

Taxonomy and correct species names in *Pinus* (Pinaceae): correspondence of the Basel jurist and naturalist Hermann Christ with the German botanist D. F. L. von Schlechtendal

Natalia TKACH & Martin RÖSER

Abstract: Tkach, N. & Röser, M. 2024: Taxonomy and correct species names in *Pinus* (Pinaceae): correspondence of the Basel jurist and naturalist Hermann Christ with the German botanist D. F. L. von Schlechtendal. *Schlechtendalia* **41**: 17–25.

The herbarium of the University Halle-Wittenberg (Germany, HAL) preserves a collection of about 5,600 letters from contemporary botanists to Diederich Franz Leonhard von Schlechtendal (1794–1866), mainly in connection with his publishing activities for the journals ‘*Linnaea*’ and ‘*Botanische Zeitung*’. Among them are four letters of the botanically interested Basel (Switzerland) jurist Hermann Christ (1833–1933) from the years 1863 to 1865. Christ was just at the beginning of his extremely rich botanical publication activity in the following years. In his letters to Schlechtendal, he asked for accepting submitted manuscripts for publication. Unfortunately, he also had a mishap, mixing up the journals and sending one of the manuscripts to the wrong addressee. Nevertheless, the publication found its way to the public. The letters are transcribed, translated into English and annotated. Particularly interesting and topical are Christ’s comments on some species of the genus *Pinus*, which essentially deal with questions that are still unresolved today.

Zusammenfassung: Tkach, N. & Röser, M. 2024: Taxonomie und korrekte Artnamen in *Pinus* (Pinaceae): Korrespondenz dess Basler Juristen und Naturforschers Hermann Christ mit dem deutschen Botaniker D. F. L. von Schlechtendal. *Schlechtendalia* **41**: 17–25.

Das Herbarium der Universität Halle-Wittenberg (Deutschland, HAL) bewahrt eine Sammlung von etwa 5.600 Briefen zeitgenössischer Botaniker an Diederich Franz Leonhard von Schlechtendal (1794–1866) auf, die hauptsächlich im Zusammenhang mit seiner publizistischen Tätigkeit für die Zeitschriften “*Linnaea*” und “*Botanische Zeitung*” stehen. Darunter befinden sich vier Briefe des botanisch interessierten Basler Juristen Hermann Christ (1833–1933) aus den Jahren 1863–1865. Christ stand damit am Anfang seiner überaus reichen botanischen Publikationstätigkeit in den folgenden Jahren. In seinen Briefen an Schlechtendal bat er darum, dass beiliegende Manuskripte zur Veröffentlichung angenommen werden. Leider unterlief ihm auch ein Missgeschick: Er verwechselte die Zeitschriften und schickte eines der Manuskripte an den falschen Adressaten. Dennoch fand die Veröffentlichung ihren Weg an die Öffentlichkeit. Die Briefe sind transkribiert, ins Englische übersetzt und mit Kommentaren versehen. Besonders interessant und aktuell sind Christs Ausführungen zu einigen Arten der Gattung *Pinus*, die im Wesentlichen Fragen behandeln, die auch heute noch ungeklärt sind.

Key words: Botany, herbarium Halle, letters, *Linnaea*, *Pinus halepensis*, *Pinus maritima*, scientific publishing

Published online 7 Feb. 2024

Introduction

The herbarium of the Martin Luther University Halle-Wittenberg preserves four letters of the Swiss jurist, botanist, and philanthropist Konrad Hermann Heinrich Christ (Fig. 1) addressed to Diederich Franz Leonhard von Schlechtendal and written in the period from September 1863 to June 1865.

Hermann Christ (1833–1933) was jurist by profession, but was also intensively engaged in natural history, especially botanical topics. Christ authored more than 300 works on plant geography, vegetation science, plant systematics, and the history of botany over a period of 80 years. These include classic writings in botanical literature such as “*Pflanzenleben der Schweiz*” (Christ 1879) and “*Studien über die Kanarischen Inseln*” (Christ 1885, 1886, 1887). Among the many groups of plant, he was interested in were ferns, conifers, sedges, and roses. Some of his works were of a popular scientific or regional nature, e.g., on the cottage gardens of Switzerland. Many of his publications belong to the classics of botanical literature even today, also because of their poetic style of writing.

He was a founding and honorary member of the Swiss Botanical Society and a member and honorary member of numerous Swiss and foreign natural science associations and academies, e.g., the Leopoldina. In addition, he was active in religious, ecclesiastical and social fields and campaigned, for example, for the Armenians and oppressed ethnic groups in Africa and East Asia. Numerous publications and appreciations report on his life and work, for example, Senn (1933, 1934), Schröter (1934) and Becherer (1975).

D.F.L. von Schlechtendal (1794–1866) worked as a botany professor and director of the botanical garden at the university in Halle (Saale), where he was active from 1833 until his death. Some

biographical works have also been published about his work, but above all the type material of the more than 1,600 plant taxa described by him for the first time has been recorded and digitized to a large extent in the meantime (Wunschmann 1890, Schubert 1964, Heklau 1998, Heuchert et al. 2017, JACQ Virtual Herbaria 2023, JSTOR Global Plants 2023).

In connection with his contemporaries, Schlechtendal is interesting in that he left behind a collection of his letters, which still exists today at the herbarium of the Martin Luther University Halle-Wittenberg and is to be made accessible and digitized. It is a collection of about 5,600 letters from almost 500 personalities from Europe and overseas with whom he was in exchange (Schubert et al. 1964, Tkach et al. 2014).

Often these letters are about technical botanical issues and scientific publications of these correspondents, because Schlechtendal acted as editor and publisher of two journals that had relatively wide circulation. The journal 'Linnaea' published mainly taxonomic botanical articles, while the weekly 'Botanische Zeitung', co-edited with Hugo von Mohl (1805–1872, Tübingen, Germany), published original papers also from other fields of botany such as plant physiology and contained advertisements, lists of new writings and reviews, as well as reporting on news from the 'world of botany'. The four letters from Christ are also of business nature and concern the publication of scientific papers.



Fig. 1: Hermann Christ, portrait probably from 1863. Photographer F.H. Hartmann. — Universitätsbibliothek Basel (UB Basel, Portr BS Christ H 1833, 2). The photo depicts H. Christ as a young man, around the time he was corresponding with Schlechtendal.

The letters of Hermann Christ

(1) Letter from 9 September 1863 (Fig. 2)

Herrn Prof. D. v. Schlechtendal

i. Halle. —

Verehrter Hr. Professor!

Hr. Prof. Grisebach hat in N 12 der „Flora“ meine kleine Übersicht der europ. *Pinus* recensirt, u. dabei über *Pin. Brutia*, *Halepensis* u. *maritima* Lamb. eine Ansicht wiederholt, die ich i. Widerspruch mit der Natur der Sache finde. Es schien mir wohl der Mühe werth, diesen Gegenstand zu erörtern. Es ist wirklich bemühend zu sehen, wie die kleinen *Sileneae* od. *Carices* unseres europ. Südens so trefflich bekannt, die großen wichtigen Waldbäume jedoch noch so wenig gründlich studirt sind, daß uns die Alten immer noch i. dieser Bez. wenigstens gleich stehen. —

Ich bitte Sie daher, baldmöglichst die beifolgende Arbeit in die Spalten der „Flora“ aufzunehmen. Wenn Sie auch nicht (wie ich das vielleicht hoffen darf) alle überzeugt, so wird sie doch eine Anregung sein zur weiteren Untersuchung des so wichtigen Gegenstandes. Ich bitte ferner um 15 Abzüge des Drucks (unter gefäll. etwaiger Kostennachnahme) zur Vertheilung an Freunde.

Mit hochachtungsvollen

Empfehlungen

Ergebenst

Dr. H. Christ.

Basel 9 Sept 1863

Adresse: Sternenfels

N 5.

English translation:

Prof. D. von Schlechtendal

in Halle. —

Dear Professor!

Prof. Grisebach has reviewed in issue 12 of the ‘Flora’ my small overview of the European *Pinus*, and repeated a view about *Pinus Brutia*, *Halepensis* and *maritima* Lamb. which I find in contradiction with the nature of the matter. It seemed to me well worth the effort to discuss this subject. It is really troublesome to see how the small *Sileneae* or *Carices* of our European south are so well-known, but the large important forest trees are still so little studied in depth that the ancients are still at least equal to us in this respect. —

I therefore ask you to include the following paper in the columns of the ‘Flora’ as soon as possible. Even if you do not convince everyone (as I may hope), it will be a stimulus for further investigation of such an important subject. I also ask for 15 copies of the print (with any costs paid) to be distributed to friends.

With respectful

recommendations

Sincerely

Dr. H. Christ.

Basel 9 Sept 1863

Address: Sternenfels

N 5.

Comments to the letter:

August H.R. Grisebach, a professor of botany at the University Göttingen (Germany), commented in a short publication in the journal ‘Flora’ (Grisebach 1863) on a survey of the European *Pinaceae* published by Christ (1863a). Grisebach praised Christ’s treatment in principle, but disagreed with Christ’s classification/evaluation of *Pinus maritima* Lamb. because Christ considered the species conspecific with *P. halepensis* Mill., while he (Grisebach) himself considered it conspecific with *P.*

brutia Ten. Christ sent along with this letter a manuscript to Schlechtendal, in which he replied to Grisebach's criticism.

(2) Letter from 12 September 1863

Herrn Prof. v. Schlechtendal

i. Halle. —

Verehrter Herr!

Ich ersehe eben daß ich Ihnen irrthümlich einen Aufsatz zusandte, der zum Erscheinen in der Regensburger „Flora“ bestimmt ist. Da Griseb. seine Kritik i. letzterer Zeitschrift erscheinen ließ, muß ich natürlich die Gegenkritik auch i. derselben publiciren. Ich bitte Sie daher um die Freundlichkeit, einfach das Manuscript per Post der Redaction der „Flora“ zu überschicken, welche ich bereits avertirte. —

Für Ihre Mühe angelegentl. um Entschuldigung bittend

verharret mit besonderer Hochachtung

Ihr ergebener

Dr. H. Christ.

N 5 Sternenfels

Basel 12 Spt 1863

English translation:

Prof. von Schlechtendal

in Halle —

Dear Sir!

I see that I sent you an essay by mistake, which is intended for publication in the Regensburg 'Flora'. Since Grisebach had his critique published in the latter journal, I must of course also publish the counter-critique in the latter. I therefore ask you for the kindness of simply sending the manuscript by mail to the editors of the 'Flora', which I have already notified. —

For your trouble, I beg your pardon, with special respect

I remain with special esteem

Your devoted

Dr. H. Christ.

N 5 Sternenfels

Basel 12 Spt 1863

Comments to the letter:

Christ had found out in the meantime that Schlechtendal was not the editor of the journal 'Flora oder allgemeine botanische Zeitung...' in which Grisebach had published his article (see above), but of the 'Botanische Zeitung', another journal with a similar title. Schlechtendal evidently sent the manuscript to the editors of the 'Flora' in Regensburg according to Christ's request. 'Flora' published it in the issue 24 of volume 46 on 2 October 1863 (Christ 1863b).

In his reply, Christ convincingly supported his point of view and expressed the wish that the name *Pinus maritima* Lambert should disappear from the botanical literature: „Unter solchen Umständen wird hoffentlich die *P. maritima* Lamb. als Art aus unserer Litteratur verschwinden“ (Christ 1863b: p. 376).

Interestingly, *P. maritima* Lamb., first used in Lambert's "A description of the genus *Pinus*, illustrated with figures..." first edition of 1803: p. 13 seems to be an oddity till now, as it was not a new species epithet coined by Lambert but is based either on *P. sylvestris* ϵ *maritima* Ait. (see Aiton 1789: p. 366) or *P. maritima minor* Duhamel (see Duhamel du Monceau 1755: p. 125, species no. 3), both of which are cited here as synonyms. Because Duhamel's name is a species designation consisting of a generic name followed by two or more adjectival words in the nominative case it cannot be regarded as species name according to Art. 23.6(c) of the International Code of Nomenclature (ICN 2018). Therefore, the correct name of this species would be *P. maritima* (Ait.) Lamb.

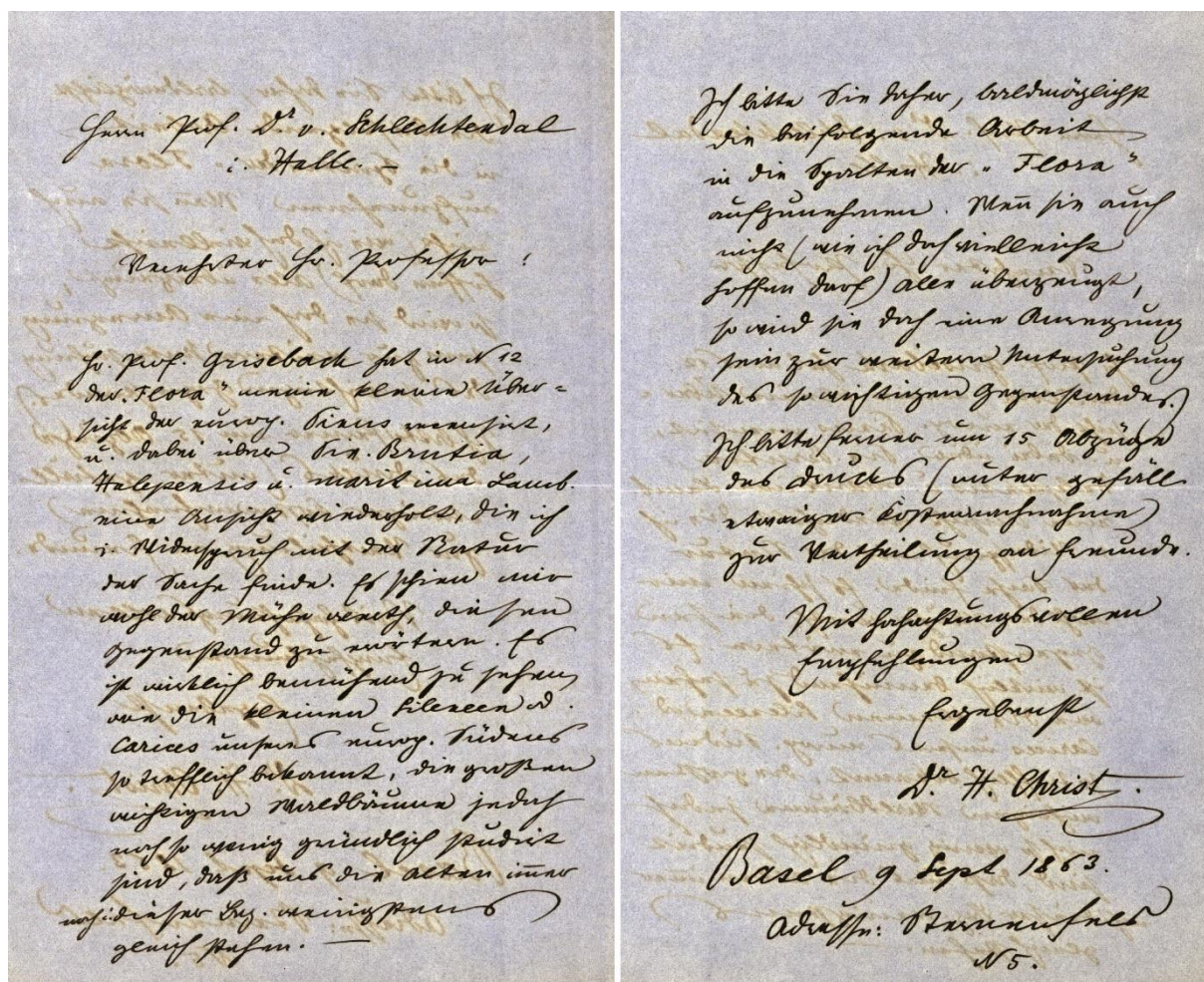


Fig. 2: Letter of H. Christ to Schlechtendal from 9 September 1863, front and back. — Schlechtendal's letter collection in the herbarium of the University Halle-Wittenberg.

In addition, Aiton's name refers to *P. maritima major* Duhamel (see Duhamel du Monceau 1755: p. 125, species no. 2). Duhamel's names both refer to Bauhin's 'Pinax theatri botanici' (see Bauhin 1623: p. 491), which also contains a third name, *P. maritima altera*, not used by later authors. In any case, the only legitimate name is *P. maritima* Mill. (see Miller 1768, unpaginated work, *Pinus* no. 7). Miller, however, referred to "*Pinus maritima* II" of Tabernaemontanus (see Tabernaemontanus 1590: p. 937), which is also illustrated but not described, and the illustration would apply to several species.

From today's point of view, it is clear that *P. maritima* (Ait.) Lamb. represents an illegitimate, unavailable name, because it is a younger homonym to *P. maritima* Mill. Lambert would have had to introduce an entirely new epithet for his species to avoid illegitimacy. In the 'Handbook of the world's conifers' (Farjon 2017) both illegitimate names, *P. maritima* Lam. (syn. of *P. pinaster* Ait.) and *P. maritima* (Ait.) Lamb., are missing.

The synonyms of Aiton and Duhamel were not included in the second edition of Lambert's "A description of the genus *Pinus*, illustrated with figures..." (Lambert 1828: p. 30*) nor in the so-called 'third edition' with slightly changed title "A description of the genus *Pinus*, with directions relative to the cultivation..." (Lambert 1832: p. 16). Apparently, Christ had the latter edition, which is evident from the cited pages and tables (Christ 1863b: p. 372).

The three editions of Lambert's "A description of the genus *Pinus*..." also have differences in the figures made by the famous illustrator Ferdinand Bauer (1760–1826). The first edition cited Tab. 9 as *P. maritima*. In the second edition it was supplemented by two cones and was ascribed to "*Pinus Laricio*" (Lambert 1828: p. 28*), a species missing in the first edition. Further changes of this illustration were made in the third addition (Lambert 1828: Tab. 4). In addition, the "*P. maritima*" illustrations of Tab. 10 of the first and second edition (Lambert 1803, 1828) are from two different

individuals, one of them an herbarium specimen from W. Sherard (today presumably in the herbarium OXF), the other after a growing tree at Sion House, Kew Gardens (see Lambert 1803: p. 13, 14). The illustrations of the third edition are even from three different specimens, including a cone collected in Greece by W.T.H. Fox-Strangways (Lambert 1832: p. 17, Tab. 6).

However, the debate about the correct name of the *Pinus* species discussed by Christ and Grisebach is by no means closed, as the application of the names *P. halepensis* and *P. brutia* is, indeed, unclear due to open questions as to their nomenclatural types. Therefore, a proposal has recently been made to conserve the name *P. halepensis* Mill. with a conserved type to avoid the name *P. halepensis* having to replace *P. brutia* Ten. and the name *P. maritima* Mill. having to replace *P. halepensis* (Ferrer-Gallego & Farjon 2020). However, the proposed type specimen from the Algarve in Portugal is perhaps not the most fortunate choice for a species that bears as epithet the name of a city at the opposite end of the Mediterranean, Aleppo in Syria (*'P. halepensis'*). In addition, the name *P. maritima* Mill. is still not clarified.

(3) Letter from 15 January 1864

Herrn Prof. v. Schlechtendal i. Halle

Verehrter Herr Professor!

Ich habe über den Formenkreis des *Pinus sylvestris* des Oberengadin eine Arbeit fertig, welche sich einestheils an Ihre treffl. Studie in der *Linnaea* 1857 anschließt, anderntheils nicht unwichtige Resultate (bes. über die Annäherung der dortigen *P. sylv.* zur *P. montana*) ergeben hat. – Ich halte daher dafür, daß diese (nicht ganz 2 Schreibbogen umfassende) Studie in der *Linnaea* nicht am unrechten Ort wäre, und erlaube mir die Anfrage, ob ich Sie Ihnen für dieses Journal senden dürfte. Lieb wäre mir, wenn eine Tafel mit Figuren von Strobili (nur in Linearzeichnung) beigegeben werden könnte, doch betrachte ich das nicht als unerlässlich. —

Gefälliger recht baldiger Antwort gewärtig, bitte ich noch, gelegentl. meinen Freund, Ihren Kollegen Hrn. Fitting herzlich zu grüßen. —

Mit vorzüglicher Hochachtung

Ihr ergebenster

Dr. H. Christ

Sternenfels N 5

Basel

Am 15 Jan. 1864

English translation:

Prof. von Schlechtendal in Halle

Dear Professor!

I have finished a work about the forms of *Pinus sylvestris* of the Upper Engadin, which on the one hand follows your excellent study in *Linnaea* 1857, and on the other hand has yielded not unimportant results (especially about the approximation of the *P. sylv.* there to the *P. montana*). — I therefore think that this study (not quite 2 sheets of writing paper) would not be in the wrong place in the *Linnaea*, and allow me to ask if I can send it to you for this journal. I would be pleased if a plate with figures of strobili (only in line drawing) could be enclosed, but I do not consider this as indispensable. —

I would like to ask you to send my best regards to my friend, your colleague Mr. Fitting, at your convenience. —

With the greatest respect

Yours sincerely

Dr. H. Christ

Sternenfels N 5

Basel

On 15 Jan. 1864

Comments to the letter:

Apparently, Schlechtendal rejected this manuscript of Christ, probably because he himself was working on a publication on *Pinus* that appeared in *Linnaea* 33, issues 3–4 (December 1864) and issue 6 (June 1865) (Schlechtendal 1864a,b, 1865). Christ's manuscript finally appeared in March 1864 in 'Flora' (Christ 1864) as a continuation of his earlier publication "Beiträge zur Kenntnis südeuropäischer *Pinus*-Arten" (Christ 1863b). Schlechtendal's earlier publication in "*Linnaea* XXIX 1857", to which Christ refers (Christ 1864: p. 147), had, among its subjects, observations on German and Swiss *Pinus* species (Schlechtendal 1857).

H. Hermann Fitting, a German jurist, was professor of Roman law at the University Basel and thus a colleague of Christ. In the fall of 1862, Fitting had accepted a call to the University Halle-Wittenberg, where Schlechtendal was professor of botany (Schmücking 1961).

(4) Letter from 7 June 1865

Verehrter Herr Professor!

Ich habe eine Arbeit über die Formenkreise, in denen sich die europ. *Pinus* Arten begegnen, nahezu vollendet, und erlaube mir, Sie anzufragen, ob Sie solche in die botan. Zeitung aufnehmen wollen. Nicht nur die längst discutirten *P. montana* u. *sylvestris*, sondern auch die *Laricionen*, *Halepensis*, *Brutia* etc. werden darin einlässlich nach ihren verschiedenen, theils mehr theils weniger constanten Variationen beschrieben, einige neue geogr. Nachweise beigelegt u. bes. auch die Entwicklungsgeschichte des Strobilus Rücksicht genommen. Umfang: ca 1½ Octavdruckbogen, nach meiner Schätzung.

Um gefäll. Nachricht

bittend Ihr hochachtungsvoll

ergebener

Dr. Christ-Socin

Basel. Sternenfels 5

am 7 Juni 1865

English translation:

Dear Professor!

I have almost completed a work on the forms, in which the European *Pinus* species meet each other, and allow me to ask you whether you want to accept it for the 'Botanische Zeitung'. Not only *P. montana* and *sylvestris*, which have long been discussed, but also *Laricionen*, *Halepensis*, *Brutia*, etc. are described in detail according to their different, partly more or less constant variations, some new geographic evidence is added, and especially the history of the development of the strobilus is considered. Size: about 1½ octavo sheets, according to my estimate.

Asking for your kind message

Your respectfully

devoted

Dr. Christ-Socin

Basel. Sternenfels 5

7 June 1865

Comments to the letter:

This publication was accepted by Schlechtendal and printed, distributed in three issues of the 'Botanische Zeitung' (Christ 1865). In *P. halepensis* Mill., Christ distinguishes three different forms on the basis of characteristics of the strobilus, including one which he calls "*c. maritima* Lamb." (Christ 1865: p. 222).

Discussion

As can be seen from the list of Christ's publications (Senn 1934), the works mentioned in the letters to Schlechtendal belong to his early botanical works. The journals 'Linnaea' and 'Botanische Zeitschrift', edited and published by Schlechtendal, corresponded quite well to the character of Christ's publications and seemed to be a suitable publication organ. Apparently, Christ did not resent Schlechtendal's rejection of a manuscript, which can be assumed on the basis of the letters. It is possible that he would also have placed his further works in these journals, but after Schlechtendal's death in 1866, no publication by Christ appeared in either of the two journals.

It is also interesting to note the short time span of only 3.5 weeks from the submission of a manuscript to its appearance in 'Flora', although the manuscript was erroneously sent first to Schlechtendal in Halle instead of to the editorial office in Regensburg (letters 1 and 2). The time span for publication in 'Botanische Zeitung' was 4 weeks (letter 4). Today's authors can only dream of such a rapid pace of publication.

Acknowledgments

We thank Mrs. Anita Hohmann, Mrs. Gisela Marx, Mrs. Ursula Nitschke and Mrs. Brunhilde Richter, volunteers of the 'Sütterlinstube Halle', for the careful translation of the handwritten letters of H. Christ. We are also grateful to Mrs. Benedicta Erny, University Library Basel, Switzerland, for providing an image of H. Christ's portrait.

References

- Aiton, W. 1789: Hortus kewensis. Vol. 3. London, G. Nicol.
- Bauhin, C. 1623: Pinax theatri botanici. Basilea, Ludovicus Rex.
- Becherer, A. 1975: Erinnerungen an die Basler Botaniker Hermann Christ, Emil Steiger und Eduard Thommen. *Bauhinia* **5**(3): 161–171.
- Christ, H. 1863a: Uebersicht der europäischen Abietineen (*Pinus* Linn.). Verhandlungen der Naturforschenden Gesellschaft in Basel **3**: 540–557.
- Christ, H. 1863b: Beiträge zur Kenntniss südeuropäischen *Pinus*-Arten. I. Ueber *Pinus Brutia* Ten., *Pinus Halepensis* Miller und deren Varietäten. *Flora* **46**(24): 369–376.
- Christ, H. 1864: Beiträge zur Kenntniss südeuropäischen *Pinus*-Arten. III. Die Formen der *Pinus sylvestris* L. des Oberengadin (Ctn. Graubündten). *Flora* **47**(24): 147–380.
- Christ, H. 1865: Die Formenkreise der europäischen *Pinus*-Arten. *Botanische Zeitung* (Berlin) **23**(27): 213–216, **23**(28): 221–224, **23**(29): 229–234.
- Christ, H. 1879: Das Pflanzenleben der Schweiz. Zürich, Schulthess.
- Christ, H. 1885: Vegetation und Flora der Kanarischen Inseln. *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* **6**: 458–527.
- Christ, H. 1886: Eine Frühlingsfahrt nach den Kanarischen Inseln. Basel, Georg.
- Christ, H. 1887: Spicilegium canariense, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* **9**: 86–172.
- Duhamel du Monceau, H.-L. 1755: Traité des arbres et arbustes qui se cultivent en France en pleine terre. Vol. 2. Paris, H.L. Guerin & L.F. Delatour.
- Farjon, A. 2017: A handbook of the world's conifers. Ed. 2. Leiden, Brill. doi: 10.1163/9789047430629
- Ferrer-Gallego, P. P. & Farjon, A. 2019: (2726) Proposal to conserve the name *Pinus halepensis* (Pinaceae) with a conserved type. *Taxon* **68**(6): 1368–1369. doi: 10.1002/tax.12170
- Grisebach, A. H. R. 1863: Christ's Uebersicht der europäischen Abietineen (Versammlung der naturforschenden Gesellschaft in Basel 1863). *Flora* **46**(12): 189–190.
- Heklau, H. 1998: Diederich Franz Leonhard von Schlechtendal (1794–1866). *Schlechtendalia* **1**: 1–14. doi: 10.25673/89993
- Heuchert, B., Braun, U., Tkach, N., Marx, D. & Röser, M. 2017: Biography of D.F.L. von Schlechtendal and type material of his new taxa preserved in the herbarium of Martin Luther University Halle-Wittenberg (HAL) and other botanical collections. *Schlechtendalia* **31**: 1–143. doi: 10.25673/90152
- ICN 2018 = Turland, N. J., Wiersema, J. H., Barrie, F. R., Greuter, W., Hawksworth, D. L., Herendeen, P. S., Knapp, S., Kusber, W.-H., Li, D.-Z., Marhold, K., May, T. W., McNeill, J., Monro, A. M., Prado, J., Price, M. J. & Smith, G. F. (Eds.). 2018: International code of nomenclature for algae, fungi, and plants (Shenzhen Code) adopted by the Nineteenth International Botanical Congress Shenzhen, China, July 2017. *Regnum Vegetabile* **159**. Glashütten, Koeltz Botanical Books. doi: 10.12705/Code.2018
- JACQ Virtual Herbaria. 2023: <https://www.jacq.org/> [last accessed 20 September 2023].

- JSTOR Global Plants. 2023: <https://plants.jstor.org/> [last accessed 20 September 2023].
- Lambert, A. B. 1803: A description of the genus *Pinus*, illustrated with figures, directions relative to the cultivation, and remarks on the uses of the several species. Ed. 1, vol. 1. London, J. White.
- Lambert, A. B. 1828: A description of the genus *Pinus*, illustrated with figures, directions relative to the cultivation, and remarks on the uses of the several species. Ed. 2, vol. 1. London, Weddell.
- Lambert, A. B. 1832: A description of the genus *Pinus*, with directions relative to the cultivation, and remarks on the uses of the several species; also descriptions of many other new species of the family of Coniferae. Vol. 1. London, Weddell.
- Miller, P. 1768: The gardeners dictionary. Ed. 8. London, J. & F. Rivington.
- Schlechtendal, D. F. L. von 1857: Coniferae mexicanae ex catalogo clar. Roezl translatae, cum observationibus in pinastros Germaniae nec non in coniferas mexicanas. II. De pinastris Germaniae et Helvetiae observationes. *Linnaea* **29**(3): 357–384.
- Schlechtendal, D. F. L. von 1864a: Beiträge zur Kenntniss der Koniferen. I–II. *Linnaea* **33**(3–4): 339–383.
- Schlechtendal, D. F. L. von 1864b: Beiträge zur Kenntniss der Koniferen. IV(1–3a). *Linnaea* **33**(3–4): 395–400.
- Schlechtendal, D. F. L. von 1865: Beiträge zur Kenntniss der Koniferen. IV(3b–e)–V. *Linnaea* **33**(3–4): 693–750.
- Schmücking, A. 1961: Fitting, Hermann. In: Historische Kommission bei der Bayerischen Akademie der Wissenschaften (Ed.), *Neue Deutsche Biographie*. Vol. 5, p. 218. Berlin, Duncker & Humblot.
- Schröter, C. 1934: Dr. Hermann Christ. 1833–1933. *Verhandlungen der Schweizerischen Naturforschenden Gesellschaft* 1934(3): 493–499.
- Schubert, G. 1964: *Leben und Werk von Diederich Franz Leonhard von Schlechtendal*. Unpublished PhD thesis. Halle (Saale), University Halle-Wittenberg.
- Senn, G. 1933: Hermann Christ-Socin. *Berichte der Deutschen Botanischen Gesellschaft* **51**(12): (72)–(95).
- Senn, G. 1934: Verzeichnis von Hermann Christs botanischen Schriften. *Verhandlungen der Schweizerischen Naturforschenden Gesellschaft* 1934(3): 500–511.
- Tabernaemontanus, J. T. 1590: *Eicones plantarum seu stirpium, arborum nempe, fructicum, herbarum, fructuum, lignorum...* Francofurti ad Moenum, N. Bassaeus.
- Tkach, N., Braun, U. & Röser, M. 2014: Correspondence of D.F.L. von Schlechtendal in the herbarium of the University Halle-Wittenberg, Germany (HAL). *Schlechtendalia* **28**: 29–34. doi: 10.25673/90135
- Wunschmann, E. 1890: Schlechtendal, Diederich Franz Leonhard v. In: *Historische Kommission bei der Königl. Akademie der Wissenschaften, Bayern (Ed.), Allgemeine Deutsche Biographie*. Vol. 31, pp. 351–353. Leipzig, Duncker & Humblot.

Addresses of the authors

Natalia Tkach & Martin Röser, Martin Luther University Halle-Wittenberg, Institute of Biology, Geobotany and Botanical Garden, Neuwerk 21, 06108 Halle (Saale), Germany.
(E-mails: natalia.tkach@botanik.uni-halle.de; martin.roeser@botanik.uni-halle.de)

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Schlechtendalia](#)

Jahr/Year: 2024

Band/Volume: [41](#)

Autor(en)/Author(s): Tkach Natalia, Röser Martin

Artikel/Article: [Taxonomy and correct species names in Pinus \(Pinaceae\): correspondence of the Basel jurist and naturalist Hermann Christ with the German botanist D. F. L. von Schlechtendal 17-25](#)