in his treat-

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ment of the Hepaticae in Engler-Prantl (preprint 1893) [see proposals to conserve 675–678 see p. 746]. Although Spruce (l.c.) used for his *Lejeunea* species a binary nomenclature by combining subgeneric names with specific epithets, it is clear (e.g. text, index) that the binomina are meant as *Lejeunea* combinations and they are considered as such by most authors (see Gradstein et al. for further details). Before 1893, however, the Sprucean subgeneric names were used in various papers by F. Stephani in a “seeming” generic rank; indeed Stephani now and then referred to them as “genus.”

A chronological survey of a number of relevant papers by Stephani, mainly those published in *Hedwigia*, was given by Bonner et al. (1961), in conjunction with a brief discussion of the subject of this paper. These authors were the first to realize that on the basis of Art. 42 ICBN some generic names in Lejeuneaceae, e.g. *Taxilejeunea* and *Trachylejeunea*, can be considered as validly published by Stephani in *Hedwigia* 28, 1889. Later on Grolle (1979) demonstrated valid publication of monotypic new Lejeuneaceae genera by Stephani in the *Bot. Gaz.* 15, 1890, e.g. *Lopho-Lejeunea* and *Acro-Lejeunea*. For an evaluation of the status of *Lopho-Lejeunea* Steph., *Acro-Lejeunea* Steph., *Trachylejeunea* Steph. and *Taxilejeunea* Steph., one might consider these names against the background of the entire context of Stephani’s work on Lejeuneaceae until 1893. As the survey of Stephani’s papers in Bonner et al. is rather incomplete, and as there are several points of divergence in opinion, a new analysis of Stephani’s relevant papers (before Sep 1893) is presented below.

The papers discussed here are arranged according to the three journals in which they appeared: *Hedwigia* (27–31), the *Botanical Gazette* (15 and 17) and the *Bulletin de la Société Royale de Botanique de Belgique* (30–32). Four papers from this period discussed by Bonner et al. are left out of consideration: Stephani in Bescherelle 1892, *Journal de Botanique* (Morot) 7: 174–180, 183–194; Stephani in Bescherelle 1893, *Revue Bryologique* 20: 59–60, 60 and 106–108. In all those cases, in my opinion, Bescherelle and not Stephani is the author responsible for the publication.

In the survey below “no indication of rank” means: Sprucean subgeneric names used in a “seeming” generic rank, without further indication of rank.

Hedwigia

The general indexes of the *Hedwigia* volumes discussed below are of considerable nomenclatorial importance, for instance as a source for validation of combinations (see e.g. Bischler and Lamy, 1978 for *Lejeunea* combinations). They may also be of help in interpreting names cited in the text, as names of new species and genera are printed spaced (“durchschossen gedruckt”) in the index; the addition of a “n” indicates new species.

It could not be determined who is responsible for the general indexes of these *Hedwigia* volumes. It may be assumed, however, that these indexes were not prepared by the authors of the individual articles, e.g. by Stephani, but by the editor (K. Prantl). We tried to find out if any correspondence between Stephani and Prantl concerning Stephani’s articles has been preserved but until now no relevant documents have been traced.

Vol. 27, 1888:

Two articles with 26 Sprucean names: In the first article (“Hepaticae africanae”), published in two parts (pp. 59–63, Feb and 106–113, Mar–Apr), there is no indication of rank. Spruce is not mentioned at all. Descriptions of 14 new species of Lejeuneaceae are given, in seven Sprucean (sub)generic names. To 3 of them Art. 42 ICBN can be applied, e.g. to “*Microlejeunea africana* Steph. n. sp.” on p. 61. In the second article (“Westindische Hepaticae”) (pp. 276–302, Nov–Dec) generally the indication “Abtheilung” is used for the Sprucean subgeneric names. On p. 287, however, the words “Subgenus” and “Gattung” are used, both referring to *Cololejeunea*. Spruce is mentioned only incidentally (e.g. as the author who sent a specimen of a species of *Lejeunea*) except on p. 283, where the “Abtheilung” *Neurolejeunea* is referred to Spruce. In the discussions the species are often called “*Lejeunea* . . .” Art. 42 ICBN is not applicable.

General index: *Lejeunea* appears on p. xiii, with a “n” and the remark: “s. auch die Subgenera.” The Sprucean subgeneric names appear in alphabetical order with the generic names

(pp. vii–xxi), none of them being printed spaced, nor with a “n”. The specific epithets are recorded in binomials with the subgeneric names. Some of them are recorded in *Lejeunea* as well, if they appear in the text in different ways, e.g.

<i>Cololejeunea marginata</i> L. et L.	287	<i>Lejeunea marginata</i>	289
<i>Platylejeunea granulata</i> Nees	285	" <i>granulata</i>	285, 286

Vol. 28, 1889

One article (“Hepaticae Australiae”), published in three parts, two of which treating species of Lejeuneaceae (pp. 155–175, May–June and 257–278, July–Aug). Five out of eighteen Sprucean subgeneric names used in this paper are called “Gattung”, one is called “Subgenus” (*Lopholejeunea*), the remaining twelve are unspecified. Several epithets are used for two different species; this may indicate that the species concerned were considered to belong to different genera. According to Bonner et al. Art. 42 ICBN can be applied to seven of the Sprucean names. Four of them are not monotypic in my opinion, one or two of these moreover concern new combinations (in *Mastigolejeunea* and, maybe, *Ptycholejeunea*).

General index: as in vol. 27.

Vol. 29, 1890:

One article (“Die Gattung *Lejeunea* im Herbarium Lindenberg”), published in three parts (pp. 1–23, Jan–Feb; 68–99, Mar–Apr and 133–142, May–June). Referred to as a genus only: *Acro-Lejeunea* (p. 9), *Brachio-Lejeunea* (pp. 8, 9), *Hygro-Lejeunea* (p. 11), *Lopho-Lejeunea* (pp. 17, 19), *Euosmo-Lejeunea* (p. 89) and *Strepsi-Lejeunea* (p. 89); as a genus as well as a subgenus: *Micro-Lejeunea* (pp. 89 and 84) and *Thysano-Lejeunea* (pp. 18 and 4); as a subgenus (or section or group) only: *Eu-Lejeunea* (p. 81), *Chello-Lejeunea* (p. 88), *Cerato-Lejeunea* (pp. 95–96) and *Cauda-Lejeunea* (p. 19; subg. nov.!, not at all mentioned by Bonner et al.). Most of the remaining Sprucean subgeneric names appear without any indication of rank. The introduction of this paper, as well as the conclusion (p. 98 in part 2) clearly state that the Sprucean subdivisions of *Lejeunea* are being treated as subgenera. The third part of the paper is an enumeration of the species according to their subgenera in *Lejeunea* (see Gradstein et al., 1982).

General index: the same style as in vol. 27 and 28, except for the lack of a reference under *Lejeunea* to the subgenera. To some of the subgeneric names a “n” is added. The 386 species, however, are recorded in *Lejeunea* only.

Vol. 30, 1891:

One article (“Hepaticae africanae”), published in two parts (pp. 201–217, Sep–Oct and 265–272, Nov–Dec). No indication of rank, except on p. 207: “genus *Eulejeunea*”. Ten new species in Sprucean (sub)genera are described, to five of them Art. 42 ICBN can be applied.

General index: From vol. 30 on there is no more the addition of a “n” for new species. None of the Sprucean (sub)generic names are printed spaced, only the specific epithets in the case of a new species. The species concerned are recorded twice: in *Lejeunea* as well as in binomials with the Sprucean names.

Vol. 31, 1892:

Continuation of “Hepaticae africanae” in three parts (pp. 120–130, May–June; 165–174, July–Aug and 198–214, Sep–Oct). Eleven new species of Lejeuneaceae are described, to none of them can Art. 42 ICBN be applied. No indication of rank.

In an article by Jack and Stephani (“Hepaticae Wallisianae”, pp. 11–27, Jan–Apr) a general reference to the Sprucean names as being genera is given on p. 19. Nine new species of Lejeuneaceae are described, to two of them Art. 42 ICBN can be applied.

General index: the species are recorded in *Lejeunea* only, arranged according to the subgeneric names, e.g.

Lejeunea

.....

" (*Acrolejeunea*) *parviloba*

.....

" (*Lopholejeunea*) *multilacera*

(Vol. 32, 1893: no Lejeuneaceae.)

Botanical Gazette

Vol. 15, 1890:

In the article "Hepaticae Africanae novae in insulis Bourbon, Maurice et Madagascar lectae" (pp. 281–292, Nov) the descriptions of seven new species in Sprucean (sub)generic names are given; to three of them Art. 42 ICBN can be applied. No indication of rank.

The descriptions of these species are repeated twice elsewhere: Hedwigia 31, Sep–Oct 1892 and Bull. Soc. Roy. Bot. Belgique 30(2), Jan 1892. Moreover the species are listed in Stephani's Enumeratio, Bull. Soc. Roy. Bot. Belgique 32(1): 119–120, Sep 1894, but here the Sprucean names clearly have subgeneric rank (see below)!

Vol. 17, 1892:

In the article "The North American Lejeuneae" (pp. 170–173, June) a number of species of Lejeuneaceae are listed and discussed, and two new species are described (Art. 42 ICBN not applicable). The species are mentioned in two different ways: as binomials with a Sprucean name in the arrangement and in the head of the descriptions; as binomials in *Lejeunea* in the discussions. On p. 172 the Sprucean names are called "suborder."

General indexes: In vol. 15 the species are recorded in *Acro-Lejeunea* etc. as well as in *Lejeunea*; in vol. 17 they are recorded in *Lejeunea* only! We conclude that the compiler of the general index considered these species to belong to *Lejeunea*, even though Stephani's text in vol. 15 only suggests the new species belong to the genus *Acro-Lejeunea* etc.

Bull. Soc. Roy. Bot. Belgique

Vol. 30(2), "1891", Jan (prim.) 1892:

A chapter on "Hepaticae" (pp. 194–207) by Stephani in an article of Renaud and Cardot: "Musci exotici novi vel minus cogniti" (pp. 181–207). Repetition of the descriptions of eight species in Sprucean (sub)genera, a.o. those from Bot. Gaz. 15, 1890. No indication of rank.

Vol. 31(1), "1892", 6 Jul 1893:

A chapter on "Hepaticae" (pp. 175–182) by Stephani as part of "Primitiae Florae Costaricensis" by Th. Durand and H. Pittier; reprints of Stephani's article were distributed under the title "Hepaticae Costaricensis" (sic!). The genera of Hepaticae are listed alphabetically except for the "genera" of Lejeuneaceae which are all listed between *Jungermannia* and *Lepidozia* (hence where *Lejeunea* would naturally be placed in an alphabetical sequence). Although their form suggests generic rank, the place of listing clearly indicates infrageneric rank for the Sprucean names.

Vol. 32(2), "1893", Aug 1893:

A chapter on "Hepaticae" (pp. 29–40) by Stephani in an article of Renaud and Cardot: "Musci exotici novi vel minus cogniti" (pp. 8–40). Three species described in Sprucean (sub)genera. No indication of rank. Art. 42 ICBN is not applicable.

Vol. 32(1), "1893", Sep (prim.) 1894:

"Enumeratio Hepaticarum Insularum Austro-Africarum" (pp. 118–121) by Stephani, as an appendix to an article by Renaud and Cardot: "Musci exotici novi vel minus cogniti" (pp. 101–117). The Sprucean names appear under *Lejeunea*, clearly as subgenera:

Lejeunea (Acrolejeunea) fulva G. - Mad.
— — *emergens* Mitt. - B. etc.

Many species are listed, a.o. those seven from Bot. Gaz. 15, 1890 and the three from the Bulletin, vol. 32(2), 1893.

From the above data we conclude that the general indexes of Hedwigia and the Bot. Gaz. (the Bull. does not have a general index) indicate subgeneric rank for the Sprucean names cited there (those of Hedwigia 30, 1891 and Bot. Gaz. 15, 1890 only weakly so). In the articles themselves the rank of subgenus is most obvious in the Bull., vol. 32(1), 1894, less so in vol. 31(1), 1893. In addition, one has to conclude subgeneric rank in Hedwigia 29, 1890 and Bot. Gaz. 17, 1892.

Bonner et al. (1961) suggest a transition of concept (from subgenus to genus) in those Hedwigia papers. I cannot agree with this. Their inaccurate study of Hedwigia 29 and their neglect of the general indexes might be a reason for our difference in interpretation.

It seems as if Stephani in his earliest publications made use of the Sprucean names in their original manner (Hedwigia 27, 1888). In his 1889–1890 publications he seems inclined to consider them as genera (see the very inconsistent publications in Hedwigia 28 and 29), but in the 1892–1893–(1894–) publications he seems to stick firmly again to the Sprucean taxonomy and nomenclature, as is illustrated clearly in the Costa Rica paper (Bull. vol. 31(1), Jul 1893). The more orthodox way of presentation of the subgeneric names in the Enumeratio (Bull. vol. 32(1), 1894) might be the work of Renauld and Cardot.

The analyses and interpretations presented here might be useful for those who have to judge on the presumed establishment of monotypic new genera in Lejeuneaceae, based on species descriptions by Stephani.

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