

cryptogamie

Bryologie

2024 • 45 • 5

Revisiting the Bryophyte Checklist of Algeria: Exploring Diversity and Distribution

Rosa M. ROS, Susana RAMS, Olaf WERNER & Eloy CERÓN

art. 45 (5) — Published on 10 October 2024
www.cryptogamie.com/bryologie

PUBLICATIONS
SCIENTIFIQUES



DIRECTEUR DE LA PUBLICATION / *PUBLICATION DIRECTOR*: Gilles BLOCH
Président du Muséum national d'Histoire naturelle

RÉDACTEUR EN CHEF / *EDITOR-IN-CHIEF*: Denis LAMY

ASSISTANT DE RÉDACTION / *ASSISTANT EDITOR*: Chris LE COQUET-LE ROUX (bryo@cryptogamie.com)

MISE EN PAGE / *PAGE LAYOUT*: Chris LE COQUET-LE ROUX

RÉDACTEURS ASSOCIÉS / *ASSOCIATE EDITORS*

Biologie moléculaire et phylogénie / *Molecular biology and phylogeny*

Bernard GOFFINET

Department of Ecology and Evolutionary Biology, University of Connecticut (United States)

Mousses d'Europe / *European mosses*

Isabel DRAPER

Centro de Investigación en Biodiversidad y Cambio Global (CIBC-UAM), Universidad Autónoma de Madrid (Spain)

Francisco LARA GARCÍA

Centro de Investigación en Biodiversidad y Cambio Global (CIBC-UAM), Universidad Autónoma de Madrid (Spain)

Mousses d'Afrique et d'Antarctique / *African and Antarctic mosses*

Rysiek OCHYRA

Laboratory of Bryology, Institute of Botany, Polish Academy of Sciences, Krakow (Pologne)

Bryophytes d'Asie / *Asian bryophytes*

Rui-Liang ZHU

School of Life Science, East China Normal University, Shanghai (China)

Bioindication / *Biomonitoring*

Franck-Olivier DENAYER

Faculté des Sciences Pharmaceutiques et Biologiques de Lille, Laboratoire de Botanique et de Cryptogamie, Lille (France)

Écologie des bryophytes / *Ecology of bryophyte*

Nagore GARCÍA MEDINA

Department of Biology (Botany), and Centro de Investigación en Biodiversidad y Cambio Global (CIBC-UAM), Universidad Autónoma de Madrid (Spain)

COUVERTURE / *COVER*:

Photograph of *Tortula revolvens* turf.

Cryptogamie, Bryologie est indexé dans / *Cryptogamie, Bryologie is indexed in*:

- Biological Abstracts
- Current Contents
- Science Citation Index
- Publications bibliographiques du CNRS (Pascal)

Cryptogamie, Bryologie est distribué en version électronique par / *Cryptogamie, Bryologie is distributed electronically by*:

- BioOne® (<http://www.bioone.org/loi/cryb>)

Cryptogamie, Bryologie est une revue en flux continu publiée par les Publications scientifiques du Muséum, Paris
Cryptogamie, Bryologie is a fast track journal published by the Museum Science Press, Paris

Les Publications scientifiques du Muséum publient aussi / *The Museum Science Press also publish: Adansonia, Geodiversitas, Zoosystema, Anthropolozologica, European Journal of Taxonomy, Naturae, Comptes Rendus Palevol, Cryptogamie sous-sections Algologie, Mycologie.*

Diffusion

Publications scientifiques Muséum national d'Histoire naturelle
CP 41

57 rue Cuvier F-75231 Paris cedex 05 (France)

Tél. : 33 (0)1 40 79 48 05 / Fax : 33 (0)1 40 79 38 40

diff.pub@mnhn.fr / <http://sciencepress.mnhn.fr>

© Publications scientifiques du Muséum national d'Histoire naturelle, Paris, 2024

ISSN (imprimé / *print*) : 1290-0796 / ISSN (électronique / *electronic*) : 1776-0992

Revisiting the Bryophyte Checklist of Algeria: Exploring Diversity and Distribution

Rosa M. ROS

Departamento de Biología Vegetal (Botánica), Universidad de Murcia,
Campus de Espinardo, E-30100 Murcia (Spain)
rmros@um.es (corresponding author)

Susana RAMS

Departamento de Didáctica de las Ciencias Experimentales, Universidad de Granada,
Campus Universitario de Cartuja, E-18071 Granada (Spain)
susanarams@go.ugr.es

**Olaf WERNER
Eloy CERÓN**

Departamento de Biología Vegetal (Botánica), Universidad de Murcia,
Campus de Espinardo, E-30100 Murcia (Spain)
werner@um.es

Submitted on 4 October 2023 | Accepted on 29 April 2024 | Published on 10 October 2024

Ros R. M., Rams S., Werner O. & Cerón E. 2024. — Revisiting the Bryophyte Checklist of Algeria: Exploring Diversity and Distribution. *Cryptogamie, Bryologie* 45 (5): 49-116. <https://doi.org/10.5252/cryptogamie-bryologie2024v45a5>. <http://cryptogamie.com/bryologie/45/5>

ABSTRACT

A new, updated checklist of the bryophytes of Algeria was compiled from the literature. Reports were made mainly by French botanists in the 19th and first half of the 20th centuries and include a total of 498 taxa, of which 477 are at species level and the rest are at infraspecific rank. It comprises three hornwort species, 118 liverwort taxa (113 species), and 377 moss taxa (361 species). For each taxon, literature records and localities explored in the country are provided. The analysis of the current data reveals that Algeria is the Maghreb country with the second-largest number of bryophyte taxa, behind Morocco. As in other Mediterranean countries, hornworts and liverworts are scarce (24.3%), and mosses are dominant (75.7%). Concerning liverworts and hornworts, the family Ricciaceae and genus *Riccia* (31 taxa) are the best-represented; the aquatic and ephemeral genus *Riella* (8 taxa) shows the higher number of species in the Mediterranean countries. Regarding mosses, the family Pottiaceae is the largest one, with 107 taxa (28.4% of the moss taxa), and *Tortula* (22 taxa) is the most species-rich genus. Algeria has, by now, the lowest species/km² ratio (0.20×10^{-3}) compared to the rest of the Maghreb and some European Mediterranean countries (Greece, Italy, and Spain), due not only to the low degree of knowledge of the bryophyte flora but also to the larger surface area of the country and the great extension of the Saharan region. The high percentages of rare or very rare taxa (72.5%) versus the low percentages of frequent, common, and very common (27.5%) can be an indicator that many areas are still underexplored, and that the bryophyte flora of the country cannot be considered well-known. The revision or collection of new samples of some rare or doubtful taxa would be necessary to assess the reliability of some reports.

KEY WORDS

Northern Africa,
Maghreb,
Mediterranean,
mosses,
liverworts,
hornworts,
updated catalogue.

RÉSUMÉ

Révision de la liste de contrôle des bryophytes d'Algérie : exploration de la diversité et de la distribution.

Une nouvelle liste actualisée des bryophytes d'Algérie a été établie à partir de la littérature. Les récoltes ont été faites principalement par des botanistes français au cours du 19^{ème} et de la première moitié du 20^{ème} siècle et comprennent un total de 498 taxons, dont 477 sont au niveau de l'espèce et le reste au niveau infraspécifique. Elle comprend trois espèces d'anthocérotes, 118 taxons d'hépatiques (113 espèces) et 377 taxons de mousses (361 espèces). Pour chaque taxon, les données bibliographiques et les localités explorées dans le pays sont fournies. L'analyse des données actuelles révèle que l'Algérie est le pays du Maghreb qui possède le deuxième plus grand nombre de taxons de bryophytes, derrière le Maroc. Comme dans les autres pays méditerranéens, les anthocérotes et les hépatiques sont rares (24,3 %) et les mousses sont dominantes (75,7 %). En ce qui concerne les hépatiques et les anthocérotes, la famille des Ricciaceae et le genre *Riccia* (31 taxons) sont les mieux représentés; le genre aquatique et éphémère *Riella* (8 taxons) présente le plus grand nombre d'espèces dans les pays méditerranéens. En ce qui concerne les mousses, la famille Pottiaceae est la plus importante, avec 107 taxons (28,4 % des taxons de mousses), et *Tortula* (22 taxons) est le genre qui atteint le plus grand nombre d'espèces. L'Algérie a, à ce jour, le plus faible ratio espèces/km² ($0,20 \times 10^{-3}$) par rapport au reste du Maghreb et à certains pays méditerranéens européens (Grèce, Italie et Espagne), en raison non seulement du faible degré de connaissance de la flore bryophytique, mais aussi de la plus grande superficie du pays et de la grande extension de la région saharienne. La forte proportion de taxons rares ou très rares (72,5 %) contre la faible proportion de taxons fréquents, communs et très communs (27,5 %) peut indiquer que de nombreuses régions sont encore sous-explorées et que la flore bryophytique du pays ne peut pas être considérée comme bien connue. La révision ou la collecte de nouveaux échantillons de certains taxons rares ou douteux serait nécessaire pour évaluer la fiabilité de certaines récoltes.

MOTS CLÉS

Afrique du Nord,
Maghreb,
Méditerranée,
mousses,
hépatiques,
anthocérotes,
catalogue actualisé.

INTRODUCTION

GEOGRAPHIC CHARACTERISTICS OF ALGERIA

Algeria, officially the People's Democratic Republic of Algeria, is in the northwest of the African continent, in the center of the Maghreb, which includes, in a restricted sense, Morocco, Algeria, and Tunisia. Algeria borders seven countries: Tunisia and Libya to the east, Niger and Mali to the south, and Mauritania, Morocco, and Western Sahara to the west. To the north, a coastline opens, more than 1200 km long, towards the Mediterranean Sea. The country has a surface area of 2 381 741 km² (Oficina de Información Diplomática del Ministerio de Asuntos Exteriores, Unión Europea y Cooperación 2023). Algeria includes two completely different phytogeographical regions: the Mediterranean, to the north, where the Atlas Mountains abruptly shape the environment, and the Saharan-Arabian, to the south (Charco 1999). The Sahara Desert covers an area of 2 million km² in Algeria, which represents approximately 85% of the territory (Oficina de Información Diplomática del Ministerio de Asuntos Exteriores, Unión Europea y Cooperación 2023).

In the Mediterranean part of the country, the predominant geographic feature is formed by the Atlas Mountains, made up of different massifs and mountain ranges; in each of them, different climatic conditions and types of vegetation are present.

The massif located further north is the Tellian Atlas, situated in the wettest area and boasting the highest concentration of forests in northern Africa, together with the Rif, in Morocco. With a Mediterranean climate, 65% of the precipitation it

receives occurs during spring and autumn, with quantities higher than 400 mm per year, even reaching a mean higher than 2000 mm per year in some points such as Kabylia and Kroumerie; the characteristic vegetation is made up of *Abies* sp. pl., *Cedrus atlantica* (Endl.) Manetti ex Carrière, *Olea europaea* L. var. *sylvestris* (Mill.) Lehr, *Quercus faginea* Lam., *Q. ilex* L., *Q. suber* L., and *Tetraclinis articulata* (Vahl) Mast. (Charco 1999).

Immediately to the south of the Tellian Atlas are the Hauts Plateaux, in which the main steppes of northern Africa develop. They are high plains surrounded by mountains. Many rivers and temporary streams flow into the plain and form lagoons in the depressions that also collect surface runoff water. The characteristic climate is of the extreme continental type, with very hot summers reaching 50°C and very cold winters with temperatures below zero; daily thermal amplitude can reach a variation of 40°C. Main precipitation ranges between 150 and 400 mm per year, and the vegetation is made up of *Q. ilex*, which leads to *Pinus* L. forests, *T. articulata*, *Juniperus* L. with needle-like leaves, *Juniperus* with scale-like leaves as the drought increases; and even to *Stipa tenacissima* L. formations, together with *Artemisia* sp. pl. and *Rosmarinus officinalis* L. (Charco 1999).

Finally, in the Saharan Atlas, a long mountain range rising on the fringes of the Sahara Desert represents a great barrier between the Mediterranean region and the Saharan-Arabian region, with altitudes not higher than 2000 m; the climate is Mediterranean-steppic (dry-semi-arid) in the north slope, where annual rainfall ranges from 150 to 400 mm, and the Mediterranean desertic (arid-semi-arid) in the south

slope, where mean annual rainfall does not reach 100 mm; the vegetation corresponds to *Pinus* forests with *Juniperus* with needle-like leaves, and with scale-like leaves (Charco 1999). The Sahara Desert reaches high temperatures and hot and dry air currents; summers are hot, and winters reach temperatures below zero in some places; in a normal year, the maximum temperature recorded is normally 48–50°C, but it can reach even 56–58°C; not only are temperature differences recorded between summer and winter, but variations of 20°C are also recorded between day and night, which can even reach 30°C (Ozenda 1977). Precipitation is null or almost null in the Sahara, due to the great distance that it presents to the sea; an irregular annual rainfall of less than 50 mm has been recorded in the Central Saharan Region; only in the central massifs such as Hoggar and Tassili n'Ajjer, slightly more abundant and regular rains have been observed, which even reach 200 mm per year; no outstanding flora is found due to the harsh climatic conditions present (Ozenda 1977).

EVOLUTION OF THE STUDY OF BRYOPHYTES IN ALGERIA OVER TIME

According to Jelenc (1955a), the first data about bryological explorations in the Maghreb dates to 1799. They were due to the French botanist R. L. Desfontaines (1750–1833), who carried out a botanical expedition from Tunisia to Algeria that lasted three years. His results were included in his work “Flora Atlantica” (Desfontaines 1799), where he mentioned 11 species of mosses and one liverwort, nine of them collected in Algeria but without indication of their location.

In the 19th century, botanists dedicated to the study of northern African vascular plants showed interest in bryophytes, also collecting these plants in their expeditions. That was the case of C. J. Gouget (1809–1877), who explored Algiers, Oran, and Constantine between 1835 and 1839, J.-N. Bové (1802–1842) who toured the Algiers region between 1837 and 1841, and A. V. Roussel (1795–1874), who collected many species around Algiers. The last one sent the samples for identification to J. P. F. C. Montagne (1784–1866), who published the results (Montagne 1838).

Between 1839 and 1882 the French government promoted a scientific exploration of Algeria. It was chaired first by Colonel J. B. G. N. Bory de Saint-Vincent (1778–1846) and the botanist M. C. Durieu de Maisonneuve (1796–1878), with the latter serving as the primary collector of bryophytes due to his passion for cryptogams.

They were in contact with Montagne, who studied most of their samples (Bory de Saint-Vincent & Montagne 1843; Durieu de Maisonneuve 1846, 1849, 1868; Montagne 1849, 1856). In 1852, the French botanist and mycologist E. S.-C. Cosson (1819–1889) accompanied Durieu de Maisonneuve on the scientific explorations, and he became the most prominent researcher of this period traveling to Algeria, but also to Tunisia and north of the Sahara (Cosson 1853). Other bryophyte collectors in this period were H.-R. Le T. de la Perraudière (1831–1861), J. M. Gandoger (1850–1926),

A.-H. Letourneux (1820–1890), J. É. G. N. Paris (1827–1911) and H. Philibert (1822–1901). The French pharmacist and botanist E. Bescherelle (1828–1903) published the collections of these botanists and other earlier ones in his “Catalogue des Mousses observées en Algérie”, proposing many new taxa (Bescherelle 1882). Some of these collectors also published their own collections (Philibert 1880a, b; Gandoger 1883).

Most of the data generated since then were studied by a new bryologist, L. C. Trabut (1853–1929), who lived in Alger until his death and made a substantial number of new collections. Trabut's work was immense; in collaboration with J. A. Battandier (1848–1922) he carried out the inventory of the flora of northern Africa, although only one issue of his publication included five bryophytes (Battandier & Trabut 1886). In other publications, Trabut described many species of mosses and liverworts and reported many new species for Algeria (Trabut 1886, 1887a, b, 1888, 1908, 1913, 1914, 1916, 1922, 1927, 1933, 1934; Battandier *et al.* 1914; Douin & Trabut 1919). An important part of his work was summarized in the “Flore des Hépatiques de l'Afrique du Nord” (Trabut 1941), published after his death. The work carried out by Trabut on the study of bryophytes in northern Africa has been, together with that of Durieu de Maisonneuve, the most important on the topic until the first half of the 20th century. Some European botanists or mycologists reported his bryological data, such as A. C. Julien (x-1902) in the region of Constantine (Julien 1894), V. Litschauer (1879–1939) in Alger (Litschauer 1904), and G. Lapie (fl. 1914) in the Kabylie du Djurdjura (Lapie 1908, 1909).

During this period, other botanists carried out collections in Algeria, such as E. de Bergevin (1859–1933) in the whole country, R. Chudeau (1864–1921) in Constantine, the Sahara, and the Djurdjura, B. P. G. Hochreutiner (1873–1959) in the vicinity of Alger and Oran, H. Gay (1882–1909) around Blida, and P. E. Pinoy (1873–1948) in Oran and Tlemcen. Most of these materials were studied by J. Cardot (1860–1934), L. Corbière (1850–1941), C. I. Douin (1858–1944), P. A. Hariot (1854–1917), and Trabut (Brongniart 1882; Cardot 1884, 1904; Corbière 1889, 1904, 1905; Douin 1904; Camus 1906; Hariot 1913).

R. C. J. E. Maire (1878–1949) surveyed the whole of northern Africa and the north of the Sahara and made many contributions, in addition to what he had done before (Maire 1916, 1936, 1937, 1939, 1940; Maire & Sevenet 1928). Also, L. E. Gauthier-Lièvre (1897–1992) and J. Feldmann (1905–1978) made some interesting additions (Gauthier-Lièvre 1931; Feldmann 1945, 1947), as well as J. Braun-Blanquet (1814–1980), G. Andreánszky (1895–1967), E. Wilczek (1867–1948) and many other botanists. Many of the collections of this period were studied by M. Bizot (1905–1979), A. Coppey (1874–1913), H. N. Dixon (1861–1944), C. Meylan (1868–1941), R. A. L. Potier de la Varde (1878–1961), and I. Thériot (1859–1947). Some of the outstanding publications were: Dixon (1904, 1931), Coppey (1911), Potier de la Varde (1922), Braun-Blanquet & Maire (1924), Thériot & Trabut (1930), Meylan (1931, 1936),

Thériot (1931, 1933), Szepesfalvi (1932), and Andreánszky (1934). Some of them were published in the second half of the 20th century, such as Dubuis & Faurel (1945), Bizot & Lauriol (1950), Bizot & Potier de la Varde (1952), Braun-Blanquet (1954), Léréde (1954), Chevassut (1956), Chevassut & Quezél (1956, 1958), Collenot *et al.* (1960), Bizot (1973), Frahm (1978).

Another key bryologist who deserves to be highlighted in the study of Algerian bryophytes is the Frenchman F. Jelenc (1911–2001), who lived in Algeria until 1962. His herbarium in Alger was destroyed, and, unfortunately, many of his types disappeared (Cano *et al.* 2000). Only a reduced number of his northern African collections are still at MHLCLF herbarium (Muséum Henri Lecoq Clermont-Ferrand, France).

He carried out numerous studies throughout northern Africa and published many bryological papers (Jelenc 1948, 1949, 1950, 1951, 1953, 1954a, b, 1955a, b, 1956, 1957, 1959, 1966, 1967). Their results were compiled in the work entitled “Muscinées de l’Afrique du Nord (Algérie, Tunisie, Maroc, Sahara)” (Jelenc 1955a). This is an exhaustive inventory of the citations already published and their unpublished data. The work holds a catalogue of 159 liverworts and hornworts and 444 mosses, with an indication of the localities grouped by geographical areas. A few years later, he published a supplement (Jelenc 1967) with the results of his later studies, which was his last publication.

It is remarkable that two women, the French hepaticologists S. Jovet (1914–2006) and H. Bischler (1932–2005) worked very intensively in northern Africa and all over the Mediterranean basin. Unfortunately, they never published a catalogue of liverworts from Algeria. Nevertheless, they mentioned their presence in the country when giving distribution data in other publications of the Mediterranean Basin (Jovet-Ast 1955, 1956; Jovet-Ast & Bischler 1968, 1971) and taxonomical studies (Bischler 1970, 1978). Their most outstanding works were the taxonomic revision of the genus *Riccia* in the Mediterranean Region by Jovet-Ast (1986) and the book about the Mediterranean liverworts by Bischler (2004) which hold vast information about the presence of this group of bryophytes in Algeria.

The rest of the works published in the second half of the 20th century have very little original data. They are mostly punctual revisions of previously published data. In the last two decades of the 20th century, the northern African bryophytes attracted the interest of Spanish bryologists due to their proximity and the similarity of their floras. Researchers from the University of Murcia started a research line on the Mediterranean Bryophyte Flora and made several collecting trips to Algeria (Ros *et al.* 1990). They reviewed Jelenc’s checklists to assess the breadth of their discoveries and published a new bryophyte checklist of northern Africa (Ros *et al.* 1999) using updated taxonomical and nomenclatural criteria. In addition to Algeria, other Maghreb countries were considered, such as Morocco and Tunisia, but also Egypt, Libya, Mauritania, Western Sahara, the north of Niger, and Mali. In a parallel way, they studied the

endemic species of northern Africa, as many of them were described based on partial knowledge of the variability of the species (Cano *et al.* 2000; Ros & Cano 2008; Ros *et al.* 2023). Between 2007 and 2013, a large group of bryologists working in different countries of the Mediterranean basin, led by R. M. Ros and V. Mazimpaka, published the checklists of the bryophytes of the Mediterranean Basin, which hold the last published national catalogue of Algeria. Ros *et al.* (2007a) include information on liverworts and hornworts, and Ros *et al.* (2013) on mosses. Both have served as a basis for this work.

In the last few years, some Algerian botanists at the University of Badji Mokhtar (Annaba) have shown interest in bryophytes (Boukhatem *et al.* 2017). Additionally, a bryologist group has recently emerged at the University El Bez (Setif) and initiated studies in the Setif region (Mazari & Boulaacheb 2023; Mazari *et al.* 2024).

The main aim of this paper is to compile published information about Algerian bryophytes, including literature references and localities where species were reported. That should be the basis for a modern and updated Algerian bryophyte flora. The specific objectives are: 1) to know the state of the art of Algerian bryology that should be kept in mind for new Algerian studies; 2) to state which Algerian areas have been sampled in the past and where new floristic studies should be undertaken; 3) to draw attention to species in the catalogue that should be reviewed to establish a trustworthy list of the Algerian bryophytes; and 4) to lay the groundwork for the protection of Algerian bryophytes.

MATERIAL AND METHODS

CRITERIA FOR THE LIST

All the publications known to contain any reference to Algerian bryophytes were compiled, and the reports were introduced in a database according to the original names used in each publication. The checklist therefore includes all the published known records of Algerian bryophytes. Unlike what was done in the previous Algerian checklists published by Ros *et al.* (1999, 2007a, 2013), which were based on the compilations of Jelenc (1955a, 1967), here all known published records have been included from 1799 (Desfontaines 1799) up to the present day.

The veracity of the reports has not been revised. This paper is a compilation of the published data to ease the necessary posterior work for a critically revised checklist.

The European checklist by Hodgetts *et al.* (2020) was the main basic reference for accepted names and taxonomic adscription of genera to families, as most of the reported taxa are also present in Europe. Some exceptions were made in the light of more recently published taxonomic papers or other criteria, and these are documented after the accepted names, such as those related to the genera *Calcidicranella* Bonfim Santos, Fedosov & Jan Kučera (Fedosov *et al.* 2023), *Metaneckera* Steere (Enroth *et al.* 2022) and *Oxystegus* (Limpr.) Hilp. (Zander & Eckel 2019), and the

species *Microbryum davallianum* (Sm.) R.H.Zander (Ros *et al.* 1996), *Neotrichostomum crispulum* (Bruch) R.H.Zander (Zander 2023), and *Weissia armata* (Thér. & Trab.) Fedosov (Fedosov 2011).

When accepted names are different from those used in the last Algerian checklists (Ros *et al.* 2007a, 2013), the names used in these works are given to help the identification of taxa and comparison between former and present checklists. For synonyms, Ros *et al.* (2007a, 2013) are the basic references, but when newly proposed ones and older ones are not included in any of them, they are given here after the currently accepted name, indicating the work where the synonyms were published. In cases where infraspecific taxa were not distinguished in the literature, the relevant occurrences are shown in the checklist at the species level (e.g. *Fissidens bryoides* instead of *F. bryoides* var. *bryoides*).

Taxa names are arranged alphabetically by genus and species. Two groups have been considered, hornworts and liverworts on one side, and mosses on the other side.

Accepted names are written in both italics and bold. Taxa for which there are doubts about their taxonomical validity, as well as the invalid names, are shown only in italics. All entries are also arranged alphabetically in the list, with indications of literature reports and localities, along with explanations or justifications of their current status.

Additionally, species currently accepted by the scientific community and listed in Hodgetts *et al.* (2020), but facing doubts regarding their presence in Algeria, are italicized and marked with an asterisk (*). These doubts may stem from changes in taxonomic criteria used to define the species since the publication of the record, errors in synonymy utilized in previous works, the lack of evidence listing the species in Algeria, or identification uncertainties as assessed by the authors of this work. For these last cases, the revision of the original material would be desirable. However, the high dispersion of herbarium collections, which were often made by non-bryologists and sent for identification to specialists, poses challenges in locating the samples. Moreover, the disappearance of a significant portion of Jelenc's herbarium, one of the most important collections for Algerian bryophytes, further complicates the assessment of the identity of many doubtful taxa in the future. Explanations are provided for each case. Literature reports based on the revision of herbarium material, despite no locality being indicated (*sine loco*) are accepted as correct. The work of Bischler (2004), related to liverworts and hornworts of the Mediterranean, which explicitly indicates that specimens were collected in Algeria but that localities were only available on CD upon request, deserves a special mention. Unfortunately, the CD seems to have been lost (Denis Lamy, personal communication), and Bischler's Algerian localities are unknown to the authors of this work. Taxa excluded from Algeria are also written in italics and preceded by two asterisks (**). All the published literature sources containing Algerian records are given for each taxon, arranged chronologically. They are grouped by localities to highlight the areas and geographical areas surveyed.

For the name of a given locality, which can vary between different publications, in general, the spelling of the first author who cited the taxon is used. When the name of the locality is confusing and does not coincide with the form used by other authors, the name used by the first author is followed in parentheses by the form used by other authors, e.g. Lac Touga (Tonga). When the localities were imprecise over a large area and there was also published information about more precise localities that belong to this large area, the imprecise locality was also left, since sometimes this indicates that the species is widespread throughout that area (e.g. Monts et Haute-Plaine de Tlemcen and Haute Plaine de Tlemcen, Berges du Chabet bel Abbès, 750 m). Finally, the abundance in Algeria of each accepted taxon is indicated.

FLORA ANALYSIS

Analysis of species diversity, species richness, and species abundance were made. For species diversity, the number of taxa of the three bryophyte groups (liverworts, hornworts, and mosses) was analysed, as well as their biotypes: thallose versus foliose in the two first, and acrocarpous versus pleurocarpous in the mosses, as they have different degrees of adaptation to Mediterranean conditions. Also, they were examined at family and genus levels to determine the more diverse taxonomical groups.

For the species richness analysis, a comparison was made between Algeria and the other two Maghreb countries (in the restricted sense, Morocco and Tunisia), as well as Algeria and three European Mediterranean countries with different extensions and depths of bryological exploration (Greece, Italy, and Spain). As the whole of Algeria belongs to continental Africa, only the continental parts of these countries were considered; therefore, islands and archipelagos were excluded. The number of taxa in each country was taken from Ros *et al.* (2007a, 2013) for liverworts and hornworts on the one hand and mosses on the other hand, except for Italy, for which the more recent checklist of Aleffi *et al.* (2020) was used. To know the bryophyte number present in 1 km² of each country, the taxa numbers were related to the total area of each country, which were obtained from the Geography of Greece (2022) and IberiaNature (2022) for the Greek and Spanish mainland surfaces, respectively, and the United Nations (2017) for the Italian surface, but modified according to Sardegna (2022) and Sicilia (2022).

The species abundance of each accepted taxon in Algeria was estimated from the scale proposed by Huarte Irurzun (2001), later used by Rams *et al.* (2014), but with modifications to adapt it to this study, as the highest number of localities for a given taxon in Algeria was 55, much lower than in the two mentioned studies that were near 100. The scale used is the following: very rare (present only in one locality), rare (present in 2-10 localities), frequent (present in 11-20 localities), common (present in 21-40 localities), very common (present in more than 40 localities). Reports "*sine loco*" have not been considered for abundance unless they are the only ones accepted for a given species.

RESULTS

LIVERWORTS AND HORNWORTS

Aneura pinguis (L.) Dumort.

RECORDS. — Montagne (1838): Alger. Jelenc (1955a): Atlas de Blida; Kabylie du Djurdjura, Ait Ouaban. Chevassut & Quézel (1956): La Réghaïa. Jelenc (1967): Kabylie du Djurdjura, Akfadou. Rare.

**Anthoceros agrestis* Paton

COMMENT

Doubtfully present in Algeria. Ros *et al.* (2007a) included it in the Algerian list as a “Report without precise collection data or locality”, based erroneously on Jelenc (1955a), who included its synonym *A. crispulus* (Mont.) Douin as *sine loco* for northern Africa based on Trabut information, but not for Algeria. It has often been confused with *A. punctatus* in old literature (Söderström *et al.* 2002), which led Ros *et al.* (2007a) to think that most of the Mediterranean reports should belong to *A. punctatus*.

Anthoceros punctatus L.

RECORDS. — Litschauer (1904), Jelenc (1955a): Fort National, 1000 m. Trabut (1941): *sine loco*. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, Baie de Tamanart; Kabylie de Collo, vallée de l'Oued Elli Ankou, 500–600 m. Jelenc (1955a): Souk Ahras. Jelenc (1955a), Ahayoun *et al.* (2007): Alger. Rare.

Apopellia endiviifolia (Dicks.) Nebel & D.Quandt

Pellia endiviifolia (Dicks.) Dumort.

RECORDS. — Corbière (1904): Tlemcen, entre Sidi bou Médine et les cascades. Corbière (1904), Jelenc (1955a): Sidi-Bel-Abbès. Braun-Blanquet & Maire (1924), Trabut (1941), Jelenc (1955a): Tlemcen. Trabut (1941), Jelenc (1955a): Alger; Tiaret. Jelenc (1949): Dans les monts et la haute plaine de Tlemcen. Jelenc (1951): Monts de Tlemcen, cirque d'el Ourit. Jelenc (1951, 1967): Haute plaine de Tlemcen, cascades de l'oued Bou-Ennag à la traversée des collines des Beni Mester, 500 m. Jelenc (1953): Aurès, flanc nord du Ras Pharaoun, dans les torrents près d'Aïn Mimoun. Jelenc (1953, 1955a): Aurès, Ravin de la maison forestière du Chélia, dans les cascades. Jelenc (1956): Sahel d'Alger, dans le ravin du Frais-Vallon. Jelenc (1966, 1967): Kabylie du Djurdjura dans la Massif de l'Akfadou. Bischler (2004): *sine loco*. Frequent.

COMMENT

Pellia endiviifolia fo. *undulata* Jelenc *nom. inval.* was reported from Monts de Tlemcen, El Ourit by Jelenc (1951, 1967) but according to Ros *et al.* (2007a) no other record or reference to it has been found.

Asterella africana (Mont.) A.Evans

RECORDS. — Montagne (1838): Alger. Litschauer (1904), Jelenc (1955a): Col de Tirourda, 1700 m. Montagne (1856), Trabut (1941), Bischler (2004): *sine loco*. Rare.

Calypogeia arguta Nees & Mont.

RECORDS. — Bischler (1970): *sine loco*. Rare.

COMMENT

This author based the presence of the species in Algeria on the study of three specimens from different herbaria (P, S-PA, W).

Calypogeia azurea Stotler & Crotz

RECORDS. — Trabut (1941), Jelenc (1955a): Bône; Edough. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, vallée de l'Oued Bin el Ouidante, près de Taoulet, 600 m. Jelenc (1954b, 1966, 1967): Kabylie du Djurdjura dans le Massif de l'Akfadou. Jelenc (1955a): Aumale, Oued Hamidou. Jelenc (1959): Kabylie de Collo, Baie de Tamamart, 50 m. Rare.

COMMENT

Following Söderström *et al.* (2002), reports in Algeria referring to the name *C. trichomanis* auct. have been attributed to *C. azurea*. However, considering that the concept of *C. trichomanis* often encompasses *C. muelleriana* and potentially other species, the presence and distribution in Algeria of this complex of species is doubtful.

Calypogeia fissa (L.) Raddi

RECORDS. — Trabut (1941): Oued-el-Akhal. Bischler (1970): Djurdjura, Akfadou; Edough. Bischler (2004): *sine loco*. Rare.

**Calypogeia muelleriana* (Schiffn.) Müll. Frib.

COMMENT

Doubtfully present in Algeria. Bischler (2004) reported that it had been recorded previously in Algeria, but no published reports have been found under this name. It could be based on some old *C. trichomanis* reports, as Bischler (1970) informed that some African records she revised belong to *C. muelleriana*, although no precise information was published.

Cephalozia bicuspidata (L.) Dumort.

RECORDS. — Corbière (1889), Jelenc (1955a): Blida, près la glacière Laval. Bischler (2004): *sine loco*. Very rare.

Cephaloziella baumgartneri Schiffn.

RECORDS. — Trabut (1941), Jelenc (1955a): Alger; Blida; Mostaganem. Jelenc (1955a): La Bouzaréa. Ros *et al.* (1990): Between

Mostaganem and Cap Ivi, Abdelmaimalek-Ramdan beach, 0 m; Hammam-Riga, 500 m. Bischler (2004): *sine loco*. Rare.

Cephaloziella calyculata (Durieu & Mont.) Müll. Frib.

RECORDS. — Durieu de Maisonneuve (1849), Stephani (1889a), Bischler (2004): *sine loco*. Montagne (1856), Trabut (1941), Jelenc (1955a): Prope Philippeville. Corbière (1904): Mostaganem, 120 m. Jelenc (1955a, 1966, 1967): Alger au Fort des Arcades. Jelenc (1955a): Oran. Rare.

Cephaloziella divaricata (Sm.) Schiffn.

RECORDS. — Corbière (1904), Jelenc (1955a): La Bouzaréah, près Alger. Corbière (1905), Jelenc (1955a): Environs de Constantine, Djebel Ouach. Trabut (1941): Alger. Jelenc (1955a): El Biar. Bischler (2004): *sine loco*. Rare.

Cephaloziella stellulifera (Taylor ex Spruce) Schiffn.

RECORDS. — Trabut (1941), Jelenc (1955a): Constantine; Forêt de la Réghaia. Jelenc (1967), Bischler (2004): *sine loco*. Ros *et al.* (1990): Texenna's wood, 700 m. Rare.

Cephaloziella turneri (Hook.) Müll. Frib.

RECORDS. — Feldmann (1947), Jelenc (1955a): Kabylie de Collo, les crêtes de Boudra, 500–600 m; Kabylie de Collo, Taoulet. Bischler (2004): *sine loco*. Rare.

Chiloscyphus pallescens (Ehrh. ex Hoffm.) Dumort.
var. *fragilis* (Roth) Müll. Frib.

Nomenclature follows Söderström *et al.* (2016).

RECORDS. — Feldmann (1947), Jelenc (1955a): Kabylie de Collo, Oued Bin el Ouidane près de Taoulet. Rare.

COMMENT

Only this variety of *C. pallescens* has been reported in Algeria, which was considered by Ros *et al.* (2007a) as a synonym of var. *pallescens*.

Chiloscyphus polyanthos (L.) Corda var. *polyanthos*

RECORDS. — Jelenc (1955a): Kabylie du Djurdjura, Afkadou. Very rare.

Chiloscyphus polyanthos var. *rivularis*
(Schrad.) Lindb. & Arnell

RECORDS. — Trabut (1941), Jelenc (1955a): La Calle. Jelenc (1955a): Kabylie du Djurdjura, Fontaine de Tala Semda, col de Afkadou. Rare.

COMMENT

Ros *et al.* (2007a) did not distinguish var. *rivularis* within *Chiloscyphus polyanthos*, therefore the reports of this taxon were joined with the typical variety.

Clevea hyalina (Sommerf.) Lindb.

Athalamia hyalina (Sommerf.) S.Hatt.

Nomenclature follows Rubasinghe *et al.* (2011) and Söderström *et al.* (2016).

RECORDS. — Trabut (1914, 1941), Jelenc (1955a): Djurdjura, Forêt des Aït-Ouaban. Trabut (1941), Jelenc (1955a): Gertoufa près Tiaret; Mazer, cascades de l'Oued Khemis. Jelenc (1955a): Kabylie du Djurdjura, Tirourda, 1800 m; Sersou, Guertoufa. Bischler (2004): *sine loco*. Rare.

Clevea spathysii (Lindenb.) Müll. Frib.

Athalamia spathysii (Lindenb.) S.Hatt.

Nomenclature follows Rubasinghe *et al.* (2011) and Söderström *et al.* (2016).

RECORDS. — Montagne (1838), Jelenc (1955a): Alger. Montagne (1856), Bischler (2004): *sine loco*. Corbière (1904): Alger-Mustapha, 120 m. Trabut (1941): les environs d'Alger. Jelenc (1955a): Blida; Oran, Ravins de Noisieux. Jelenc (1967): Tiaret, 1000 m. Rare.

Cololejeunea rossettiana (C.Massal.) Schiffn.

RECORDS. — Dismier (1930), Jelenc (1955a): Gorges de la Chiffa, ruisseau des Singes. Very rare.

Conocephalum conicum (L.) Dumort.

RECORDS. — Brongniart (1882): Blidah. Corbière (1889), Jelenc (1955a): Blida, sources du Bou-Rebbou. Corbière (1904), Jelenc (1955a): Bône, flancs de l'Edough. Trabut (1941), Bischler (2004): *sine loco*. Jelenc (1955a): Alger; Kabylie du Djurdjura, Tiroual. Rare.

COMMENT

As predicted by Ros *et al.* (2007a), *C. salebrosum* Szweyk., Buczkowska & Odrzykoski, a species split from *C. conicum* s.s. by Szweykowski *et al.* (2005), is currently widespread in the Mediterranean area (Hallingbäck 2019). Therefore, its presence in Algeria is probable, and the distribution of *conicum* is uncertain.

Corsinia coriandrina (Spreng.) Lindb.

RECORDS. — Corbière (1904), Trabut (1941): Ravin de Telemly près Alger. Corbière (1905), Trabut (1941), Jelenc (1955a): Environs de Constantine, Djebel Ouach. Trabut (1914, 1941), Jelenc (1955a): Forêt d'Afkadou. Trabut (1941), Jelenc (1955a): Tiaret; Tlemcen. Trabut (1941), Jelenc (1955a), Chevassut & Quézel (1956): Réghaia. Chevassut & Quézel (1956): La Rassauta. Jelenc (1956, 1967): Sahel d'Alger. Bischler (2004): *sine loco*. Rare.

Diplophyllum albicans (L.) Dumort.

RECORDS. — Bischler (2004): *sine loco*. Very rare.

**Dumortiera hirsuta* (Sw.) Nees

COMMENT

Doubtfully present in Algeria. Bischler (2004) informed that it had been recorded previously in Algeria, but no published reports have been found.

Exormotheca welwitschii Steph.

RECORDS. — Douin & Trabut (1919), Trabut (1941), Ahayoun *et al.* (2007): Tiaret, Vallon de Takdempt à Gertonfa. Jelenc (1955a): Sersou, Tagdempt. Bischler (2004): *sine loco*. Rare.

Fossombronina angulosa (Dicks.) Raddi

RECORDS. — Corbière (1889), Jelenc (1955a): Blida. Corbière (1904): La Bouzaréah, près Alger, 110 m. Corbière (1904), Jelenc (1955a): Mostaganem, 198 m. Lapie (1909), Jelenc (1955a): Kabylie du Djurdjura, Fort National. Trabut (1941), Jelenc (1955a): Alger; Bône; Edough; Tlemcen. Bischler (2004): *sine loco*. Rare.

Fossombronina caespitiformis De Not. ex Rabenh.
subsp. *caespitiformis*

RECORDS. — Trabut (1887a): D'Oran a Mécheria. Corbière (1889), Jelenc (1955a): Blida. Corbière (1904): Alger, chemin de Telemly, 80 m. Corbière (1904), Jelenc (1955a): La Bouzaréah, près Alger, 230 m; Le Corso; Orléansville, bois de la Pépinière. Corbière (1905), Jelenc (1955a): Environs de Constantine, Route de Sétif. Trabut (1941), Bischler (2004): *sine loco*. Jelenc (1954b): Hydra, 200 m; Sahel d'Alger: colline du Hamma, près du Musée. Jelenc (1955a): Alger, Frais Vallon; Castiglione; El Affroun; Littoral Oranais. Chevassut & Quézel (1956): La Rassauta. Chevassut & Quézel (1956), Jelenc (1966): Forêt de Pins d'Alep de Saint-Ferdinand; La Réghaïa. Ros *et al.* (1990): Azazga; Between Mostaganem and Cap Ivi, Abdelmeimalek-Ramdan beach, 0 m; Hammam-Riga, 500 m. Frequent.

Fossombronina caespitiformis subsp. *multispira*
(Schiffn.) J.R.Bray & D.C.Cargill in Stotler *et al.*

RECORDS. — Trabut (1941), Jelenc (1955a): Alger; Blida; Mouzaia. Jelenc (1955a): Cap Matifou; Castiglione; El Biar; Marengo. Chevassut & Quézel (1956): La Réghaïa. Chevassut & Quézel (1956), Jelenc (1966): Forêt de Pins d'Alep de Saint-Ferdinand. Rare.

Fossombronina echinata Macvicar

RECORDS. — Macvicar (1911), Jelenc (1955a): Belida, Mouzaïaville. Trabut (1941), Jelenc (1955a): Alger; Blida; Oran. Jelenc (1949): Monts de Tlemcen: forêt de Zariffet, 1100 m. Chevassut & Quézel (1956): Forêt de Pins d'Alep de Saint-Ferdinand. Ros *et al.* (1990): Djebel Chenoua, 5-40 m. Bischler (2004): *sine loco*. Rare.

Fossombronina mittenii Tind.

RECORDS. — Trabut (1941), Jelenc (1955a): Alger; Réghaïa. Rare.

Fossombronina pusilla (L.) Nees

RECORDS. — Corbière (1889), Jelenc (1955a): Blida. Litschauer (1904), Jelenc (1955a): Michelet, 1000 m. Jelenc (1955a): Alger; El Affroun; La Bouzaréah; Marengo. Bischler (2004): *sine loco*. Rare.

Fossombronina wondraczekii (Corda) Lindb.

RECORDS. — Montagne (1838), Corbière (1904), Trabut (1941), Jelenc (1955a): Alger. Corbière (1904), Trabut (1941), Jelenc (1955a): La Bouzaréah, près Alger, 220 m. Chevassut & Quézel (1956): Forêt de Pins d'Alep de Saint-Ferdinand; La Réghaïa. Rare.

Frullania dilatata (L.) Dumort.

RECORDS. — Corbière (1889), Jelenc (1955a): Blida. Corbière (1904), Jelenc (1955a): La Bouzaréah, près Alger, 200 m. Corbière (1904), Jelenc (1955a): La Calle, Forêt de l'Oued Mellah. Corbière (1905), Jelenc (1955a): Environs de Constantine, Djebel Ouach; Environs de Constantine, Menidj. Jelenc (1955a): Djidjelli; Edough; Kabylie du Djurdjura, Forêt d'Afkadou. Jelenc (1955a), Ahayoun *et al.* (2007): Gorges de Keddara. Bischler (2004): *sine loco*. Rare.

Frullania tamarisci (L.) Dumort.

RECORDS. — Feldmann (1947), Jelenc (1955a, 1959): Kabylie de Collo, Baie de Tamanart, moins de 50 m. Jelenc (1955a): Atlas de Blida. Rare.

**Fuscocephaloziopsis connivens*
(Dicks.) Váňa & L.Söderstr.

Cephalozia connivens (Dicks.) Lindb.

Nomenclature follows Söderström *et al.* (2016).

COMMENT

Doubtfully present in Algeria. Bischler (2004) informed that it had been recorded previously in Algeria, but no published reports have been found.

**Fuscocephaloziopsis lunulifolia*
(Dumort.) Váňa & L.Söderstr.

Cephalozia lunulifolia (Dumort.) Dumort.

Nomenclature follows Söderström *et al.* (2016).

COMMENT

Doubtfully present in Algeria. Bischler (2004) informed that it had been recorded previously in Algeria, but no published reports have been found.

Gongylanthus ericetorum (Raddi) Nees

RECORDS. — Philibert (1882), Trabut (1941), Jelenc (1955a): Bône. Trabut (1941), Jelenc (1955a): Alger. Jelenc (1951, 1967): Monts de Tlemcen, Forêt de Zariffet, 1200 m. Jelenc (1955a): La Réghaia. Jelenc (1967): Kabylie du Djurdjura, Gorges de Palestro, 500 m. Ros *et al.* (1990): Texenna's wood, 700 m. Bischler (2004): *sine loco*. Rare.

Gymnocolea inflata (Huds.) Dumort.

RECORDS. — Trabut (1941): La Calle. Very rare.

Isopaches bicrenatus (Schmidel ex Hoffm.) H.Buch

Lophozia bicrenata (Schmidel ex Hoffm.) Dumort.

Nomenclature follows Söderström *et al.* (2016).

RECORDS. — Corbière (1889), Jelenc (1955a): Blida, près la glacière Laval. Very rare.

Jungermannia atrovirens Dumort.

RECORDS. — Trabut (1914, 1941), Jelenc (1955a): Djurdjura. Very rare.

**Jungermannia pumila* With.

COMMENT

Doubtfully present in Algeria. Bischler (2004) informed that it had been recorded previously in Algeria, but no published reports have been found.

Lejeunea cavifolia (Ehrh.) Lindb.

RECORDS. — Corbière (1889): Blida, derrière Mimich. Corbière (1904), Trabut (1941): Gorges de la Chiffa, ruisseau des Singes Kabylie. Trabut (1941), Jelenc (1955a): Akfadou. Feldmann (1947), Jelenc (1955a, 1959): Kabylie de Collo, Baie de Tamanart, moins de 50 m. Jelenc (1955a): Gorges de la Chiffa, ruisseau des Singes; Kabylie du Djurdjura, Djebel Afroun. Bischler (2004): *sine loco*. Rare.

COMMENT

The reports of the name *Lejeunea serpyllifolia* Lib. by Corbière (1889, 1904) have been ascribed to *L. cavifolia*, following the criterion of Ros *et al.* (2007a).

Lophocolea bidentata (L.) Dumort.

RECORDS. — Trabut (1941), Jelenc (1955a): La Calle. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, Oued Medjerrah près de Bou Noghra; Kabylie de Collo, Oued Melkach. Rare.

Lophocolea heterophylla (Schrad.) Dumort.

RECORDS. — Bischler (2004): *sine loco*. Very rare.

Lophocolea minor Nees

RECORDS. — Bischler (2004): *sine loco*. Very rare.

Lunularia cruciata (L.) Lindb.

RECORDS. — Desfontaines (1799), Trabut (1941), Bischler (2004): *sine loco*: Montagne (1838), Jelenc (1955a): Alger. Trabut (1887a): D'Oran a Mécheria. Corbière (1889): Blida. Corbière (1904), Jelenc (1955a): Le Corso; Orléansville. Julien (1894): Région de Constantine. Litschauer (1904), Jelenc (1955a): Fort National, 1000 m; Qued-Kebir bei Blidah, 200 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, Djebel Ouach. Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Trabut (1941): Djurdjura, 2000 m. Jelenc (1949): Djebel Murdjadjo (Oran), Ravin de la Vierge; El Kalaa (Tlemcen) vers 800 m; Vallée de l'Isser "El Kasbat", 500 m. Jelenc (1949, 1967): Monts et haute plaine de Tlemcen. Jelenc (1955a): Ait Ouabane; Alma. Chevas-sut & Quézel (1956): Forêt de Pins d'Alep de Saint-Ferdinand; La Réghaia. Jelenc (1956): Kabylie du Djurdjura le massif de l'Akfadou. Jelenc (1956, 1967): Atlas Mitridijen, pic Mouzaïa. Jelenc (1967): La Réghaia. Ros *et al.* (1990): Texenna's wood, 700 m. Common.

Mannia androgyna (L.) A.Evans

RECORDS. — Corbière (1889), Jelenc (1955a): Blida, l'oued Sidi-el-Kebir. Corbière (1904), Jelenc (1955a): Ravin d'El Biar près Alger, 100 m. Litschauer (1904), Jelenc (1955a): Michelet, 1000 m. Lapie (1909), Jelenc (1955a): Kabylie du Djurdjura, Fort National. Trabut (1941), Bischler (2004): *sine loco*. Jelenc (1955a): Alger; La Bouzaréa. Rare.

Mannia atlantica Jelenc *nom. inval.*

Grimaldia dichotoma var. *atlantica* Trab. *nom. nud.*

Grimaldia atlantica Trab. *nom. inval.*

RECORDS. — Trabut (1914): Djurdjura. Trabut (1941), Jelenc (1955a): Atlas, Fort National. Jelenc (1955a): Gorges de la Chiffa.

COMMENT

These seem to be the only references to these names (Ros *et al.* 2007a) and their identity seems to be unresolved.

Marchantia paleacea Bertol.

RECORDS. — Trabut (1914), Jelenc (1955a): Djurdjura. Trabut (1941): Fontaine à l'entrée des gorges du Chabet, route de Bougie à Sétif. Jelenc (1949, 1967): Haute plaine de Tlemcen, berges de l'Oued Saf-Saf entre 600-650 m (entre le Pont de Mascara et El Ourit). Jelenc (1955a): Kabylie des Babors, Chabet el Akra. Rare.

Marchantia polymorpha L.

RECORDS. — Gandoger (1883): *sine loco*. Feldmann (1947) Jelenc (1955a): Kabylie de Collo, Oued Elli Ankou, 500-600 m; Kabylie de Collo, Oued Medjerrah, 500-600 m. Rare.

COMMENT

No subspecies have been distinguished in the Algerian literature; therefore, the reports should refer to *Marchantia polymorpha* s.l.

Marsupella emarginata (Ehrh.) Dumort.

RECORDS. — Bischler (2004): *sine loco*. Very rare.

Mesoptychia collaris (Nees) L.Söderstr. & Váňa

Leiocolea collaris (Nees) Schljakov

Nomenclature follows Söderström *et al.* (2016).

RECORDS. — Bischler (2004): *sine loco*. Very rare.

Mesoptychia turbinata (Raddi) L.Söderstr. & Váňa

Leiocolea turbinata (Raddi) H.Buch

Nomenclature follows Söderström *et al.* (2016).

RECORDS. — Corbière (1905), Jelenc (1955a): Environs de Constantine, Chettabah; Environs de Constantine, Menidj; Environs de Constantine, les Pins; Environs de Constantine, Route de la Corniche; Environs de Constantine, Sidi M'Cid. Trabut (1941), Bischler (2004): *sine loco*. Jelenc (1951): Monts de Tlemcen, cirque d'el Ourit. Jelenc (1955a): Cherchell; Kabylie du Djurdjura, Ait Abd el Ali, 900 m; La Bouzaréa Jelenc (1956): Kabylie du Djurdjura, dans les gorges de Palestro, vers 500 m près de Hamman Tellat. Rare.

Metzgeria furcata (L.) Dumort.

RECORDS. — Feldmann (1947), Jelenc (1955a): Kabylie de Collo, Oued Elli Ankou, 600 m. Very rare.

***Moerckia hibernica* (Hook.) Gottsche

COMMENT

Excluded from Algeria. Trabut (1941) reported that there exists a collection supposedly collected in the “cascades de Tlemcen” by Dr. Zoernig and identified by Stephani, but that after having searched the cascades himself, he only found *Apopellia endiviifolia* (sub *Pellia fabroniana*). He also commented that the thallus of *M. hibernica* closely resembles that of *P. endiviifolia*. He, therefore, considers his presence in Algeria doubtful. The report was compiled by Jelenc (1955a), indicating the locality “Monts de Tlemcen, cascades d'El Ourit”. The presence of this Circumpolar Boreo-temperate

species that grows on flushed rock faces or wet peaty ground (Blockeel *et al.* 2014a) in Algeria is here rejected.

Myriocoleopsis minutissima

(Sm.) R.L.Zhu, Y.Yu & Pócs

Cololejeunea minutissima (Sm.) Schiffn.

Nomenclature follows Söderström *et al.* (2016).

RECORDS. — Trabut (1941), Jelenc (1955a): Forêts de la Calle. Bischler (2004): *sine loco*. Very rare.

Nardia scalaris Gray

RECORDS. — Trabut (1888): *sine loco*. Trabut (1941), Jelenc (1955a): Réghaia. Very rare.

Oxymitra incrassata (Brot.) Sérgio & Sim-Sim

RECORDS. — Montagne (1838): Alger. Corbière (1904): Mostaganem, 170 m. Corbière (1904), Jelenc (1955a): La Bouzaréah, près Alger, 220 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, Bekcina, 650 m; Environs de Constantine, Djebel Ouach. Trabut (1941), Bischler (2004): *sine loco*. Jelenc (1949, 1967): Haute plaine de Tlemcen, colline de Bréa, 600 m. Jelenc (1953): Babor, flanc nord du Tababor, 1700 m. Jelenc (1955a): Kabylie du Djurdjura, Akfadou; Sidi Daoud. Jelenc (1955a), Chevassut & Quézel (1956): La Réghaia. Chevassut & Quézel (1956): Forêt de Pin d'Alep de Bâinem; Forêt de Pin d'Alep de Bâinem; Forêt de Pin d'Alep d'El Riath; La Rassauta. Jelenc (1956): Atlas mitidjien, au barrage du Hamiz; Massif de la Bouzaréa, Forêt de Bâinem. Ros *et al.* (1990): Oued Rhiou. Frequent.

Pedinophyllum interruptum (Nees) Kaal.

RECORDS. — Lapie (1909), Dubuis & Faurel (1945), Jelenc (1953, 1955a, 1967): Djurdjura, Plateau de l'Aizer, 1900 m. Very rare.

Pellia epiphylla (L.) Corda

RECORDS. — Corbière (1904): Bône, flancs d'Edough. Trabut (1941): Aïn-Taya. Lapie (1909): Kabylie du Djurdjura. Trabut (1941), Jelenc (1955a): Bône; Edough. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, vallée de l'Oued Ramèche, 600-800 m. Jelenc (1955a): Alger; Atlas de Blida; Kabylie du Djurdjura, Dra Inguel; La Bouzaréa. Jelenc (1956): Kabylie du Djurdjura, Massif de l'Akafadou à la Fontaine des Ifs. Bischler (2004): *sine loco*. Frequent.

Petalophyllum ralfsii (Wilson) Nees & Gottsche

RECORDS. — Battandier & Trabut (1886), Trabut (1887b): Circa Alger, Hydra; Circa Alger, Mustapha. Battandier & Trabut (1886), Trabut (1887b), Trabut (1941), Jelenc (1955a): Circa Alger, Sidi-Ferruch. Corbière (1904), Trabut (1941), Jelenc (1955a): Orléansville, bois de la Pépinière, 140 m. Trabut (1941): Birmandreis. Jelenc (1949): Massif du Murdjadjo, versant nord du col de Santa Cruz. Jelenc (1955a): Sidi Merzoug. Jelenc (1967): Oran. Bischler (2004): *sine loco*. Rare.

**Phaeoceros carolinianus* (Michx.) Prosk.

COMMENT

Doubtfully present in Algeria. Jovet-Ast & Bischler (1968) informed that it had been recorded previously in Algeria, but no published reports have been found.

Phaeoceros laevis (L.) Prosk.

RECORDS. — Montagne (1838): Alger. Litschauer (1904), Jelenc (1954b, 1955a): Vallon bei la Bouzarea, 400 m. Trabut (1941), Bischler (2004): *sine loco*. Jelenc (1954b, 1967): Massif du Bou Zegza, gorges de Keddara, 400 m. Jelenc (1955a): Kabylie des Babor, Cap Aokas; Kabylie du Djurdjura, Fort National; Monts de Tlemcen, Forêt d'Hafir; Rouiba. Chevassut & Quézel (1956): Forêt de Pins d'Alep de Saint-Ferdinand. Chevassut & Quézel (1956), Jelenc (1967): La Réghaïa. Jelenc (1956): Sahel d'Alger, au Beau-Fraisier. Jelenc (1967): Bainem. Frequent.

Phymatoceros bulbiculosus
(Brot.) Stotler, W.T.Doyle & Crand.-Stotl.

RECORDS. — Trabut (1941), Jelenc (1955a): Aïn Taya; Alger. Chevassut & Quézel (1956): Forêt de Pins d'Alep de Saint-Ferdinand; La Rassauta; La Réghaïa. Bischler (2004): *sine loco*. Rare.

Plagiochasma rupestre (J.R.Forst. & G.Forst.) Steph.

RECORDS. — Trabut (1941), Jelenc (1955a): Bouçaada (Bou Saâda), fissures des roches du Kerdada. Thériot (1933), Jelenc (1955a), Bischler (1978): Hoggar, au-dessus de l'Oued Ilaman, 2000-2100 m. Collenot *et al.* (1960): Tassili N'Aijer, Afaïtalèsse. Bischler (1978): Atlas saharien; Grand Kabylie; Petite Kabylie; Tassili, Plateau d'Edjerit E Djanet. Frahm (1978): Hoggar, Guelta von Imeghra, 1780 m. Bischler (2004): *sine loco*. Rare.

**Plagiochila asplenioides* (L. emend. Taylor) Dumort.

COMMENT

Doubtfully present in Algeria. Due to the taxonomical problems of this species (Söderström *et al.* 2002; Ros *et al.* 2007a), probably the reports of this species in Kabylie du Djurdjura, Afkadou by Trabut (1914, 1941) and Jelenc (1955a) belong to *P. porelloides*.

Plagiochila porelloides Lindenb. (Torrey ex Nees)

RECORDS. — Jelenc (1955a): Kabylie du Djurdjura, Tala Ghizan. Very rare.

Porella arboris-vitae (With.) Grolle

RECORDS. — Jelenc (1955a): Kabylie du Djurdjura, Tala Ghizan; Kabylie du Djurdjura, Yakouren. Rare.

Porella cordaeana (Huebener) Moore

RECORDS. — Trabut (1941), Jelenc (1955a): Kabylie; La Calle. Jelenc (1953, 1967): Ouarsenis, cédraie de Téniet el Had, 1500 m. Jelenc (1955a): Djurdjura, 2000 m; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Tala Ghizan. Rare.

Porella obtusata (Taylor) Trevis.

RECORDS. — Trabut (1941), Jelenc (1955a): Kabylie de Collo, Djebel Goufi. Feldmann (1947): Kabylie de Collo, Oued Elli Ankou, 600 m. Jelenc (1955a): Kabylie du Djurdjura, Tala Ghizan. Bischler (2004): *sine loco*. Rare.

Porella pinnata L.

RECORDS. — Lapie (1908), Jelenc (1955a): Kabylie du Djurdjura, Aizer. Very rare.

Porella platyphylla (L.) Pfeiff.

RECORDS. — Brongniart (1882): Blidah. Trabut (1888): *sine loco*. Trabut (1941), Jelenc (1955a): Akfadou; Teniet-el-Haad. Jelenc (1949, 1951, 1955a, 1967): Monts de Tlemcen, Tlemcen. Trabut (1941), Jelenc (1951, 1955a): Monts de Tlemcen, Koudiat d'Hafir, 1200 m. Jelenc (1955a): Kabylie du Djurdjura, Agoulmin Aberkane; Kabylie du Djurdjura, Tala Ghizan. Rare.

Radula complanata (L.) Dumort.

RECORDS. — Brongniart (1882), Corbière (1889), Jelenc (1955a): Blida. Corbière (1904), Jelenc (1955a): Gorges de la Chiffa, ruisseau des Singes. Trabut (1941): *sine loco*. Feldmann (1947): Kabylie de Collo, Oued Elli Ankou, 600 m. Jelenc (1955a): Djebel Chenoua; Kabylie de Collo, Djebel Goufi; Kabylie du Djurdjura, Forêt d'Akfadou; Khodjaberry. Rare.

Radula lindenberiana Gottsche ex C.Hartm.

RECORDS. — Trabut (1941), Bischler (2004): *sine loco*. Jelenc (1951, 1955a, 1967): Monts de Tlemcen, Forêt de Zariffet, près de l'Aïn Defla, 1100 m. Very rare.

Reboulia hemisphaerica (L.) Raddi

RECORDS. — Brongniart (1882): Blidah. Corbière (1889): Blida, glacière Laval. Corbière (1904), Jelenc (1955a): Kabylie, Fort National, 1000 m; Souk-el-Haad. Corbière (1905), Jelenc (1955a): Environs de Constantine, les Pins; Environs de Constantine, Sidi M'Cid. Lapie (1909): Kabylie du Djurdjura. Maire & Sevenet (1928), Jelenc (1955a): Gorges du Zaccar. Trabut (1941), Bischler (2004): *sine loco*. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, Djebel Goufi, 1000 m; Kabylie de Collo, vallée de l'Oued Bin el Ouidante, près de Taoulet, 600 m. Jelenc (1953): Atlas de Blida, Ravin Bleu de Chréa; Bélezma, Tenient el Gantos, 1900 m. Jelenc (1953, 1955a, 1967): Djurdjura, Plateau de l'Aizer, 1900 m. Jelenc (1954b, 1967): Chaîne des Zahrez, au nord du Zahrez Chergui, berges de l'Oued M'Kamza au djebel Touillila, 1000 m. Jelenc (1955a): Ait Abdelali; Ait Ouaban; Atlas de Blida, Oued el Kebir; Aurès, Djebel Ich Mah-

mel, 2150 m; Djebel Chenoua; Edough; El Kantara; Forêt d'Hafir; Khenchela; Monts de Tlemcen, Tlemcen; Mouzaia; Ouarsenis, Téniet el Had; Tirourda. Jelenc (1956): Atlas mitidjien, à Meurdja; Monts de Tlemcen, Forêt de Zariffet; Sahel d'Alger, dans le ravin du Frais-Vallon. Jelenc (1959): Kabylie de Collo, Baie de Tamamart, 50 m. Jelenc (1966, 1967): Région de Boghar, sur le flanc nord du Djebel Krellala, 1300 m. Jelenc (1967): Atlas de Blida; Massif du Bélezma, Téniet el Gantès, 1900 m; Monts de Tlemcen; Yakouren. Ahayoun *et al.* (2007): Djebel Ech chabir, vers Bou Arfa, 1400 m. Common.

Riccardia chamedryfolia (With.) Grolle

RECORDS. — Feldmann (1947), Jelenc (1955a): Kabylie de Collo, vallée de l'Oued Bin el Ouidante, près de Taoulet, 600 m; Kabylie de Collo, vallée de l'Oued Ramèche, 600-800 m. Trabut (1941), Jelenc (1955a): La Calle. Jelenc (1959): Kabylie de Collo, Baie de Tamamart, 50 m. Rare.

**Riccardia latifrons* (Lindb.) Lindb.

COMMENT

Doubtfully present in Algeria. Bischler (2004) informed that it had been recorded previously in Algeria, but no published reports have been found.

Riccardia multifida (L.) Gray

RECORDS. — Trabut (1914, 1941), Jelenc (1955a): Ruisseaux de la Forêt d'Akfadou. Trabut (1941): Kabylie. Jelenc (1955a): Kabylie du Djurdjura, Yakouren. Jelenc (1956, 1966, 1967): Kabylie du Djurdjura, Massif de l'Akfadou à la Fontaine des Ifs. Bischler (2004): *sine loco*. Rare.

Riccia atromarginata Levier

RECORDS. — Trabut (1941): Mechouneche dans les Ziban. Jelenc (1955a): Aurès, M'chounech; Oran. Chevassut & Quézel (1956): Forêt de Pins d'Alep de Saint-Ferdinand; La Réghaïa. Jelenc (1951, 1967): Haute-Plaine de Tlemcen, collines de Bréa. Jovet-Ast (1986), Bischler (2004): *sine loco*. Rare.

Riccia battandieri Trab. *nom. nud.*

RECORDS. — Trabut (1941), Jelenc (1955a): Aïn-Taya (Alger). Chevassut & Quézel (1956): Forêt de Pin d'Alep de Bâinem; Forêt de Pin d'Alep d'El Riath.

COMMENT

This name was proposed by Trabut (1941) from Algeria. Grolle (1976) indicated that according to Jovet-Ast *in litt.*, it is a *nomen dubium* (Ros *et al.* 2007a).

Riccia beyrichiana Hampe ex Lehm.

RECORDS. — Corbière (1904), Trabut (1941), Jelenc (1955a): La Bouzaréah, près Alger; Orléansville. Chevassut & Quézel (1956): La Réghaïa. Jovet-Ast (1986): *sine loco*. Rare.

Riccia bicarinata Lindb.

RECORDS. — Trabut (1941), Jelenc (1955a): Alger à Aïn-Taya; Col de Sfa près Biskra; Oran. Chevassut & Quézel (1956): Forêt de Pins d'Alep de Saint-Ferdinand; La Rassauta; La Réghaïa. Jelenc (1967): Kabylie du Djurdjura, Col de Tirourda. Jovet-Ast (1986), Bischler (2004): *sine loco*. Ros *et al.* (1990): Oued Rhiou. Rare.

Riccia bifurca Hoffm.

RECORDS. — Corbière (1904), Trabut (1941), Jelenc (1955a): La Bouzaréah, près Alger, 200 m. Corbière (1905): Environs de Constantine, Djebel Ouach, 900 m. Chevassut & Quézel (1956): La Rassauta; La Réghaïa. Jovet-Ast (1986), Bischler (2004): *sine loco*. Rare.

Riccia canaliculata Hoffm.

RECORDS. — Corbière (1904), Jelenc (1955a): Le Corso. Jovet-Ast (1986): *sine loco*. Very rare.

Riccia cavernosa Hoffm.

RECORDS. — Trabut (1941), Jovet-Ast (1986): Sahara, à In-Salah (Massifs sahariens). Very rare.

COMMENT

It was not listed for Algeria by Ros *et al.* (1999, 2007a), but at least one report was made by Trabut (1941) as *Riccia crystallina* var. *angustior* Lindenb. Also, Bischler (2004) informed to it had been reported previously in Algeria. Rare.

Riccia chudoana Steph.

Riccia chinensis Steph. ex Har. *nom. nud.*

RECORDS. — Hariot (1913), Jelenc (1955a): Tahount Arak (Mouydir). Stephani (1917), Jelenc (1955a): Sahara.

COMMENT

This species was not mentioned in the monograph of the genus *Riccia* L. in the Mediterranean area by Jovet-Ast (1986), and no other record or reference to it has been found (Ros *et al.* 2007a). Söderström *et al.* (2016) considered that there are serious doubts about the value of the taxon. It was included in Hodgetts *et al.* (2020) as a species occurring in territories adjacent to Europe.

Riccia ciliata Hoffm.

Riccia ciliata var. *intumescens* Bisch.

Riccia crinita auct. eur.

Riccia intumescens (Bisch.) Underw.

Riccia trichocarpa M.Howe

Nomenclature follows Hodgetts *et al.* (2020).

RECORDS. — Stephani (1885), Jovet-Ast (1986), Bischler (2004): *sine loco*. Trabut (1941), Jelenc (1955a): Beni Khalfoum; Bône; Oran; Tiaret; Tlemcen. Trabut (1941), Jelenc (1955a), Chevassut & Quézel (1956): Réghaia. Jelenc (1955a): Ouarsenis, Téniet el Had; Rouiba; Saint Eugène; Tiguermount. Chevassut & Quézel (1956): Forêt de Pins d'Alep de Saint-Ferdinand. Frequent.

Riccia ciliifera Link ex Lindenb.

RECORDS. — Trabut (1941), Jelenc (1955a): Aïn-Taya, Bois sacré; Alger; Oran; Tiaret; Tlemcen. Jelenc (1955a), Chevassut & Quézel (1956): La Réghaia. Chevassut & Quézel (1956): Forêt de Pins d'Alep de Saint-Ferdinand. Chevassut (1956): Atlas mitidjien, même station que le 367. Müller (1957), Jovet-Ast (1986): *sine loco*. Jelenc (1967): Barrage du Hamiz. Rare.

Riccia crozalsii Levier

RECORDS. — Trabut (1941), Jelenc (1955a): Oran; Tlemcen à Hafir. Trabut (1941), Jelenc (1955a), Chevassut & Quézel (1956): Alger à la Réghaia. Chevassut & Quézel (1956): La Rassauta. Jovet-Ast (1986), Bischler (2004): *sine loco*. Rare.

Riccia crustata Trab.

RECORDS. — Trabut (1916, 1941), Jelenc (1955a): Tiaret; Tlemcen à Terni. Jovet-Ast (1986), Bischler (2004): *sine loco*. Rare.

Riccia crystallina L.

RECORDS. — Corbière (1904), Jelenc (1955a): Mostaganem. Litschauer (1904), Jelenc (1955a): Fort National, 1000 m. Thériot (1933), Jelenc (1955a): Hoggar, Ideles, 1500 m; Hoggar, Oued Ilaman, 2000 m; Hoggar, Tin Seghin, 2400 m, Mouydir, gorges d'Arak, 600-650 m; Tafedest, Oued Ahetes, 1150 m; Tassili N'Aijer, Amguid, 750-800 m. Jelenc (1955a): Alger; Boufarik; Maison-Carrée; Monts de Tlemcen, Forêt d'Hafir. Collenot *et al.* (1960): Tassili N'Aijer, Oued Ahalef. Jovet-Ast (1986), Bischler (2004): *sine loco*. Frequent.

Riccia fluitans L.

RECORDS. — Trabut (1941), Jelenc (1955a): Fort de l'Eau. Trabut (1941), Jelenc (1955a), Chevassut & Quézel (1956): Réghaia. Trabut (1941): La Merdja. Jelenc (1955a): Inkermann, Oued Merja; Koléa; Marais de la Rassauta; Marais de Senhadja. Jelenc (1967): Cheikh-el-Bir. Jovet-Ast (1986): *sine loco*. Rare.

Riccia frostii Austin

Riccia convexa Steph.

Riccia convexa Steph. ex Har. *nom. nud.*

Nomenclature follows Jovet-Ast (1957).

RECORDS. — Jovet-Ast (1986): Hoggar, Tassili des Ajers. Very rare.

COMMENT

The locality Dhayet El-Tofla (Dayet el Tefla), in the Sahara occidental, reported by Hariot (1913) and Jelenc (1955a),

and confirmed by Jovet-Ast (1957) as *Riccia convexa* is situated in Mauritania (State Adrar, Region Aoujeft, County N'Teirguent, 19.71682N 12.86083W) and not to Algeria as was stated by Ros *et al.* (2007a).

Riccia glauca L. var. *glauca*

RECORDS. — Montagne (1838), Trabut (1941), Jelenc (1955a): Alger. Gandoger (1883), Jelenc (1967), Jovet-Ast (1986): *sine loco*. Corbière (1889), Jelenc (1955a): Blida, Chênes-Lièges. Corbière (1889): Corbière (1904), Jelenc (1955a): La Bouzaréah, près Alger. Jelenc (1956, 1967): Kabylie de Collo; Sersou, environs de Tiaret. Rare.

Riccia glauca var. *ciliaris* Warnst.

RECORDS. — Trabut (1941): L'Agha. Trabut (1941), Jelenc (1955a): Alger; Bouzaréah. Jelenc (1949, 1967): Haute-Plaine de Tlemcen, colline de Bréa, 600 m. Rare.

Riccia gougetiana Durieu & Mont. var. *gougetiana*

RECORDS. — Durieu de Maisonneuve (1849), Trabut (1941), Jovet-Ast (1986), Bischler (2004): *sine loco*. Montagne (1856): Blida. Corbière (1904), Jelenc (1955a): La Bouzaréah, près Alger. Corbière (1905), Jelenc (1955a): Environs de Constantine, Djebel Ouach. Trabut (1914), Jelenc (1955a): Forêt d'Akfadou. Müller (1941), Trabut (1941), Jelenc (1955a): Alger. Trabut (1941), Jelenc (1955a): Tlemcen. Jelenc (1951): Monts de Tlemcen, forêt de Zariffet, 1200 m. Jelenc (1955a): Atlas de Blida; Chenoua. Jelenc (1955a), Chevassut & Quézel (1956): La Réghaia. Chevassut & Quézel (1956): Forêt de Pins d'Alep de Saint-Ferdinand. Ros *et al.* (1990): Oued Rhiou. Frequent.

Riccia gougetiana var. *armatissima*
Levier ex Müll. Frib.

RECORDS. — Trabut (1914), Jelenc (1955a): Fort-National; Michelet. Trabut (1941), Jelenc (1955a): Berrouaghia, Montagne des Lions. Trabut (1941): Oran. Trabut (1941), Jelenc (1955a): Tiaret. Trabut (1941), Jelenc (1948, 1955a): Tlemcen. Jelenc (1948): Hafir. Jelenc (1967): Monts de Tlemcen, 1200 m. Jovet-Ast (1986), Bischler (2004): *sine loco*. Rare.

Riccia huebeneriana Lindenb.

RECORDS. — Maire (1939), Jelenc (1955a): Lac Freitis, dans la plaine des Senhadja. Very rare.

COMMENT

Jovet-Ast (1986) and Bischler (2004) did not mention this species to have been reported from Algeria, which was indeed reported under its synonym *Riccia pseudo-frostii* (Schiffn.) Müll. Frib.

Riccia lamellosa Raddi

RECORDS. — Corbière (1904): Mostaganem. Corbière (1904), Trabut (1941): Orléansville, berges du Chélif et bois de la Pépin-

ière. Trabut (1941): Oran. Trabut (1941), Jelenc (1955a): Alger. Jelenc (1949): Haute plaine de Tlemcen: colline de Bréa, 600 m. Jelenc (1949, 1967): Monts de Tlemcen, cirque d'El Ourit, 700 m. Jelenc (1955a): Chercheell; Kabylie du Djurdjura, Adjiba; Oran, Massif du Murdjajo. Chevassut & Quézel (1956): Forêt de Pin d'Alep de Bâinem; Forêt de Pin d'Alep d'El Riath; Forêt de Pins d'Alep de Saint-Ferdinand. Jovet-Ast (1986): Massifs sahariens. Jovet-Ast (1986), Bischler (2004): *sine loco*. Ros & Guerra (1987a): El Kantara. Ros *et al.* (1990): Oued Rhiou; Ouled Mimoum. Frequent.

Riccia ligula Steph.

RECORDS. — Bischler (2004): *sine loco*. Very rare.

Riccia macrocarpa Levier

RECORDS. — Trabut (1941): Tiaret. Trabut (1941), Jelenc (1955a): Alger. Jelenc (1955a): Aïn Taya; La Bouzaréa; La Réghaia. Jovet-Ast (1986), Bischler (2004): *sine loco*. Ros *et al.* (1990): Azazga. Rare.

Riccia mamillata Trab. ex Steph.

RECORDS. — Stephani (1889b): *sine loco*. Trabut (1941), Jelenc (1955a): El-Adjiba (Alger).

COMMENT

This species was not included in the monograph of the genus *Riccia* L. in the Mediterranean area by Jovet-Ast (1986), but was listed by Söderström *et al.* (2002, 2016), who mentioned knowledge problems. It was included in Hodgetts *et al.* (2020) as a species occurring in territories adjacent to Europe. According to Casares-Gil (1919) it is similar to *Riccia macrocarpa* Levier. Its identity remains doubtful.

Riccia michelii Raddi

RECORDS. — Corbière (1904), Jelenc (1955a): Kabylie, Fort National, 1000 m; Mostaganem, 170 m; Oran. Corbière (1905), Jelenc (1955a): Environs de Constantine, Djebel Ouach. Trabut (1941), Jovet-Ast (1986), Bischler (2004): *sine loco*. Jelenc (1951): Haute plaine de Tlemcen, collines de Bréa. Jelenc (1955a): Aïn Taya; Kabylie du Djurdjura, Akfadou; Ouarsenis, Téniet el Had. Jelenc (1955a, 1956), Chevassut & Quézel (1956): La Réghaia. Jelenc (1955a), Ahayoun *et al.* (2007): La Bouzaréa. Jelenc (1956, 1967): Atlas mitidjien, au barrage du Hamiz. Chevassut & Quézel (1956): Forêt de Pin d'Alep de Bâinem; Forêt de Pin d'Alep d'El Riath; Forêt de Pins d'Alep de Saint-Ferdinand; La Rassauta. Jelenc (1967): Haute-Plaine de Tlemcen, 600 m. Frequent.

Riccia nigrella DC.

RECORDS. — Corbière (1904), Jelenc (1955a): La Bouzaréah, près Alger, 200 m; Mostaganem, 150 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, Djebel Ouach. Trabut (1941), Jelenc (1955a): Alger; Tiaret. Jelenc (1955a): Aïn Taya; Cap Matifou; La Réghaia. Jovet-Ast (1986), Bischler (2004): *sine loco*. Ros *et al.* (1990): Azazga; Dellys, 0-40 m; Oued Rhiou. Frequent.

Riccia papillosa Moris

RECORDS. — Corbière (1905), Trabut (1941), Jelenc (1955a): Environs de Constantine, Djebel Ouach. Trabut (1941), Jelenc (1955a): Alger à la Réghaia. Jovet-Ast (1986), Bischler (2004): *sine loco*. Rare.

Riccia perennis Steph.

RECORDS. — Trabut (1916), Douin & Trabut (1919), Trabut (1941), Jelenc (1955a), Chevassut & Quézel (1956): Forêt de la Réghaia aux environs d'Alger. Chevassut & Quézel (1956): La Rassauta. Jovet-Ast (1986), Bischler (2004): *sine loco*. Rare.

Riccia polycarpa (Trab.) Jelenc

RECORDS. — Trabut (1933), Jelenc (1955a): Hoggar, Asekrem, gorges de Tin Segghin, 2400 m.

COMMENT

This species was not included in the monograph of the genus *Riccia* L. in the Mediterranean area by Jovet-Ast (1986), but was listed by Söderström *et al.* (2002, 2016), who mentioned knowledge problems. It was included in Hodgetts *et al.* (2020) as a species occurring in territories adjacent to Europe.

Riccia sommieri Levier

RECORDS. — Trabut (1941), Jelenc (1955a): Tiaret. Chevassut & Quézel (1956): Forêt de Pin d'Alep de Bâinem; Forêt de Pin d'Alep d'El Riath. Jovet-Ast (1986), Bischler (2004): *sine loco*. Rare.

Riccia sorocarpa Bisch.

Riccia sorocarpa var. *heigii* Schiffn.

Nomenclature follows Hodgetts *et al.* (2020).

RECORDS. — Corbière (1904), Trabut (1941), Jelenc (1955a): Alger. Corbière (1904), Jelenc (1955a): Kabylie, Fort National, 1000 m; Mostaganem; Oran. Corbière (1905), Jelenc (1949): Colline de Bréa. Jelenc (1955a): Environs de Constantine, Djebel Ouach. Trabut (1941), Jelenc (1955a): Kabylie du Djurdjura, Boghni. Jelenc (1955a): Aïn Taya; Rouiba. Jelenc (1955a), Chevassut & Quézel (1956): La Réghaia. Jelenc (1951, 1967): Haute-Plaine de Tlemcen, 600 m. Jovet-Ast (1986): Massifs sahariens. Jovet-Ast (1986), Bischler (2004): *sine loco*. Frequent.

Riccia subbifurca Warnst. ex Croz.

RECORDS. — Trabut (1941): Alger. Trabut (1941): Jelenc (1955a): La Réghaia. Jovet-Ast (1986), Bischler (2004): *sine loco*. Rare.

Riccia trabutiana Steph.

RECORDS. — Stephani (1889b), Jovet-Ast (1986), Bischler (2004): *sine loco*. Trabut (1941): Blida; Montagnes du sud Oranais. Jelenc (1949, 1951, 1967): Haute plaine de Tlemcen, collines de Bréa. Jovet-Ast (1955), Jelenc (1955a): Oued el Kebir, à Blida. Jelenc (1955a): Nemours. Chevassut & Quézel (1956): Forêt de Pins d'Alep de Saint-Ferdinand. Rare.

Riccia warnstorffii Limpr. ex Warnst.*Riccia warnstorffii* var. *subinermis* Warnst.Nomenclature follows Hodgetts *et al.* (2020).

RECORDS. — Trabut (1941), Jelenc (1955a): Alger. Jelenc (1951), Jelenc (1967): Monts de Tlemcen, forêt de Zariffet, vers 1150 m, l'oued Zarifète. Jelenc (1955a): Aïn Taya. Jovet-Ast (1986), Bischler (2004): *sine loco*. Rare.

Ricciocarpus natans (L.) Corda

RECORDS. — Trabut (1941): Alger; Entre Blida et Coléa; Fort-de-l'Eau. Trabut (1941), Jelenc (1955a): Fossés de Farghen; Marais de la Rassauta. Rare.

Riella affinis M.Howe & Underw.

RECORDS. — Puche & Boisset (2009), Segarra-Moragues *et al.* (2014): Tassili N'Ajjer, Tafilalet canyon, 24°36'05"N, 9°37'26"E, 1600 m. Very rare.

Riella bialata Trab.

RECORDS. — Trabut (1908, 1941), Jelenc (1955a): Plaine du Chécliff, Duperré. Allorge (1932): *sine loco*. Very rare.

Riella cossoniana Trab.

RECORDS. — Battandier & Trabut (1886), Trabut (1887b, 1941), Jelenc (1955a, 1957): Chott Chergui, El Kreider. Allorge (1932): *sine loco*. Maire (1937), Jelenc (1955a): Sahara central, Hoggar, Tamanghasset. Jelenc (1957): Sud-Oranais, Khunda. Frahm (1978): El Goléa. Rare.

COMMENT

According to Jelenc (1957), the locality "Sud-Oranais, Khunda" appears in the label of the sample collected by Trabut in April 1907, at PC; he indicates that he did not locate any geographical place with this name and that this word is very similar to a word in the Arabic language "Khandek", and that it was possibly a mistake to refer to the locality "Le Kreider".

Riella helicophylla (Bory & Mont.) Mont.

RECORDS. — Bory de Saint-Vincent & Montagne (1843), Montagne (1856), Trabut (1941), Jelenc (1955a), Segarra-Moragues *et al.* (2022): près d'un petit lac d'eau saumâtre (La Sénia) situé à environ 8 km au S-E d'Oran. Durieu de Maisonneuve (1846): *sine loco*. Cosson (1853): D'Oran au Chott-el-Chergui. Trabut (1887a): Chott (Khreider). Jelenc (1957): Daya Borselly, Oran, Munby. Jelenc (1957), Segarra-Moragues *et al.* (2022): Oran dans le Lac Dahia el Morceli. Jelenc (1967): Mécheria; Miserghin; Valmy. Segarra-Moragues *et al.* (2022): Hochland der Chotts, Süßwassersee südl. Ksar El Boukhari bei Bougzoul. Rare.

COMMENT

The study of Segarra-Moragues *et al.* (2022) confirmed that the species is restricted to the western Mediterranean basin, being present in Algeria, Morocco, Tunisia, and mainland Spain.

Riella macrocarpa (P.Allorge)

Puche, Segarra-Moragues, Sabovlj., M.Infante & Heras

RECORDS. — Segarra-Moragues *et al.* (2022): *sine loco*. Very rare.

COMMENT

The species was recently recognized by Segarra-Moragues *et al.* (2022) for the previously considered *Riella helicophylla* var. *macrocarpa* P.Allorge. They reported just an Algerian sterile clone obtained from U. Kutschera, the species is therefore to be found wild in the country. According to these authors, it extends from the western Mediterranean in Portugal to the Eastern Mediterranean in Cyprus, replacing in many, but not all, countries the reports of *R. helicophylla*.

Riella notarisii (Mont.) Mont.*Riella battandieri* Trab.*Riella reuteri* Mont.*Riella sersuensis* Trab.Nomenclature follows Segarra-Moragues *et al.* (2022).

RECORDS. — Trabut (1886, 1941), Jelenc (1955a, 1957): In fossis hieme inundatis circa vicum Maison-Blanche Alger (Plaine de la Mitidja, Alger à Maison Carrée, fossé de l'Oued Smar). Allorge (1932): *sine loco*. Trabut (1934, 1941), Jelenc (1955a, 1956, 1957, 1967): Sersou, autour de la mare de Tasselent (entre Tiaret et Vialar). Jelenc (1957): Vallé de l'oued Chécliff (Ouest Algerian). Chevassut & Quézel (1958), Jelenc (1967): Entre la ferme Bourlier et Tiaret, à 20 km à l'E de Tiaret, de part de d'autre de la route Tiaret-Vialar. Rare.

COMMENT

Riella battandieri and *R. reuteri* were considered by Jelenc (1957) synonyms of *R. notarisii* (Mont.) Mont. That was also the criterion of Schumacker *et al.* (2005) and followed by Ros *et al.* (2007a). Although both species were listed by Söderström *et al.* (2016) and Hodgetts *et al.* (2020) as accepted species, these works also stated that their taxonomical distinction is questioned and that they belong to *Riella notarisii* complex with poorly defined taxonomic boundaries, as did Segarra-Moragues *et al.* (2022). Jelenc (1957) stated that the area where *R. notarisii* had been found in Algeria (sub *R. battandieri*) had been cultivated at that time and it should be supposedly taken that the species had disappeared. The only reference to *R. reuteri* in Algeria was done by Allorge (1932), in a map of his *Pflanzenareale* series, but no previous report seems to have been published on this name.

Riella numidica Trab.

RECORDS. — Trabut (1934, 1941), Jelenc (1955a, 1957): Source à Boniou (Chott Hodna). Allorge (1932): *sine loco*. Jelenc (1955a): Oran, Sainte Barbe du Tlélat. Rare.

Riella parisii Gottsche

RECORDS. — Durieu de Maisonneuve (1868), Jelenc (1957), Segarra-Moragues *et al.* (2022): Fossés d'obstacle près de Berbessa (Plaine de la Mitidja, Bassin de l'Oued Mazafran, Barbessa, à la limite du Sahel et de la Mitidja, 2°45'E, 36°37'N, 30 m). Batrandier & Trabut (1886), Trabut (1941), Jelenc (1955a, 1957): Plaine de la Mitidja, Boufarick (2°55'E, 36°35'N); Plaine de la Mitidja, Bassin de l'Oued Mazafran, Chaïba inférieur et Farghen (2°50'E, 36°37'N, 13 m); Plaine de la Mitidja, Bassin de l'Oued el Harrach, environs de Maison-Carrée, Alger (3°8'E, 36°43'N, 15 m). Allorge (1932): *sine loco*. Jelenc (1955a, 1957), Chevassut (1956): Plaine de la Mitidja, Bassin de l'Oued el Hamiz, marais de la Rassauta (3°12'E, 36°45'N, 5 m). Jelenc (1955a): Sebkhra d'Oran. Jelenc (1955a, 1957): Plaine de la Mitidja, bassin de l'Oued el Réghaïa, nord de la ville de Réghaïa (3°20'E, 36°47'N, 20 m); Sahel de Koléa, environs de Coleah, Bou Ismail, massif du Chenoua (2°45'E, 36°40'N). Jelenc (1957): Plaine de la Mitidja, Bassin de l'Oued Mazafran, Chaïba inférieur et Oued el Alleug, 2°45'E, 36°35'N, 30 m. Jelenc (1957), Segarra-Moragues *et al.* (2022): Plaine de la Mitidja, environs d'Alger. Jelenc (1957), Ahayoun *et al.* (2007): Plaine de la Mitidja, Oued el Alleg, 2°48'E, 36°33'N. Rare.

Scapania compacta (A.Roth) Dumort.

RECORDS. — Trabut (1941), Jelenc (1955a): La Calle. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, Taoulet. Bischler (2004): *sine loco*. Rare.

Scapania curta (Mart.) Dumort.

RECORDS. — Trabut (1941), Jelenc (1955a): Akfadou. Very rare.

**Scapania gracilis* Lindb.

COMMENT

Doubtfully present in Algeria. Bischler (2004) informed that it had been recorded previously in Algeria, but no published reports have been found.

Scapania irrigua (Nees) Nees

RECORDS. — Jelenc (1955a): Kabylie du Djurdjura, Yakouren. Very rare.

Scapania subalpina (Nees ex Lindenb.) Dumort.

RECORDS. — Maire (1940), Jelenc (1955a): Kabylie, ruisselets dans les chênaies de l'Akfadou, sur les grès, 1300-1400 m. Very rare.

Scapania undulata (L.) Dumort.

RECORDS. — Trabut (1914): Djurdjura. Trabut (1941), Jelenc (1955a): Akfadou; Kabylie. Jelenc (1955a): Kabylie du Djurdjura, Ait Idjer. Jelenc (1967): Kabylie du Djurdjura, Yakouren. Bischler (2004): *sine loco*. Rare.

Solenostoma gracillimum (Sm.) R.M.Schust.

Jungermannia gracillima Sm.

Nomenclature follows Söderström *et al.* (2016).

RECORDS. — Corbière (1904): La Calle, route de Tabarka, entre Oum Theboul et El Aioun, 400 m. Trabut (1941), Jelenc (1955a): La Calle. Feldmann (1947), Jelenc (1955a): Forêt de Taourirt Ighil, Grande Kabylie; Kabylie de Collo, Oued Elli Ankou, 500-900 m. Feldmann (1947), Jelenc (1955a), Váňa (1974): Kabylie de Collo, vallée de l'Oued Ramèche, 500-900 m. Bischler (2004): *sine loco*. Rare.

Solenostoma hyalinum (Lydell) Mitt.

Jungermannia hyalina Lyell

Nomenclature follows Söderström *et al.* (2016).

RECORDS. — Corbière (1904): Alger, chemin de Telemly, 80 m. Trabut (1941), Jelenc (1955a): Alger. Trabut (1914, 1941): Kabylie. Jelenc (1955a): Atlas de Blida. Rare.

**Solenostoma obovatum* (Nees) C.Massal.

Jungermannia obovata Nees

Nomenclature follows Söderström *et al.* 2016.

COMMENT

Doubtfully present in Algeria. Bischler (2004) informed that it had been recorded previously in Algeria, but no published reports have been found.

Solenostoma sphaerocarpum (Hook.) Steph.

Jungermannia sphaerocarpa Hook.

Nomenclature follows Söderström *et al.* (2016).

RECORDS. — Feldmann (1947), Jelenc (1955a): Kabylie de Collo, Maison forestière de Bou Noghra, 600 m. Very rare.

Southbya nigrella (De Not.) Henriq.

RECORDS. — Corbière (1904), Jelenc (1955a): Orléansville, bois de la Pépinière. Corbière (1905), Jelenc (1955a): Environs de Constantine, Mansourah. Trabut (1941), Bischler (2004): *sine loco*. Jelenc (1949, 1967): Monts de Tlemcen, flanc nord du djebel el Béniane, 1000 m. Rare.

Southbya tophacea (Spruce) Spruce

RECORDS. — Corbière (1904), Jelenc (1955a, 1967): Alger, 80 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, Chettabah. Corbière (1905): Environs de Constantine, les Pins. Trabut (1941), Bischler (2004): *sine loco*. Jelenc (1954b): Sahel d'Alger, colline du Hamma. Jelenc (1955a): Arba; Atlas de Blida, 1200 m; La Bouzaréa; Marengo. Jelenc (1956): Sahel d'Alger, dans le ravin du Frais-Vallon. Ros *et al.* (1990): Chiffa's Gorge. Rare.

Sphaerocarpos michelii Bellardi

RECORDS. — Corbière (1904), Jelenc (1955a): Mostaganem, 104 m. Trabut (1941), Bischler (2004): *sine loco*. Jelenc (1954b, 1956): Sahel d'Alger, colline du Hamma. Jelenc (1955a, 1967): Alger. Jelenc (1955a): Kabylie du Djurdjura, Akfadou; Philippeville. Rare.

Sphaerocarpos texanus Austin

RECORDS. — Trabut (1941): L'Agha. Jelenc (1955a): Alger. Bischler (2004): *sine loco*. Rare.

COMMENT

Bell *et al.* (2013) showed that the European populations of *Sphaerocarpos texanus* are genetically very distinct from the American populations, and that *S. europaeus* Lorb. should be used for the European species. Studies in northern African populations should be made to confirm if they also correspond to *S. europaeus*.

Recently, Infante *et al.* (2024) described a new species in the Iberian Peninsula (*Sphaerocarpos ibericus* M. Infante, Luceño, Quirós-de-la-Peña, Míguez, J. Muñoz & Heras), which could also be present in Algeria.

Targionia hypophylla L.

RECORDS. — Montagne (1838), Jelenc (1955a), Ahayoun *et al.* (2007): Alger. Brongniart (1882): Blidah. Gandoger (1883), Bischler (2004): *sine loco*. Trabut (1887a): D'Oran a Mécheria. Corbière (1889): Blida, Chemin de la glacière Laval. Litschauer (1904), Jelenc (1955a): Fort National, 1000 m; Im Tal des Qued-Kebir bei Blidah, 200 m. Corbière (1905): Environs de Constantine. Lapie (1909): Kabylie du Djurdjura. Maire & Sevenet (1928), Jelenc (1955a): Alger, Tombeau de la Chrétienne, près de Bérard. Jelenc (1949): Djebel Murdjadjo (Oran), Ravin du Tammernmouth; Vallée de l'Isser "El Kasbat", 500 m. Jelenc (1949, 1967): Monts et Haute-Plaine de Tlemcen. Jelenc (1951, 1967): Massif du Tessala, pic de Tafaraoui, 600 m. Jelenc (1955a): Birmandreïs; Edough; El Biar; Gorges de la Chiffa; La Bouzaréa; Monts de Constantine; Monts de Tlemcen, cascades d'El Ourit; Oran, Ravins de Noisieux. Jelenc (1967): Kabylie de Collo; Kabylie du Djurdjura, Yakouren; Sahel d'Oran. Ros & Guerra (1987a): El Kantara. Ros *et al.* (1990): Between Mostaganem and Cap Ivi, Abdelmaïmalek-Ramdan beach, 0 m; Djebel Chenoua, 5-40 m; Oued Rhio. Common.

Targionia lorbeeriana Müll. Frib.

RECORDS. — Jelenc (1956, 1967): Massif de la Bouzaréa, sous les Pins dans la forêt de Baïnem. Very rare.

MOSSES

Acaulon muticum (Hedw.) Müll. Hal.

RECORDS. — Bescherelle (1882): Birkadem; Pointe-Pescade. Bescherelle (1882), Jelenc (1955a, 1967): Alger. Bescherelle (1882), Jelenc (1955a, 1955b, 1967): La Calle. Corbière (1905): Environs de Constantine, route de Batna. Corbière (1905), Jelenc (1955a):

Environs de Constantine, djebel Ouach. Jelenc (1955a): Alma; Maison-Carrée. Ros *et al.* (1990): Dellys, 0-40 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Acaulon triquetrum (Spruce) Müll. Hal.

RECORDS. — Bescherelle (1882): Alger, au-dessus de Mustapha, Bab-Azoun; Mustapha. Bescherelle (1882), Jelenc (1955a): Aïn-Vagout; Alger. Corbière (1904): Mostaganem. Corbière (1904), Jelenc (1955a): Sétif, 1112 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, Chettabah; Environs de Constantine, djebel Ouach. Ros *et al.* (1990): Ouled Mimoum. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Alleniella complanata (Hedw.)

S. Olsson, Enroth & D. Quandt

RECORDS. — Bescherelle (1882): Djurdjura. Bescherelle (1882), Jelenc (1955a): Alger, forêt de Chaïba, à oued-el-Alleug; La Calle; Philippeville. Trabut (1888): *sine loco*. Corbière (1905): Environs de Constantine, oued Marsa. Jelenc (1955a): Alger; Boufarik; Kabylie des Babor, Tababor; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Izer Zougaren; Khodjaberry. Ahayoun *et al.* (2007): Kabylie. Frequent.

Aloina aloides (Koch ex Schultz) Kindb.

RECORDS. — Bescherelle (1882): Alger; Route de Saint-Eugène. Bescherelle (1882), Corbière (1889): Blidah. Corbière (1904): Alger, talus à Telemly. Corbière (1904), Jelenc (1955a): Médéa. Corbière (1905): Environs de Constantine, route du djebel Ouach; Environs de Constantine, route du Moulin Laire. Jelenc (1949, 1967): Monts de Tlemcen, djebel el Béniane, 1100 m. Jelenc (1955a): Alger, Frais Vallon, 300 m; Atlas de Blida, oued el Kebir, 200 m; Constantine; Kabylie du Djurdjura, Aït Aïcha; Kabylie du Djurdjura, Aït Idjer; Monts de Tlemcen, Mazer. Jelenc (1966, 1967): Atlas Mitidjien à Hammam Melouane. Delgadillo (1975): Alger, vallée des Consults. Ros & Guerra (1987a): El Kantara. Ros *et al.* (1990): Between Mostaganem and Cap Ivi, Abdelmaïmalek-Ramdan beach, 0 m; Oued Rhio; Ouled Mimoum. Gallego *et al.* (1999): Alger-Vablei, des conseds. Common.

Aloina ambigua (Bruch & Schimp.) Limpr.

RECORDS. — Bescherelle (1882): Bône; Kabylie. Bescherelle (1882), Jelenc (1955a): Alger; Kouba; Maison-Carrée; Oran; Tlemcen. Gandoger (1883): *sine loco*. Trabut (1887a): D'Oran à Mécheria. Corbière (1889): Blida. Corbière (1905): Environs de Constantine, La Corniche; Environs de Constantine, Salah Bey. Lapie (1909): Kabylie du Djurdjura. Jelenc (1949): Plaine d'Oran, talus de fossé à La Sénia. Jelenc (1951): Sahel d'Arzeu, djebel Borouse. Jelenc (1951, 1967): Haute-Plaine et Monts de Tlemcen. Jelenc (1954b): Chaîne des Zahrez, au nord du Zahrez Chergui, près de l'Aïn Hallouf au djebel Touilila, 1000 m. Jelenc (1955a): Atlas de Blida, oued el Kebir; Birmandreïs; Frais Vallon; Gorges de la Chiffa; Monts de Constantine; Ouarsenis, djebel Doui. Jelenc (1966, 1967): Massif du Tessala, pic Tessala, 1000 m. Jelenc (1966): Sahel d'Arzeu à Assi bou Nif. Jelenc (1967): La Sénia, Assi-bou-Nif. Bizot (1973): Ruines de Timgad. Delgadillo (1975): Tizi-Ouzou. Gallego *et al.* (1999): Kabylie de Collo de Constantine, estuarie de l'Oued Guebli Collo. Common.

Aloina brevirostris (Hook & Grev.) Kindb.

RECORDS. — Gallego *et al.* (1999): Oran. Very rare.

Aloina rigida (Hedw.) Limpr.

RECORDS. — Montagne (1838), Jelenc (1955a): Alger. Bescherelle (1882), Jelenc (1955a): Cap Matifou; Constantine; Gigthi. Gallego *et al.* (1999): Oran. Rare.

Amblystegium serpens (Hedw.) Schimp.

RECORDS. — Bescherelle (1882): *sine loco*. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, Bessombourg, 500-600 m. Very rare.

Anacolia webbii (Mont.) Schimp.

RECORDS. — Bescherelle (1882): Blidah, aux Deux-Frères; Kabylie; La Mouzaïa. Litschauer (1904), Jelenc (1955a): Qued-Kebir bei Blidah, 200 m. Trabut (1914): Djurdjura. Jelenc (1955a): Atlas de Blida, 1400 m; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Azerou Arzela; Kabylie du Djurdjura, Tala Ghizan. Rare.

Anomobryum julaceum
(Schr. ex P.Gaertn. *et al.*) Schimp.

RECORDS. — Bescherelle (1882): Birkadem; Ravins, près le Fort l'Empereur. Bescherelle (1882), Trabut (1914), Jelenc (1955a): Col de Tirourda. Bescherelle (1882), Jelenc (1955a): Alger, talus des chemins, au Bouzaréah. Jelenc (1955a): Constantine, 700 m; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Fort National; Kabylie du Djurdjura, Michelet, 1000-1200 m; Kabylie du Djurdjura, Tifrit; Philippeville. Rare.

Anomodon viticulosus (Hedw.) Hook. & Taylor

RECORDS. — Bescherelle (1882): Kabylie. Bescherelle (1882), Jelenc (1955a): Djebel Tababor; Taguement-Azouz. Rare.

Antitrichia californica Sull.

RECORDS. — Bescherelle (1882): Alger, Atlas; Mont de l'Ouarsenis; Serdj-el-Aouda. Bescherelle (1882), Jelenc (1955a): Aïn-Talazid; Forêt de cèdres de Téniet-el-Haâd. Brongniart (1882): Blidah. Corbière (1904), Jelenc (1955a): Djebel Mouzaïa. Litschauer (1904), Jelenc (1955a): Von Fort National nach Michelet, 1000-1200 m. Jelenc (1951): Forêt de Zariffet, 1100 m. Jelenc (1951, 1967): Monts de Tlemcen, Forêt de Tessera Mramet, 1400 m. Jelenc (1955a): Kabylie du Djurdjura, Aït Ouaban; Kabylie du Djurdjura, Beni Khalfoun; Kabylie du Djurdjura, Tala Ghizan; Massif de la Mahouna, Serdj el Aouda; Ouarsenis, djebel Doui. Jelenc (1967): Kabylie de Collo, djebel Goufi. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Antitrichia curtispindula (Hedw.) Brid.

RECORDS. — Jelenc (1955a) Djurdjura, Aït Ouaban; Djurdjura, Fort National. Rare.

Archidium alternifolium (Hedw.) Mitt.

RECORDS. — Bescherelle (1882), Jelenc (1955a), Snider (1975): La Calle, bruyères; Philippeville. Jelenc (1955a): Alger; La Bouzaréa. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Aschisma carniolicum (F.Weber & D.Mohr) Lindb.

RECORDS. — Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Jelenc (1955a): Alger, La Réghaia. Rare.

Atrichum undulatum (Hedw.) P.Beauv.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Djebel Édough. Jelenc (1955a): Alger; Kabylie du Djurdjura, Agoulmin Aberkan; Kabylie du Djurdjura, forêt d'Akfadou. Rare.

Aulacomnium androgynum (Hedw.) Schwägr.

RECORDS. — Jelenc (1955a): Djurdjura; Monts de Constantine, djebel Ouach; Ouarsenis, Téniet el Had. Rare.

Aulacomnium palustre (Hedw.) Schwägr.

RECORDS. — Bescherelle (1882), Trabut (1914), Jelenc (1955a): Djurdjura. Jelenc (1955a): Monts de Constantine; Ouarsenis, Téniet el Had. Rare.

Barbula unguiculata Hedw.

RECORDS. — Montagne (1838), Bescherelle (1882), Jelenc (1955a): Alger. Bescherelle (1882), Jelenc (1955a): Birmandreïs; Bône; Édough; Kouba; Tiaret. Gandoger (1883): *sine loco*. Corbière (1889): Blida. Corbière (1904): Médéa. Corbière (1904), Jelenc (1955a): Gorges de la Chiffa, ruisseau des Singes. Corbière (1905): Environs de Constantine, Chettabah; Environs de Constantine, Menidj; Environs de Constantine, Pépinière du djebel Ouach; Environs de Constantine, près l'oued Bou Merzoug; Environs de Constantine, tuileries du Rummel. Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m; Dellys; Kabylie du Djurdjura, Fort National; La Réghaia. Ros *et al.* (1990): Between Mostaganem and Cap Ivi, Abdelmeïmalek-Ramdan beach, 0 m; Oued Rhiou; Ouled Mimoum. Cano *et al.* (2000): Kasba Cheik Saïd. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

Bartramia aprica Müll. Hal.

Bartramia stricta auct. eur.

Bartramia rosamrosiae Damayanti, J.Muñoz, J.-P.Frahm & D.Quandt
Nomenclature follows Müller (2014).

RECORDS. — Montagne (1838), Bescherelle (1882), Jelenc (1955a): Alger. Bescherelle (1882): Couteaux, Bouzaréah; Djurdjura; Kabylie; La Galite; L'Agha. Bescherelle (1882), Corbière (1889): Blidah. Bescherelle (1882), Jelenc (1955a): Bône; La Calle; Mascara; Philippeville; Tiaret. Gandoger (1883): *sine loco*. Trabut (1887a):

D'Oran à Mécheria, Tell. Corbière (1904): Bône, rochers siliceux au pied de l'Édough. Corbière (1904, 1905), Jelenc (1955a): Constantine, bois du djebel Ouach. Litschauer (1904): Col de Tirourda, 1700 m; Fort National und Michelet, 1000-1200 m. Litschauer (1904), Jelenc (1955a): Chiffaschlucht und im Tal des Qued-Kebir bei Blidah, 300 m. Lapie (1909): Kabylie du Djurdjura. Cardot (1904), Maire (1916): Province d'Oran, Djebel Aïssa, 1800 m, 2250 m. Jelenc (1949, 1967): Monts de Tlemcen, forêt de Zariffet, 1150 m; Djebel Chenoua. Jelenc (1951, 1967): Massif du Tessala, pic de Tafaraoui, 650 m; Sahel d'Oran, plateau des Ghamras, 400 m. Jelenc (1954b, 1967): Atlas mitidjien, forêt d'El Aioun, 500 m; Massif de Bou Zezga, gorges de Keddara, 400 m; Zahrez Chergui, djebel Touilila, 1000 m. Jelenc (1955a): Akfadou; Col des Aït Aïcha; Djebel Doui; Kabylie des Babor, cap Aokas; Kabylie du Djurdjura, Aït Khalfoun; Kabylie du Djurdjura, Bouzgeur; Kabylie du Djurdjura, col de Tirourda, 1700 m; Kabylie du Djurdjura, Fort National, Michelet, 1000-1200 m; La Bouzaréa; Monts des Ksour, djebel Aïssa, 1800 m; Ouarsenis; Tablabalt; Taourirt Aberkane. Jelenc (1955a), Ros *et al.* (1990): Gorges de la Chiffa. Jelenc (1955a), Ahayoun *et al.* (2007): Djebel Chenoua. Jelenc (1956): Massif de la Bouzaréa, forêt de Baïnem; Massif du Tessala, pic Tessala. Jelenc (1967): Kabylie de Collo. Ros *et al.* (1990): Texenna's wood, 700 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Very common.

Bartramia pomiformis Hedw.

RECORDS. — Desfontaines (1799): *sine loco*. Bescherelle (1882): Kabylie. Bescherelle (1882), Jelenc (1955a): Blidah, Atlas. Corbière (1889): Blida, Tala-Yesid. Litschauer (1904), Jelenc (1955a): Col de Tirourda, 1700 m. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, sommet du djebel Goufi, versant Nord, 1000 m. Jelenc (1955a): Bône; Frais Vallon; Gorges de la Chiffa; Kabylie du Djurdjura, Bouzgeur. Jelenc (1955a, 1956, 1967): Kabylie du Djurdjura, Akfadou. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

**Brachymenium commutatum* (Müll. Hal.) A.Jaeger

RECORDS. — Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed.

COMMENT

Doubtfully present in Algeria. The presence of this Tropical montane species (Dierßen 2001) in the Mediterranean Region is unlikely and requires verification.

Brachymenium commutatum var. *attenuatum*
Thér. & Trab.

RECORDS. — Thériot (1931, 1933), Jelenc (1955a): Atakor-n-Ahaggar, Ilaman, 2000 m; Tefedest, Ahetes, 1200 m. Frahm (1978): Hoggar, Guelta von Imeghra, 1780 m; Hoggar, Tahabort NE Tamnasset, 1700 m.

COMMENT

This taxon was described from Algeria (Thériot 1931) and later reported from other African countries (Ochi 1972; O'Shea 2006; Ros *et al.* 2013). According to Ros *et al.* (2007b, 2013), the taxonomic value of this name is doubtful. Unfortunately the type could not be traced by Ros *et al.* (2007b).

Brachymenium exile

(Dozy & Molk.) Bosch. & Sande Lac.

RECORDS. — Thériot (1931, 1933), Jelenc (1955a): Atakor-n-Ahaggar, Ilaman, 2000 m. Thériot (1931, 1933), Jelenc (1955a), Ochi (1972): Ideles, 1500 m; Tefedest, 1200 m. Rare.

Brachytheciastrum salicinum

(Schimp.) J.D.Orgaz, M.J.Cano & J.Guerra

Brachytheciastrum velutinum var. *salicinum* (Schimp.) Ochyra & Żarnowiec

Nomenclature follows Orgaz *et al.* (2013).

RECORDS. — Jelenc (1953): Atlas de Blida, ravin Bleu de Chréa; Aurès, forêt de Sgag, 1700 m. Jelenc (1953, 1955a, 1967): Babor, flanc nord du Babor, 1700 m. Jelenc (1953, 1967): Bèlezma, cédraies de l'oued Chaba, 1400 m. Jelenc (1955a): Atlas de Blida, forêt de *Quercus*; Kabylie des Babor, cap Aokas; Monts de Constantine, djebel Ouach; Ouarsenis, Téniet el Had. Jelenc (1967): Massif de l'Aurès, djebel Chélia, 1800 m; Massif de l'Aurès, djebel Pharounm, 1800 m; Massif de l'Aurès, forêt de Sgag, 1700 m. Frequent.

Brachytheciastrum trachypodium

(Brid.) Ignatov & Huttunen

RECORDS. — Corbière (1889), Jelenc (1955a): Blida, Koudiat-Chréa, 1500 m. Corbière (1904), Jelenc (1955a): Médéa. Rare.

Brachytheciastrum velutinum

(Hedw.) Ignatov & Huttunen

RECORDS. — Bescherelle (1882): Kabylie. Bescherelle (1882), Jelenc (1955a): Alger; Tala-Guizan. Corbière (1889), Orgaz *et al.* (2013): Blida, forêt de Lièges. Cardot (1904): Environs d'Alger, Bouzarea. Corbière (1904): Alger, propriété Braham Réis; Bois de Boulogne; Environs d'Alger, Birmandréis. Corbière (1904), Jelenc (1955a): Batna, flanc nord du djebel Tougourth. Corbière (1904, 1905), Jelenc (1955a): Constantine, djebel Ouach. Litschauer (1904): Chiffaschlucht, 200 m; Michelet, 1000 m. Litschauer (1904), Jelenc (1955a): Col de Tirourda, 1700 m; Philippeville, 50 m; Qued-Kebir bei Blidah, 200 m. Corbière (1905): Environs de Constantine, Le Hamma; Environs de Constantine, Les Pins. Corbière (1905), Jelenc (1955a): Environs de Constantine, Menidj. Lapie (1909): Kabylie du Djurdjura. Jelenc (1949, 1967): Monts de Tlemcen, forêt de Zariffet, 1150 m. Jelenc (1953): Aurès, flanc nord du Chélia, 1800 m; Aurès, flanc nord du djebel Pharaoun, 1800 m. Jelenc (1953, 1967): Bèlezma, cédraies de l'oued Chaba, 1400 m. Jelenc (1955a): Aizer; Babor; Djebel Dira; Kabylie du Djurdjura, Michelet, 1000 m; Médéa; Monts de Constantine, djebel Chettaba. Bizot (1973): Djebel Belezma à 15 km à l'ouest de Batna. Ros *et al.* (1990): Texenna's wood, 700 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

Brachythecium albicans (Hedw.) Schimp.

RECORDS. — Jelenc (1955a): Kabylie du Djurdjura, Aizer; La Bouzaréa. Rare.

COMMENT

Jelenc (1955a) informed that according to Cardot, the identification of the specimen of “La Bouzaréa” is doubtful.

Brachythecium campestre (Müll. Hal.) Schimp.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger. Very rare.

COMMENT

The only report of this Austral-montane-arctic species (Dierßen 2001) in Algeria is based on a single specimen collected by Durieu de Maisonneuve.

Brachythecium rivulare Schimp.

RECORDS. — Feldmann (1947), Jelenc (1955a), Orgaz *et al.* (2012): Kabylie de Collo, oued Elli Ankou, 500-600 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Brachythecium rutabulum (Hedw.) Schimp.

RECORDS. — Bescherelle (1882): Atlas; Kabylie. Bescherelle (1882), Jelenc (1955a): Bône; Édough; La Calle. Gandoger (1883), Trabut (1888): *sine loco*. Litschauer (1904), Jelenc (1955a): Fort National, 1000 m; Im Tal des Qued-Kebir bei Blidah, 200 m. Corbière (1905): Environs de Constantine, djebel Ouach; Environs de Constantine, Les Pins; Environs de Constantine, Menidj; Environs de Constantine, route du Séminaire. Jelenc (1955a): Alger, La Bouzaréa; Constantine; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Tizi Ouzou. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Frequent.

Brachythecium salebrosum (Hoffm. ex F. Weber & D. Mohr) Schimp.

RECORDS. — Bescherelle (1882): Kabylie. Bescherelle (1882), Jelenc (1955a): Constantine, rochers; Tala-Guizan. Jelenc (1955a): Kabylie du Djurdjura, Azerou n’Tiddjer. Orgaz *et al.* (2012): Oyan. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Bryoerythrophyllum recurvirostrum (Hedw.) P.C. Chen

RECORDS. — Bescherelle (1882), Jelenc (1955a): Tiaret. Bizot (1973): Djebel Belezma à 15 km à l’ouest de Batna. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Bryum argenteum Hedw.

RECORDS. — Bescherelle (1882): Aïn El-Hammam; Hôpital du Dey; Kabylie; Kasbah; Mustapha. Bescherelle (1882), Jelenc (1955a): Alger; Blidah; Bou-Khalfa; Constantine, rochers du ravin du Rumel; La Calle, rochers de grès; Rovigo. Gandoger (1883): *sine loco*. Corbière (1889): Blida, Nouvelle-Blida. Julien (1894): Région de Constantine. Corbière (1904): Alger, talus de Telemly. Corbière (1904), Jelenc (1955a): Médéa. Litschauer (1904), Jelenc (1955a): Michelet und Fort National, 1000-1200 m; Qued-Kebir bei Bli-

dah, 300 m. Corbière (1905): Environs de Constantine, Les Pins; Environs de Constantine, route de la Corniche. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Camus (1906), Coppey (1911), Jelenc (1955a): Beni-Ounif, Sahara algérien. Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Jelenc (1955a): Arba; Col des Aït Aïcha; Perrégaux; Sud algérois, Bou Saâda; Sud algérois, Laghouat. Jelenc (1956, 1967): Sahel de Koléa. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

Bryum canariense Brid.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Constantine. Dixon (1931), Ochi (1972): Taharaut, southern part of Hoggar Mts., Central Sahara, 5900 ft. Jelenc (1955a): Hoggar, Fort Motylinsky, 1900 m; Sud oranais; Tiaret. Rare.

Bryum dichotomum Hedw.

Bryum bicolor var. *denticulatum* (Besch.) Jelenc

Bryum bicolor var. *macrothecium* (Besch.) Jelenc

Bryum bicolor var. *tenellum* (Besch.) Jelenc

Nomenclature follows Holyoak (2021).

RECORDS. — Bescherelle (1882): Alger, Fort l’Empereur; remparts, près de la porte Randon. Bescherelle (1882), Camus (1906), Jelenc (1955a): Oran. Bescherelle (1882), Jelenc (1955a): Alger; Blidah; Bône; Bougie; Gorges de la Chiffa; Philippeville. Corbière (1889): Blida, grèves l’oued Beni-Aza, sommet des Beni-Salah. Julien (1894): Région de Constantine. Corbière (1904): Médéa. Corbière (1905): Environs de Constantine, Chettabah; Environs de Constantine, djebel Ouach; Environs de Constantine, Moulin Laire; Environs de Constantine, oued Zied; Environs de Constantine, route de Sétif; Environs de Constantine, Sidi M’Cid. Braun-Blanquet & Maire (1924): Tlemcen. Jelenc (1951): Sahel d’Oran, djebel Murdjadjo, forêt de M’sila à Msabia; Sahel d’Arzeu, djebel Borouse. Jelenc (1955a): Alger; Atlas de Blida, oued el Kebir, 300 m; Aumale; Bône; Djebel Chenoua; Djebel Ouach; Frais Vallon, 300 m; Kabylie des Babor, cap Aokas; Kabylie du Djurdjura, Bouzgeur; Kabylie du Djurdjura, Fort National; La Calle; La Réghaia; Michelet, 1000 m; Monts de Constantine, djebel Chettaba; Ouarsenis, djebel Doui; Taourirt; Tirourda. Jelenc (1955a, 1955b, 1967): Monts de Constantine. Jelenc (1955a), Ahayoun *et al.* (2007): Dellys. Jelenc (1956): Golfe de Mostaganem, junipéraie de la Macta; Haute Plaine de Sidi-bel-Abbès. Jelenc (1956, 1967): Massif de la Bouzaréa, forêt de Baïnem; Massif du Dahra, junipéraie du cap Ivi. Jelenc (1967): Haute-Plaine de Sidi Bel Abés, Baudens; Massif du Tessala, pic de Tafaraoui, 650 m. Bizot (1973): Ruines de Timgad. Ochi (1973): Algier, Bona, somaische Ruine; Mustapha de Alger. Frahm (1978): Béchar. Ahayoun *et al.* (2007): *sine loco*. Ros *et al.* (1990): Between Mostaganem and Cap Ivi, Abdelmaïmalek-Ramdan beach, 0 m; Cape Falcon, les Andalouses, 30-50 m; Ouled Mimoum; Skikda beach, 0 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Very common.

Bryum erythrocarpum complex

RECORDS. — Montagne (1838): Alger. Jelenc (1949, 1967): Massif du Murdjadjo (Oran), ravin de Noiseux. Jelenc (1955a): Afensou; Kabylie du Djurdjura, Fort National; Monts de Tlemcen, forêt d’Hafir; Tirourda. Jelenc (1967): Djebel Borouse.

COMMENT

The concept of Crundwell & Nyholm (1964) is followed for the definition of this complex.

The names reported in Algeria are *Bryum erythrocarpum* Schwägr. and *Bryum sanguineum* Brid. *nom. illeg. incl. spec. prior.*

Bryum gemmilucens R. Wilczek & Demaret

RECORDS. — Ros *et al.* (1990): Dellys, 0–40 m. Very rare.

Bryum gemmiparum De Not.

Bryum gemmiparum var. *abhagarensis* Thér. & Trab.

Nomenclature follows Holyoak (2021).

RECORDS. — Montagne (1849, 1856), Bescherelle (1882), Trabut (1913), Jelenc (1955a), Ahayoun *et al.* (2007): Prope Tiaret. Bescherelle (1882): Bouïram; Constantine, aux moulins; Kabylie. Bescherelle (1882), Jelenc (1955a): Alger; Blidah; Col d'Aïn Kebira; La Calle, pâturages humides; Hoggar, mont Asekrem, 2400 m; Milah; Tin Seghin. Bescherelle (1882), Trabut (1914): Djurdjura. Gandoger (1883): *sine loco*. Corbière (1904): Alger, rochers humides, route de Telemly, 80 m. Corbière (1905): Environs de Constantine, route de la Corniche. Corbière (1905), Jelenc (1955a): Environs de Constantine, Sidi M'Cid. Thériot (1931, 1933): Atakor-n-Ahaggar ad meridiem montis Asekrem, 2400 m. Jelenc (1951, 1967): Monts de Tlemcen, oued en Nechef, 1100 m; Forêt de Zariffet, 1100–1200 m. Jelenc (1955a): Djebel Smir; Kabylie du Djurdjura, Bouira; Tiaret, cascade de la Mina. Jelenc (1956, 1967): Massif de la Bouzaréa. Ochi (1972): Cisret. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

Bryum kabylicum Trab. *in* Jelenc *nom. inval.*

RECORDS. — Jelenc (1955a): Djurdjura.

COMMENT

Although included in the checklists of Ros *et al.* (1999, 2013), the identity of this name seems not to have been revised after having been proposed. Unfortunately, its identity could not be assessed because the type could not be traced (Ros, unpublished).

Bryum radiculosum Brid.

RECORDS. — Bescherelle (1882): Bab-Azoun; Bouzaréah; Constantine; Djebel Mansourah; La Chiffa. Bescherelle (1882), Jelenc (1955a): La Calle. Bescherelle (1882), Litschauer (1904), Jelenc (1955a), Ochi (1972): Alger. Corbière (1904): Maison Carrée près Alger. Litschauer (1904): Chiffaschlucht und im Tal des Qued-Kebir bei Blidah, 300 m. Jelenc (1955a): La Bouzaréa. Jelenc (1956): Maison-Carrée, Ecole National d'Agriculture. Bizot (1973): Djebel Belezma à 15 km à l'ouest de Batna; El Golea; Fontaine Chaude à 30 km NE de Batna. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Frequent.

Calcidicranella howei (Renauld & Cardot)

Bonfim Santos, Fedosov & Jan Kučera

Dicranella howei Renauld & Cardot

Nomenclature follows Fedosov *et al.* (2023).

RECORDS. — Bescherelle (1882): Alger; Birmandreïs; Coteaux de Bab-Azoun; Pointe-Pescade; Près Blidah et Boufarik. Bescherelle (1882), Jelenc (1955a): Bouzaréah; Maison-Carrée. Corbière (1889): Blida. Corbière (1904): Alger, talus de la route de Telemly, 80 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, bords du Rummelet de l'oued Bou Merzoug; Environs de Constantine, Le Hamma. Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m; Boufarik; Kabylie du Djurdjura, Tifrit n'Aït el Hadj. Ros *et al.* (1990): Between Mostaganem and Cap Ivi, Abdelmaïmalek-Ramdan beach, 0 m; Texenna's wood, 700 m. Frequent.

Calcidicranella varia

(Hedw.) Bonfim Santos, Fedosov & Jan Kučera

Dicranella varia (Hedw.) Schimp.

Nomenclature follows Fedosov *et al.* (2023).

RECORDS. — Montagne (1838), Jelenc (1955a): Alger. Gandoger (1883), Trabut (1888): *sine loco*. Jelenc (1951): Haute plaine de Tlemcen, berges du Chabet bel Abbès, 750 m; Monts de Tlemcen, forêt de Zariffet, l'oued Zarifète, 1150 m. Jelenc (1951), Jelenc (1967): Sahel d'Oran, djebel Murdjado au ravin de Noisieux; Sahel d'Arzeu, djebel Borouse. Jelenc (1953, 1967): Babor, flanc nord du Babor, ravin des Beni Bezez, 1300 m. Jelenc (1954b): Sahel d'Alger, colline du Hamma. Jelenc (1955a): Ben Chicao; Gorges de la Chiffa, 300–400 m. Jelenc (1956, 1967): Massif de la Bouzaréa, ravin de la prise d'eau près Bains-Romanis; Plaine de la Mitidja, à Baba-Ali, sur les bords de l'oued Kerma; Sahel d'Alger, ravin du Frais-Vallon. Jelenc (1966, 1967): Sahel de Zéralda. Jelenc (1967): Boufarik; Maison-Carrée; Monts et Haute-Plaine de Tlemcen. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Callicladium imponens

(Hedw.) Hedenäs, Schlesak & D.Quandt

Hypnum imponens Hedw.

Nomenclature follows Schlesak *et al.* (2018).

RECORDS. — Jelenc (1949, 1967): Monts de Tlemcen, djebel el Béniane, 1050 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Calliergonella cuspidata (Hedw.) Loeske

RECORDS. — Bescherelle (1882): Kabylie. Jelenc (1955a): Kabylie du Djurdjura, Tizi n'Djemaâ; Monts de Constantine. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Rare.

Campylopus brevipilus Bruch & Schimp.

RECORDS. — Bescherelle (1882): *sine loco*. Jelenc (1955a): Kabylie du Djurdjura, Aït Idjer. Frahm (1985): Kabylie. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Campylopus flexuosus (Hedw.) Brid.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Djebel Aurès. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Campylopus introflexus (Hedw.) Brid.

RECORDS. — Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Very rare.

COMMENT

Jelenc (1955a) reported this species based on the previous one of Bescherelle (1882) from La Calle as *Campylopus polytrichoides* De Not. considering both names as synonyms. Nevertheless, posterior taxonomical studies by Gradstein & Sipman (1978) differentiate clearly both species and confirmed that at that time the reports in northern Africa correspond to *C. pilifer*.

Campylopus pilifer Brid.

RECORDS. — Bescherelle (1882): La Calle. Very rare.

COMMENT

It was not listed for Algeria by Ros *et al.* (1999, 2013) based on the criterium of Jelenc (1955a) (see comment in the former species).

Campylostelium strictum Solms

RECORDS. — Feldmann (1947), Jelenc (1955a): Kabylie de Collo, Taoulet. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Ceratodon purpureus (Hedw.) Brid.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, Tizi Ouzou. Lapie (1909): Kabylie du Djurdjura. Feldmann (1947): Kabylie de Collo, vieilles souches de Chêne-Liège, 800 m, aux environs de Bessombourg. Jelenc (1955a): Kabylie du Djurdjura, Ait Ouaban; Kabylie du Djurdjura, Dra Inguel. Jelenc (1956, 1967): Sahel d'Alger, près de Zéralda. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Ceratodon purpureus subsp. *stenocarpus*
(Bruch & Schimp. ex Müll. Hal.) Dixon

RECORDS. — Jelenc (1955a): Kabylie de Collo, Bessombourg; Ouarsenis, Téniet el Had. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Rare.

Cheilothela chloropus (Brid.) Broth.

RECORDS. — Bescherelle (1882): La Galite; Oran, djebel Santo. Bescherelle (1882), Jelenc (1955a): Philippeville. Trabut (1887a):

D'Oran à Mécheria. Corbière (1904), Jelenc (1955a): Orléansville, berges du Chélif, 130 m. Jelenc (1955a): Atlas de Blida; Oran. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Rare.

Cinclidotus aquaticus (Hedw.) Bruch & Schimp.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Oued En-Nekob, au pied du djebel Tababor. Jelenc (1955a): Kabylie des Babor; Kabylie du Djurdjura, Ansor Aberkane. Jelenc (1966, 1967): Haute-Plaine de Tlemcen, ruisseau près de l'Ain Defla, 650 m. Ahayoun *et al.* (2007): Djurdjura. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Cinclidotus fontinaloides (Hedw.) P.Beauv.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Djurdjura. Monts de Tlemcen, sources de la Tafna. Jelenc (1951, 1967): Monts de Tlemcen, oued Mefrouche. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Cirriphyllum crassinervium (Taylor) Loeske & M.Fleisch.

RECORDS. — Bescherelle (1882): Bône. Jelenc (1949, 1967): Monts de Tlemcen, forêt de Zariflet, 1100 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Cirriphyllum piliferum (Hedw.) Grout

RECORDS. — Lapie (1909), Jelenc (1955a): Kabylie du Djurdjura, Aizer. Very rare.

Codonoblepharon forsteri (Dicks.) Goffinet

Zygodon forsteri (Dicks.) Mitt.

Nomenclature follows Goffinet *et al.* (2004) and Hodgetts *et al.* (2020).

RECORDS. — Jones (1956), Jelenc (1967): Yakouren (nr. Azazga), Kabylie Mountains. Very rare.

Coscinodon cribosus (Hedw.) Spruce

RECORDS. — Jelenc (1955a): Gorges de la Chiffa, 300-400 m. Very rare.

Cratoneuron filicinum (Hedw.) Spruce

RECORDS. — Bescherelle (1882): Ehna-Bord; Ravins de l'oued Sidi-el-Kebir. Bescherelle (1882), Jelenc (1955a): Atlas de Blida, Aïn Talazid; Djurdjura; Gorges de la Chiffa; Massif de Tablat, Sakamody; Monts de Constantine. Corbière (1904): Tlemcen, parois de la dernière vasque de la cascade. Corbière (1904), Jelenc (1955a): Batna, parois d'une source calcaire, flanc nord du djebel Tougourth, 1300 m; Batna, rochers sur le flanc sud du djebel Tougourth, 1300 m. Litschauer (1904): Qued-Kebir bei Blidah, 300 m. Jelenc (1949, 1967): Monts de Tlemcen, cirque d'El Ourit, 1100 m; Monts de Tlemcen, Plateau travertineux de Lalla

Setti. Jelenc (1953): Bèlezma, pentes sud-est du djebel Touggour, 1700 m. Jelenc (1953, 1967): Massif de Aurès, flanc nord du Chélia, 1900 m; Massif de Aurès, ravin de la maison forestière du Chélia, 1500 m; Massif de l'Aurès, forêt de Sgag, 1650 m; Monts du Hodna, Maadid, maison forestière de Mahali, 1300 m. Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m; Djurdjura, Lalla Khadidja; Monts de Tlemcen, cascade de Mazer. Jelenc (1955b, 1967): Monts de Hodna au massif du Bou Thaleb à At-rafti, 1400 m. Jelenc (1967): Assif du Bèlezma, djebel Touggour, 1700 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

Crossidium aberrans Holz. & E.B.Bartram

RECORDS. — Delgadillo (1975): Oran. Cano (1992): El Kantara. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Crossidium crassinervium (De Not.) Jur.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Birmandreïs, bord des chemins; Oued Sidi-Tifour, près de Macta, sud de la province d'Oran. Bescherelle (1882), Jelenc (1955a), Delgadillo (1975): Alger. Trabut (1887a): D'Oran à Mécheria. Corbière (1905): Environs de Constantine, Les Pins. Camus (1906), Coppey (1911), Jelenc (1955a): Beni-Ounif, Sahara algérien; Ravin de Ben Zireg, dans l'extrême-Sud Oranais. Camus (1906), Jelenc (1955a): environs de Tlemcen. Jelenc (1955a): Chebka, oued Mredjar au Nord de Ghardaïa; Constantine; Hauts-plateaux oranais; Orléansville; Saoula; Sud constantinois, Biskra. Jelenc (1966, 1967): Sahel d'Arzeu à Renan. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Crossidium laevipilum Thér. & Trab.

RECORDS. — Thériot (1931, 1933), Jelenc (1955a): Ghardaïa, Mzab. Jelenc (1955a): Sud algérois, Laghouat. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Crossidium squamiferum (Viv.) Jur. var. *squamiferum*

RECORDS. — Bescherelle (1882): Constantine; Couteaux de Bab-Azoun. Bescherelle (1882), Jelenc (1955a): Alger; Bougie; Bou-Sâada; Saoula. Corbière (1889), Jelenc (1955a): Blida, oued Sidi-el-Kebir. Cardot (1904), Maire (1916): province d'Oran, Djebel Morghad, 1950 m, 2105 m. Corbière (1904): Alger, talus à Telemly. Corbière (1904), Jelenc (1955a): Nador de Médéa. Corbière (1905): Environs de Constantine, Chettabah. Corbière (1905), Jelenc (1955a): Environs de Constantine, Sidi M'Cid. Camus (1906): Oran; environs de Tlemcen. Camus (1906), Coppey (1911), Jelenc (1955a): Beni-Ounif, Sahara algérien. Jelenc (1949): Haute plaine de Tlemcen, berges d l'oued Sennoun, 350 m, Monts de Tlemcen, pentes du djebel el Béniane, 950 m. Jelenc (1954b, 1966, 1967): Atlas Mitidjien, gorges de l'oued Harrach à Hammam Mèlouane, 150 m. Jelenc (1954b, 1967): Massif du Bou Zegza, gorges de Ked-dara, 400 m. Jelenc (1955a): Aumale; El Kantara, 1500 m; Gorges de la Chiffa; La Bouzaréa; La Réghaia; Monts de Constantine, djebel Ouach; Monts de Tlemcen, Tlemcen, forêt d'Hafir; Sud constantinois, Biskra; Ténier Zebboudj. Jelenc (1967): Haute-Plaine de Tlemcen. Delgadillo (1975): Atlab, Ben Zireg. Frahm (1978): Laghouat. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

COMMENT

Crossidium squamiferum var. *brevisetum* (Besch.) Paris was described by Bescherelle (1882) as *Barbula membranifolia* f. *breviseta* Besch. from three localities (Constantine, Ravin du Rummel and Laghouat). According to Ros *et al.* (2013) its identity has not been revised since. Unfortunately the type could not be traced (Ros, unpublished). Probably it is within the morphological variability of the species, as it was stated for var. *pottioideum* by Cano *et al.* (1993) and Hodgetts *et al.* (2020).

Crossidium squamiferum var. *pottioideum*
(De Not.) Mönk.

RECORDS. — Corbière (1904), Jelenc (1955a): Tiaret, Hauts-Plateaux, Douar Torrich, 1000 m. Corbière (1905): Environs de Constantine, sur les travertins du Mansourah. Jelenc (1955a): Constantine; Oran; Sud algérois, Bou Saâda; Sud algérois, Laghouat. Jelenc (1967): Monts de Tlemcen, djebel el Béniane, 950 m. Delgadillo (1975): El Guerah. Rare.

Cryphaea heteromalla (Hedw.) D.Mohr

RECORDS. — Bescherelle (1882): Philippeville. Bescherelle (1882), Jelenc (1955a): Alger, sur les lentisques, les oliviers; Djebel Thaya; Kabylie du Djurdjura, Akfadou; La Calle. Trabut (1888): *sine loco*. Corbière (1904): La Calle, forêt de l'oued Mellah. Corbière (1905), Jelenc (1955a, 1966, 1967): Monts de Constantine, djebel Ouach, 1000 m. Jelenc (1955a): Castiglione; Gorges de la Chiffa; Kabylie du Djurdjura, Tifrit; Khodjaberry; Koléa. Jelenc (1956, 1967): Atlas Mitidjien, col des Deux-Bassins, 850 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Ctenidium molluscum (Hedw.) Mitt.

RECORDS. — Bescherelle (1882): Oued Djer; Sud d'Oran. Bescherelle (1882), Jelenc (1955a): Édough; Gorges de la Chiffa; Oued Merdja. Trabut (1887a): D'Oran à Mécheria. Jelenc (1953, 1967): Kabylie des Babor, crête du Tababor, 1950 m. Jelenc (1955a): Atlas de Blida; Crêtes du Djurdjura, Aït Ouaban; Hauts-plateaux oranais. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Cynodontium bruntonii (Sm.) Bruch & Schimp.

RECORDS. — Feldmann (1947), Jelenc (1955a): Kabylie de Collo, sommet du djebel Goufi, versant Nord, 1000 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Dialytrichia mucronata (Brid.) Broth.

RECORDS. — Bescherelle (1882): Petit Atlas; *sine loco*. Corbière (1905): Environs de Constantine, ravin du Rummel; Environs de Constantine, Sidi M'Cid. Jelenc (1954b): Massif du Bou Zegza, gorges de Ked-dara, 400 m. Jelenc (1955a): Alger; Atlas de Blida; Constantine; Djurdjura. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Dicranella heteromalla (Hedw.) Schimp.

RECORDS. — Jelenc (1966): Alluvions d'un affluent de l'oued Ouadallah, 1100 m. Jelenc (1966, 1967): Monts de Tlemcen, dans la forêt de Zariffet. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Dicranoweisia cirrata (Hedw.) Lindb.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Djebel Édough, forêt de Buïn-Si; La Calle, vallée d'Ain-Crier. Jelenc (1953, 1967): Aurès, flanc nord du djebel Pharaoun, 1800 m. Jelenc (1955a): Camp de la Santé; Kabylie du Djurdjura, Fort National; Ouarsenis, Téniet el Had; Taourirt. Bizot (1973): Djebel Belezma à 15 km à l'ouest de Batna. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Dicranum scoparium Hedw.

RECORDS. — Bescherelle (1882): Djurdjura. Bescherelle (1882), Jelenc (1955a): Tala-Guizan. Jelenc (1955a): Forêt d'Akfadou; Kabylie du Djurdjura, Tiruourda. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Rare.

Dicranum tauricum Sapjegin

RECORDS. — Jelenc (1955a, 1955b, 1967): Massif de l'Aurès au djebel Chélia. Very rare.

Didymodon acutus (Brid.) K.Saito

RECORDS. — Bescherelle (1882): Birmandreïs. Bescherelle (1882), Jelenc (1955a): Alger; Blidah; Bouzaréah. Corbière (1904), Jelenc (1955a): Sétif, 1100 m. Corbière (1905): Environs de Constantine, Les Pins. Jelenc (1955a): Arba; Atlas de Blida, oued el Kebir, 300 m; Constantine; Massif du Chénoua; Oran; Pointe-Pescade. Jelenc (1955a), Ros *et al.* (1990): Gorges de la Chiffa. Ros *et al.* (1990): Oued Rhio; Ouled Mimoum. Jiménez (2006): Tizi-Ouzou. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Didymodon australasiae (Hook. & Grev.) R.H.Zander

RECORDS. — Ros & Guerra (1987a), Jiménez *et al.* (2005a), Jiménez (2006): Constantine, El Kantara. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Didymodon fallax (Hedw.) R.H.Zander

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger; Bône; Kabylie du Djurdjura, Tizi Ouzou, 1500 m; Tiaret. Bescherelle (1882), Corbière (1889), Jiménez *et al.* (2005b): Blidah. Gandoger (1883): *sine loco*. Corbière (1904), Jelenc (1955a): Médéa; Sétif, 1100 m. Corbière (1905): Environs de Constantine, Bellevue; Environs de Constantine, Les Pins; Environs de Constantine, Moulin Laire; Environs de Constantine, route de Sétif; Environs de Constantine, Sidi M'Cid; Environs de Constantine, tuileries du Rummel. Corbière (1905), Jelenc (1955a): Constantine. Braun-Blanquet &

Maire (1924): Tlemcen. Jelenc (1951, 1955a, 1967): Haute plaine de Tlemcen, vallée de l'oued el Horra. Jelenc (1955a): Atlas de Blida, oued el Kebir, 300 m; Col de Tirourda, 1700 m; Kabylie des Babor, cap Aokas; Laghouat; Maison-Carrée. Bizot (1973): Djebel Belezma à 15 km à l'ouest de Batna. Ros *et al.* (1990): Cape Falcon, les Andalouses, 30-50 m; Hammam-Riga, 500 m. Ros *et al.* (1990), Jiménez *et al.* (2005b): Between Mostaganem and Cap Ivi, Abdelmalek-Ramdan beach, 0 m. Jiménez *et al.* (2005b): Algiers, route de la Mouzaia; Bosque Texenna; Oued Rhio; St. Eugène. Jiménez (2006): Algiers, Sidi Madani. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

**Didymodon giganteus* (Funck) Jur.

Barbula nivalis (Spruce) A.Jaeger

RECORDS. — Julien (1894): Région de Constantine.

COMMENT

Doubtfully present in Algeria. This report was published as *Barbula nivalis* (without the author's name) but indicating that it was one of the most common mosses in the region. As the identity of the type of the basionym of this name (*Tortula vinealis* var. *nivalis* Spruce) is *Didymodon giganteus* and it is a rare species in the Mediterranean Region, it is doubtful to which species Julien referred. It was not included in the previous checklists of Ros *et al.* (1999, 2013).

Didymodon insulanus (De Not.) M.O.Hill

RECORDS. — Montagne (1849, 1856): Tournit. Bescherelle (1882): Toumiet, sur les bords du ruisseau, au bas de la colline. Bescherelle (1882), Jelenc (1955a): Alger, près Médéah; Bône; Col des Toumi-ettes; Constantine; Djurdjura. Corbière (1889), Jelenc (1955a): Blida. Corbière (1904), Jelenc (1955a): Médéa. Corbière (1904, 1905), Jelenc (1955a): Constantine, bois du djebel Ouasch, talus d'un fossé, 1000 m. Jelenc (1955a): Aumale; Kabylie des Babor, cap Aokas; Kabylie du Djurdjura, Fort National; Tell oranais. Jelenc (1956): Kabylie du Djurdjura, massif de l'Arkafadou à la Fontaine des Ifs. Jelenc (1967): Atlas Mitidjien, pic Mouzaia; Haute-Plaine de Tlemcen, Chabet-bel-Abbès, 750 m et oued Sennoun; Kabylie du Djurdjura, Akfadou, 1200 m; Monts de Tlemcen, forêt de Tessa Mramet, 1400 m. Bizot (1973): Ruines de Timgad. Ros *et al.* (1990): Texenna's wood, 700 m. Ros *et al.* (1990), Jiménez (2006): Chiffa's Gorge. Cano *et al.* (2000): *sine loco*. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

Didymodon luridus Hornsch.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger. Corbière (1889), Jiménez (2006): Blidah. Corbière (1904), Jelenc (1955a): Médéa; Sétif, 1085 m. Corbière (1905): Environs de Constantine, bords de l'oued Bou Merzoug; Environs de Constantine, Le Hamma; Environs de Constantine, Menidj; Environs de Constantine, Moulin Laire; Environs de Constantine, route de la Corniche; Environs de Constantine, Sidi M'Cid. Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m; Bône; Constantine; Djebel Chenoua; Gorges de la Chiffa, 300-400 m; Orléansville; Philippeville. Ros *et al.* (1990): Oued Rhio. Frequent.

Didymodon nicholsonii Culm.

RECORDS. — Jiménez *et al.* (2003), Jiménez (2006): *sine loco*. Very rare.

Didymodon rigidulus Hedw.

RECORDS. — Montagne (1838), Bescherelle (1882), Jelenc (1955a), Ros & Cano (2008): Alger. Jelenc (1955a): Atlas de Blida, oued el Kebir; Kabylie du Djurdjura, Fort National, 1000 m. Jelenc (1955a), Jiménez (2006), Ros & Cano (2008): Gorges de la Chiffa. Bizot (1973): Fontaine Chaude à 30 km NE de Batna; Ruines de Tim-gad. Ros & Guerra (1987a): El Kantara. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Didymodon tophaceus (Brid.) Lisa subsp. *tophaceus*

RECORDS. — Bescherelle (1882): Bab-Azoun; Constantine, berges du Mansourah; Mustapha. Bescherelle (1882), Corbière (1889), Jelenc (1955a): Blida, Gorges de la Chiffa. Bescherelle (1882), Jelenc (1955a): Alger, bords des ruisseaux; Oran; Tiaret. Trabut (1887a): D'Oran à Mécheria. Corbière (1905): Environs de Constantine, Arcades romaines; Environs de Constantine, Le Hamma; Environs de Constantine, Les Pins; Environs de Constantine, Moulin Laire; Environs de Constantine, route de la Corniche; Environs de Constantine, Salah Bey; Environs de Constantine, Sidi M'Cid. Corbière (1905), Jiménez (2006): Environs de Constantine, route de Sétif. Thériot (1931, 1933), Jelenc (1955a): Hoggar, Idelès; Hoggar, Imarera, 2000 m; Hoggar, Issekarrassen, 2100 m; Hoggar, oued Haman; Hoggar, oued Tarouda; Hoggar, Tassili-n-Ajjer, Amgid. Jelenc (1951, 1967): Monts de Tlemcen, plateau de Lalla Setti, 1000 m. Jelenc (1953): Babor, flanc nord du Babor, 1300 m; Bèlezma, flanc sud-est du djebel Touggour, 1700 m. Jelenc (1955a): Bérard; Bône; Hoggar, Tamanghasset; Kabylie du Djurdjura, col de Tirourda, 1700 m; Kabylie du Djurdjura, Grotte de Tifrit; Monts de Tlemcen, Mazer; Monts de Tlemcen, Sebdou; Sous, Abouda. Jelenc (1955a), Jiménez *et al.* (2005b): Constantine. Collenot *et al.* (1960): Tassili N'Aijer, Afaïtalèsse. Jelenc (1967): Aurès, Chélia, 1800 m; Aurès, forêt de Sgag, 1650 m; Bèlezma, djebel Refaa, 2100 m; Djurdjura, Aizer, 1750 m. Frahm (1978): Béchar; Hoggar, Guelta von Imeghra, 1780 m; Hoggar, Gueltas von Issakkarassene, 1800 m. Jiménez *et al.* (2005b): Hoggar Gebirge, Gueltas von Issakkarassene, Tamanghasset; Oasis de Bou Saâda; Philippeville; St. Eugène; Tizi-Ouzou. Very common.

COMMENT

Three infraspecific taxa were reported from Algeria whose identity has not been revised after its description (Ros *et al.* 2013): *Didymodon tophaceus* var. *brevicaule* (Schimp.) Boulay, reported by Bescherelle (1882) as *Trichostomum tophaceum* var. *brevicaule*, and later compiled by Jelenc (1955a) from Alger, le long de la route de Saint-Eugène; *Didymodon tophaceus* fo. *acutifolius* (Schimp.) Zodda, reported by Jelenc (1955a) from Constantine and Gorges de la Chiffa, ruisseau des Singes; and *Didymodon tophaceus* fo. *recurvifolius* (Boulay) Willd., reported by Jelenc (1951, 1967) from Monts de Tlemcen, Plateau de Lalla Setti, 1000 m, and by Jelenc (1955a) from Constantine and Monts de Tlemcen, Beni Snous. Due to the notable morphological variability of the species (Jiménez 2006), most probably these names do not have any taxonomical value.

Didymodon tophaceus subsp. *sicculus*

(M.J.Cano, Ros, García-Zamora & J.Guerra) Jan Kučera

Didymodon sicculus M.J.Cano, Ros, García-Zamora & J.Guerra

Nomenclature follows Kučera *et al.* (2018).

RECORDS. — Jiménez *et al.* (2004), Jiménez (2006): Constantine, El Kantara. Very rare.

Didymodon vinealis (Brid.) R.H.Zander

RECORDS. — Bescherelle (1882): Birmandreïs; Bouzaréah; Douéra; Kabylie. Bescherelle (1882), Corbière (1904), Jelenc (1955a): Médéah. Bescherelle (1882), Corbière (1905), Jelenc (1955a, 1967): Constantine. Bescherelle (1882), Jelenc (1955a): Alger; Mascara; Philippeville. Bescherelle (1882), Jelenc (1955a), Jiménez (2006): Batna, Minas de Tringad. Trabut (1887a): D'Oran à Mécheria, Tell. Julien (1894): Région de Constantine. Corbière (1904), Jelenc (1955a): Gorges de la Chiffa, ruisseau des Singes; Orléansville, bois de la Pépinière. Corbière (1905): Environs de Constantine, Les Pins; Environs de Constantine, Moulin Laire; Environs de Constantine, route de la Corniche; Environs de Constantine, route du Hamma; Environs de Constantine, tuileries et ravin du Rummel. Jelenc (1949): Haute plaine de Tlemcen, Berges de l'oued Sennoun, 350 m; Haute plaine de Tlemcen, Berges du chabet bel Abbès, 750 m; Monts de Tlemcen, forêt de Tessera Mramet, 1400 m. Jelenc (1949, 1967): Vallée de l'Isser, lieu dit "El Kasbat" près de Lamoricière, vers 500 m. Jelenc (1955a): Azéba; Kabylie du Djurdjura, Azerou ou Gougan, 1700 m; Kabylie du Djurdjura, Fort National; Pointe-Pescade. Jelenc (1956): Atlas Mitidjien, pic Mouzaïa. Ros & Guerra (1987a): El Kantara. Ros *et al.* (1990): Chiffa's Gorge; Texenna's wood, 700 m. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

Distichium capillaceum (Hedw.) Bruch & Schimp.

RECORDS. — Bescherelle (1882): Djurdjura. Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, col de Tirourda; Kabylie des Babors, djebel Tababor. Jelenc (1955a): Kabylie du Djurdjura, Ait Daoud; Kabylie du Djurdjura, forêt d'Akfadou; Ouarsenis. Rare.

Ditrichum pusillum (Hedw.) Hampe

RECORDS. — Bescherelle (1882), Jelenc (1955a): La Calle. Very rare.

Ditrichum subulatum Hampe

RECORDS. — Bescherelle (1882): Kabylie. Bescherelle (1882), Jelenc (1955a): La Calle; Philippeville. Corbière (1889), Jelenc (1955a): Blida, aux Chênes-Lièges, bord d'un ruisseau, 600 m. Jelenc (1954b, 1955a, 1967): Massif de l'Akfadou, sources sous les Zéens. Jelenc (1955a): Bône; Édough; Kabylie du Djurdjura, Ait Daoud; La Réghaia. Rare.

Drepanocladus aduncus (Hedw.) Warnst.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, Tala Ghizan; Kabylie du Djurdjura, Igoulmimen. Corbière (1904): Constantine, bords asséchés de l'étang supérieur du djebel Ouasch, 1180 m. Jelenc (1955a): Atlas de Blida, oued el Kebir.

Constantine; Gorges de la Chiffa; Kabylie du Djurdjura, Aït Idjer; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Akfadou au lac Noir, 1430 m; Kabylie du Djurdjura, Tirourda; La Réghaia; Maison-Carrée; Monts de Constantine. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Frequent.

COMMENT

Drepanocladus aduncus var. *laxus* Schimp. ex Jelenc *nom. inval.* was reported from Algeria (Constantine) by Jelenc (1955a). According to Ros *et al.* (2013), its identity is difficult to assess because in his taxonomic study Żarnowiec (2001), was not able to locate the type.

Encalypta trachymitria Ripart

Encalypta rhaptocarpa var. *leptodon* Lindb.

Nomenclature follows Fedosov (2012).

RECORDS. — Jelenc (1955a): Dra el Arba; Kabylie des Babor, cap Aokas. Rare.

Encalypta vulgaris Hedw.

RECORDS. — Bescherelle (1882): Atlas; Batna; Blidah; Constantine, rochers du Chatabah; Tlemcen. Bescherelle (1882), Jelenc (1955a): Alger; Massif de la Mahouna, Serdj el Aouda; Monts de Tlemcen, Mansourah; Sud algérois, Guelt es Stel; Zaccar de Miliana. Corbière (1889): Blida, bords d'un ruisseau, aux Chênes-Lièges; Blida, grèves de l'oued Beni-Aza. Julien (1894): Région de Constantine. Cardot (1904): Province d'Oran, Djebel Morghad, 1950 m. Corbière (1904): Médéa. Corbière (1904), Jelenc (1955a): Batna, rochers, flanc sud du djebel Toumourth, 1600 m; Sétif. Corbière (1905): Environs de Constantine. Camus (1906), Jelenc (1955a): Oran. Thériot (1931, 1933), Jelenc (1955a), Cano *et al.* (2000): Hoggar, au dessus de l'oued In-Fergan, 2300 m. Maire (1936): Iles Habibas. Jelenc (1951, 1967): Massif de Tessala, pic Tafaraoui, 650 m. Jelenc (1954b, 1967): Massif du Bou Zegza, gorges de Keddara, 400 m. Jelenc (1955a): Aïn Sfa; Aït Khalfoun; Atlas de Blida; Atlas de Blida, oued el Kebir, 300 m; Azéba; Bône; Djebel Doui; Djebel Tenouchfi; El Kantara; Gorges de la Chiffa; Hauts-plateaux oranais; Kabylie du Djurdjura, Bouzgeur; Kabylie du Djurdjura, Fort National, 1000 m; Monts de Constantine; Monts des Ksour, djebel Mzi; Nador de Médéa; Tirourda. Jelenc (1956, 1967): Atlas Miridjien, Meurdja, 1200 m. Jelenc (1966): Dra Ferchet el Arbi, oued Kamza au djebel Touilila, 1000 m. Jelenc (1966, 1967): Zahrez Chergui, 1000 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Very common.

COMMENT

Encalypta vulgaris var. *gymnostoma* Besch. *nom. nud.* was reported from Batna by Jelenc (1955a). According to Ros *et al.* (2013) its identity has not been revised since.

Entosthodon attenuatus (Dicks.) Bryhn

RECORDS. — Bescherelle (1882): Kabylie. Bescherelle (1882), Jelenc (1955a): Alger; Bône; Bouzaréah; La Calle; Philippeville; Stora. Corbière (1905), Jelenc (1955a): Environs de Constantine, Sidi M'Cid. Camus (1906), Coppey (1911), Jelenc (1955a): Sud

oranais, Beni-Ounif, Sahara algérien. Feldmann (1947): Kabylie de Collo, Maison forestière de Bou Noghra, 600 m. Jelenc (1955a): Kabylie du Djurdjura, Fort National; Kabylie du Djurdjura, pic Belloua. Frequent.

Entosthodon commutatus Durieu & Mont.

RECORDS. — Durieu de Maisonneuve (1849), Jelenc (1955b), Brugués *et al.* (2010): *sine loco*. Montagne (1849, 1856), Bescherelle (1882), Jelenc (1955a): in collibus Babazoum dictis prope Alger. Bescherelle (1882): Mustapha. Bescherelle (1882), Jelenc (1955a): Édough. Trabut (1922): Beni Oumi de Figuig. Trabut (1927), Jelenc (1955a): Sud algérois, entre El Goléa et In Salah; Sud oranais, Beni Ounif. Thériot (1931, 1933), Jelenc (1955a): Hoggar, oued Haman, 2000 m; Hoggar, oued Tarouda, 2100 m; Hoggar, Tassili-n-Ajjer, Amgid. Jelenc (1955a): Hoggar, oued Tamanghasset en aval de Fort Laperrine, 1350 m; Mouydir, Tahount Arak. Frequent.

Entosthodon convexus (Spruce) Brugués

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger; Bône; Coteau de Caddous. Corbière (1904), Jelenc (1955a): Orléansville, bois de la Pépinière. Jelenc (1954b, 1967): Massif du Bou Zegza, gorges de Keddara, 400 m. Jelenc (1955a): Kabylie du Djurdjura, Fort National; Monts de Tlemcen, forêt d'Hafir. Jelenc (1967): Boghar, djebel Krellala, 1000 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Entosthodon duriaei Mont.

RECORDS. — Durieu de Maisonneuve (1849): *sine loco*. Bescherelle (1882): Alger, pâturages et prairies de l'Agha; Constantine, parois humides de meules de moulins, rochers calcaires près de la chute du Rummel. Bescherelle (1882), Corbière (1904): Alger. Bescherelle (1882), Jelenc (1955a): Tlemcen, rochers ombragés, bords des grottes du Mansourah. Battandier & Trabut (1886), Trabut (1887b), Corbière (1904), Brugués (1998): Mustapha. Corbière (1905), Jelenc (1955a): Environs de Constantine, ravin de Constantine. Lapie (1909): Kabylie du Djurdjura. Jelenc (1955a): Alger, El Biar; Alger, La Bouzaréa; Djurdjura. Jelenc (1956): Environs d'El Biar; Ravin du Frais-Vallon; Sahel d'Alger, au Bois de Boulogne. Jelenc (1955a), Brugués (1998): Castiglione; Monts de Tlemcen, Mazer. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Entosthodon fascicularis (Hedw.) Müll. Hal.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Bône; Philippeville. Jelenc (1955a): Arba; Frais Vallon, 300 m; La Bouzaréa; Maison-Carrée. Rare.

Entosthodon hungaricus (Boros) Loeske

RECORDS. — Bescherelle (1882), Trabut (1922, 1927), Jelenc (1955a), Ros & Cano (2008): Const. Sahara Mehounch. Very rare.

Entosthodon mühlenbergii (Turner) Fife

RECORDS. — Montagne (1838), Bescherelle (1882), Corbière (1904), Jelenc (1955a): Alger. Bescherelle (1882), Jelenc (1955a):

Batna; Bône; Kabylie du Djurdjura, Bougie; Mascara; Philippeville; Tiaret. Trabut (1887a): D'Oran à Mécheria. Corbière (1889): Blida. Julien (1894): Région de Constantine. Corbière (1904): Kabylie, Fort National, 1000 m. Corbière (1904), Jelenc (1955a): Médéa. Corbière (1905): Environs de Constantine, M'Cid; Environs de Constantine, route de Sétif. Lapie (1909): Kabylie du Djurdjura. Jelenc (1951, 1967): Massif du Tessala, pic de Tafaraoui, 600 m, 650 m. Jelenc (1954b, 1967): Massif du Bou Zezga, gorges de Keddara, 400 m. Jelenc (1955a): Atlas de Blida; Atlas de Blida, oued el Kebir, 300 m; Aumale; Biskra; Kabylie des Babor, cap Aokas; Kabylie du Djurdjura, Ait Ali; Kabylie du Djurdjura, Ait Ouaban; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Fort National; La Réghaia; Monts de Tlemcen, Mazer; Ouarsenis, Téniet el Had. Jelenc (1955a, 1956, 1967): Sahel d'Alger, ravin du Frais-Vallon, près d'El Biar, 300 m. Jelenc (1955a, 1967): Constantine. Jelenc (1955b, 1967): Haute-Plaine de Tlemcen. Jelenc (1966): Boghar, djebel Krellala. Ros *et al.* (1990): Texenna's wood, 700 m. Common.

Entosthodon obtusus (Hedw.) Lindb.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Blidah; Édough; La Calle, bruyères; Oued-Amalou, route du Fort Génois; Oued-el-Aneb; Stora. Jelenc (1955a): Alger. Jelenc (1955a), Ahayoun *et al.* (2007): La Réghaia. Rare.

Entosthodon pulchellus (H.Philib.) Brugués

RECORDS. — Montagne (1838): Alger. Crundwell & Nyholm (1974): Alger, ravin de Pierson; Constantine, Philippeville. Rare.

Entosthodon schimperi Brugués

RECORDS. — Brotherus (1909), Jelenc (1955a): Algier. Very rare.

Ephemerum recurvifolium (Dicks.) Boulay

RECORDS. — Bescherelle (1882): Alger. Bescherelle (1882), Jelenc (1955a): Birmandreïs; Philippeville. Rare.

Ephemerum serratum (Hedw.) Hampe

RECORDS. — Bescherelle (1882): La Calle; Mustapha. Bescherelle (1882), Jelenc (1955a): Alger, à la Colonne Voirol. Rare.

Epipterygium tozeri (Grev.) Lindb.

RECORDS. — Bescherelle (1882): Alger. Bescherelle (1882), Jelenc (1955a): Beni-Salah; Bône; Bouzaréah; La Calle; Oued Amalou. Lapie (1909): Kabylie du Djurdjura. Jelenc (1951, 1967): Haute-Plaine de Tlemcen, 650 m. Jelenc (1955a): Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Djemaà Saharidij; Kabylie du Djurdjura, Fort National; Kabylie du Djurdjura, Tifrit. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Eucladium verticillatum (With.) Bruch & Schimp.

RECORDS. — Montagne (1838), Bescherelle (1882), Jelenc (1955a): Alger. Bescherelle (1882): La Chiffa; Médéah, fontaine Gros-Jean.

Bescherelle (1882), Jelenc (1955a): Kabylie des Babor, djebel Tababor; Tiaret. Brongniart (1882): Blidah, cascade. Bescherelle (1882), Camus (1906), Jelenc (1955a), Cano *et al.* (2000): Tlemcen. Gandoger (1883): *sine loco*. Trabut (1887a): D'Oran à Mécheria. Corbière (1889), Corbière (1904), Jelenc (1955a): Blida, gorges de la Chiffa. Corbière (1889), Jelenc (1955a): Atlas de Blida, source de Tala Yezid. Corbière (1904): Vallon d'El Biar près Alger. Corbière (1904), Jelenc (1955a): Jardin public de Sidi-Bel-Abbès. Corbière (1905): Environs de Constantine, Menidj; Environs de Constantine, Sidi M'Cid. Jelenc (1949, 1955a, 1967): Monts de Tlemcen. Jelenc (1953, 1967): Aurès, flanc nord du djebel Chélia, 1800 m; Aurès, forêt de Sgag, 1650 m; Bèlezma, djebel Refaa, 2100 m; Djurdjura, Aizer, en contre-bas du Chemin Lapie, 1750 m. Jelenc (1955a): Aïn Ouaban; Atlas de Blida, oued el Kebir, 200 m; Bône; Constantine; Kabylie des Babor, Sebr des Beni Slimane; Kabylie du Djurdjura, col de Tiourda, 1700 m; Littoral oranais; Nador de Médéa; Orléansville; Philippeville. Jelenc (1956, 1967): Sahel d'Alger, dans le ravin du Frais-Vallon. Jelenc (1966, 1967): Atlas Mitidjien, Hammam Mélouane. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

COMMENT

Eucladium verticillatum var. *angustifolium* Jur. *nom. illeg.* was reported from Algeria (Monts de Tlemcen, El Ourit) by Jelenc (1949, 1967). *Eucladium verticillatum* var. *angustifolium* Lindb. was considered only a form of the type (Hodgetts *et al.* 2020) and probably that is also the case.

Eurhynchiastrium pulchellum
(Hedw.) Ignatov & Huttunen

Eurhynchiastrium pulchellum (Hedw.) Ignatov & Huttunen var. *praecox* (Hedw.) Ochya & Zarnowicz

Nomenclature follows Guerra (2016).

RECORDS. — Montagne (1838): Alger. Bescherelle (1882), Jelenc (1955a): Tiaret. Lapie (1909): Kabylie du Djurdjura. Jelenc (1955a): Kabylie du Djurdjura, Aizer. Rare.

Eurhynchium striatum (Hedw.) Schimp.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, Tizi Ouzou. Litschauer (1904): Qued-Kebir, 200 m. Jelenc (1955a): Kabylie des Babor, cap Aokas. Rare.

Fabronia leikipiae var. *ahaggarensis* Thér. & Trab.

RECORDS. — Thériot (1931, 1933), Jelenc (1955a): Atakor-n-Ahaggar, in monte Amezzeroui, 2600 m. Very rare.

COMMENT

This taxon was described from Algeria by Thériot (1931). According to Ros *et al.* (2013), its identity has not been revised since. *Fabronia leikipiae* is mainly distributed in Africa (O'Shea 2006) and recently has also been reported in Asia (Yadav *et al.* 2019).

Fabronia pusilla Raddi

RECORDS. — Bescherelle (1882): Gher-el Dabch. Bescherelle (1882), Jelenc (1955a): Blidah, vieux oliviers; El-Harrouch, troncs de lentisques; Milah; Mouzaïaville. Corbière (1905): Environs de Constantine, route du Séminaire. Jelenc (1955a): Atlas de Blida; Constantine; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, djebel Afroun. Jelenc (1955a), Ahayoun *et al.* (2007): Ouarsenis, djebel Doui. Gauthier (1987): Assekrem, Hoggar. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Fissidens adianthoides Hedw.

RECORDS. — Bescherelle (1882): Kabylie; Sud d'Oran. Trabut (1887a): D'Oran à Mécheria. Jelenc (1955a): Arba; Djurdjura. Rare.

Fissidens arnoldii R.Ruthe

RECORDS. — Thériot (1931, 1933), Jelenc (1955a), Bruggeman-Nannenga (1987): Hoggar, oued Haman, 2000 m. Very rare.

Fissidens bryoides Hedw.

RECORDS. — Desfontaines (1799): *sine loco*. Montagne (1838): Alger. Pierrot (2000): Kabylie de Collo, berges de l'oued Melkach. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Fissidens bryoides var. *caespitans* Schimp.

RECORDS. — Pierrot (2000): Kabylie de Collo, torrent de la source du Djebel Goufi. Very rare.

Fissidens crassipes Wilson ex Bruch & Schimp.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger; Maison-Carrée, dans les ruisseaux; Stora. Jelenc (1955a): Bougie; El Biar; Kabylie du Djurdjura, Aït Ouaban; La Réghaia. Jelenc (1951, 1955a, 1967): Monts de Tlemcen, vallée de l'oued Khémis au village de Khémis; cascades près de la route, 800 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Fissidens crassipes subsp. *warnstorffii*
(M.Fleisch.) Brugg.-Nann.

RECORDS. — Bescherelle (1882), Potier de La Varde (1922), Jelenc (1955a): Bougie, ruisseaux. Potier de La Varde (1922), Jelenc (1955a): La Réghaia. Jelenc (1949, 1967): Jardin d'Essai d'Alger. Jelenc (1949, 1967), Bruggeman-Nannenga (1982): Monts et Haute-Plaine de Tlemcen. Jelenc (1951): Monts de Tlemcen, cirque d'el Ourit. Jelenc (1955a): La Bouzaréa. Jelenc (1955a), Bruggeman-Nannenga (1982): Kéddara. Rare.

Fissidens crispus Mont.

RECORDS. — Corbière (1904) Jelenc (1955a): Vallon d'El Biar près Alger, 120 m. Jelenc (1954b, 1967): Sahel d'Alger, colline du Hama. Ros *et al.* (1990): Chiffa's Gorge. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Fissidens curvatus Hornsch.

RECORDS. — Corbière (1904), Jelenc (1955a): La Bouzaréah, près Alger. Jelenc (1955a): Blida. Rare.

Fissidens dubius P.Beauv.

RECORDS. — Trabut (1914), Jelenc (1955a, 1956, 1967): Crêtes du Djurdjura, Akfadou, 2000 m. Jelenc (1955a): Arba; Tabort Amelel. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Fissidens exilis Hedw.

RECORDS. — Corbière (1904), Jelenc (1955a): La Bouzaréah. Jelenc (1955a): Kabylie du Djurdjura, Aït Idjer. Rare.

Fissidens fontanus (Bach. Pyl.) Steud.

RECORDS. — Bescherelle (1882): *sine loco*. Jelenc (1955a): La Réghaia; Laghouat. Jelenc (1955a), Ahayoun *et al.* (2007): Dayas de l'Alma. Rare.

Fissidens grandifrons Brid.

RECORDS. — Bescherelle (1882), Brongniart (1882), Jelenc (1955a): Alger, petit Atlas de Blidah, cascades, 1200 m. Bescherelle (1882), Jelenc (1955a): Fontaine de Gros-Jean, à Médéah, 1640 m; Gorges de la Chiffa; Atlas de Blida, Oued-Kebir, 200 m. Corbière (1889), Jelenc (1955a): Atlas de Blida, source de Tala Yezid. Jelenc (1955a): Kabylie du Djurdjura, Akfadou; Mouzaïa. Rare.

Fissidens incurvus Starke ex Röhl.

Fissidens viridulus var. *incurvus* (Starke ex Röhl.) Waldh.

Nomenclature follows Hodgetts *et al.* (2020).

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger, collines ombragées; Bône. Corbière (1889): Blida. Corbière (1904): Alger, colonne Voirol; Constantine, bois du djebel Ouasch; La Bouzaréah, près Alger; Orléansville, bois de la Pépinière. Corbière (1905): Environs de Constantine, Les Pins, bords de l'oued Bou Merzoug. Meylan (1931), Jelenc (1955a): Tlemcen. Jelenc (1949, 1967): Vallée de l'Isser, source thermale de Sidi Abdely, 375 m. Jelenc (1951, 1967): Haute-Plaine de Tlemcen, 700 m. Braun-Blanquet (1954): Forêt de Terni, près de Tlemcen, 1000 m. Jelenc (1955a): Atlas de Blida; Constantine; Djurdjura; Édough; El Affroun; La Bouzaréa; Orléansville. Jelenc (1956): Fort des Arcades. Jelenc (1956, 1967): Massif du Bou Zegza, dans les Gorges de Keddara, 400 m; Plaine de la Mitidja, forêt de la Règhaïa; Sahel d'Alger, environs d'El Biar; Sahel de Koléa, au ravin des Voleurs. Common.

Fissidens ovatifolius R.Ruthe

RECORDS. — Jelenc (1949, 1955a, 1967), Bonnot (1963): Monts de Tlemcen, forêt de Zariflet, 1100 m. Bonnot (1963): Oued Yquem. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Fissidens pusillus (Wilson) Milde

RECORDS. — Bescherelle (1882): Ben-Aknoun. Bescherelle (1882), Jelenc (1955a): Alger; Birkadem; Bou Khalfa; Kabylie; Stora. Gandoger (1883): *sine loco*. Corbière (1889), Jelenc (1955a): Blida. Corbière (1905): Environs de Constantine, Le Hamma. Corbière (1905), Jelenc (1955a): Environs de Constantine, Sidi M'Cid, près les Arcades romaines, pépinière du djebel Ouach. Jelenc (1951, 1967): Haute-Plaine de Tlemcen, 700 m. Jelenc (1955a): Birmandreïs; El Biar; La Réghaia; Philippeville. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

COMMENT

According to Bruggeman-Nannenga (1978), *F. subimmarginatus* Philib., as reported from the Massif de la Bouzaréa by Jelenc (1955b, 1967), should be regarded as a synonymous with *F. exiguus*. Later, Pursell (1997) considered *F. exiguus* synonymous with *F. bryoides* var. *pusillus* (Wilson) Pursell, and this was the criterion adopted by Ros *et al.* (1999) for the checklis of Algeria. However, Ros *et al.* (2013) and Hodgetts *et al.* (2020) considered *F. exiguus* auct. eur. to be synonymous with *F. viridulus*, which is the criterion followed here.

Fissidens rivularis (Spruce) Schimp.

RECORDS. — Feldmann (1947), Jelenc (1955a): Kabylie de Collo, vallée de l'oued Ramèche, 600-800 m. Very rare.

Fissidens rufulus Bruch & Schimp.

RECORDS. — Corbière (1889), Jelenc (1955a), Ros & Cano (2008): Blida. Corbière (1905), Jelenc (1955a): Environs de Constantine, ravin du Rummel. Rare.

Fissidens serrulatus Brid.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Djebel Édough, fond des ravins; Stora. Jelenc (1955a): Kabylie de Collo; Kabylie du Djurdjura, Aït Daoud; Kabylie du Djurdjura, forêt d'Akfadou. Rare.

Fissidens taxifolius Hedw.

Fissidens taxifolius subsp. *pallidicaulis* (Mitt.) Mönk.

Nomenclature follows Hodgetts *et al.* (2020).

RECORDS. — Bescherelle (1882): Petite Kabylie; Ras-Aokas. Bescherelle (1882), Jelenc (1955a): Bône; Djebel Édough, près la Fontaine du Prieur. Corbière (1904), Jelenc (1955a): La Bouzaréah, près Alger. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach, 900 m. Camus (1906): Oran. Meylan (1931): Tlemcen. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, vallée de l'oued Bin el Ouidane, près de Taoulet, 600 m. Dubuis & Faurel (1945), Jelenc (1953, 1955a): Djurdjura, Aizer, flanc nord du djebel Tachgalt, 2000 m. Dubuis & Faurel (1945), Jelenc (1953, 1955a, 1967): Kabylie du Djurdjura, Plateau de l'Aizer, 1900-2000 m. Braun-Blanquet (1954): Forêt de Terni, près de Tlemcen, 1000 m. Jelenc (1954b, 1967): Massif du Bou Zegza, gorges de Keddara, 400 m. Jelenc (1955a), Pierrot (2000): Alger. Jelenc (1955a): Blida; Kabylie des Babors, cap Aokas; Kabylie du Djurdjura, Akfadou;

Kabylie du Djurdjura, Fort National, 1000 m; Monts de Tlemcen, forêt de Zariffet; Monts de Tlemcen, forêt d'Hafir; Sidi Merzoug. Jelenc (1959): Kabylie de Collo, Baie de Tamamart, 50 m. Ros *et al.* (1990): Texenna's wood, 700 m. Pierrot (2000): Kabylie de Collo. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

Fissidens viridulus (Sw. ex anon.) Wahlenb.

Fissidens exiguus Sull.

Fissidens subimmarginatus Philib.

Nomenclature follows Bruggeman-Nannenga (1978) and Hodgetts *et al.* (2020).

RECORDS. — Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Jelenc (1949, 1951, 1955a, 1967): Haute plaine de Tlemcen, berges du chabet bel Abbès, 775 m; Haute plaine de Tlemcen, 650-775 m. Jelenc (1954b, 1967): Sahel d'Alger, Quatre-Chemins de Kouba. Jelenc (1955a): Maison-Carrée. Jelenc (1955b, 1967): Massif de la Bouzaréa. Jelenc (1956, 1967): Sahel d'Alger, environs d'El Biar. Ros *et al.* (1990): Djebel Chenoua, 5-40 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

COMMENT

See comment under *Fissidens pusillus*.

Flexitrichum flexicaule (Schwägr.) Ignatov & Fedosov

Ditrichum flexicaule (Schwägr.) Hampe

Nomenclature follows Fedosov *et al.* (2016).

RECORDS. — Bescherelle (1882): Djurdjura; Kabylie. Bescherelle (1882), Jelenc (1955a): Tlemcen. Jelenc (1953, 1955a, 1967): Kabylie du Djurdjura, Aizer, falaises en contre-bas du Chemin Lapie, 1750 m. Jelenc (1955a): Kabylie du Djurdjura, Aït Daoud; Kabylie du Djurdjura, Tala Ghizan; Kef el Aïssa, Dépt. de Constantine. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Fontinalis antipyretica Hedw. subsp. *antipyretica*

Fontinalis constantinica Cardot ex Jelenc *nom. inval.*

Nomenclature follows Welch (1960).

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger, Tixeraïn. Bescherelle (1882), Welch (1960): Kabylie. Julien (1894): Région de Constantine. Lapie (1909): Kabylie du Djurdjura. Trabut (1914), Jelenc (1955a), Ahayoun *et al.* (2007): Ruisseaux de la forêt d'Akfadou. Jelenc (1955a): Babor; Kabylie du Djurdjura, Taourirt Ighil; Kabylie du Djurdjura, Tirourda; Kabylie du Djurdjura, Yakouren; Monts de Constantine, djebel Ouach; Oued Réghaia. Jelenc (1955a), Welch (1960): La Calle. Jelenc (1955a), Ahayoun *et al.* (2007): Kabylie du Djurdjura, Tala Ghizan. Jelenc (1955a), Ros & Cano (2008): Kabylie du Djurdjura, Tamesguida. Welch (1960): Tiaret. Welch (1960), Jelenc (1967): Constantine. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Frequent.

Fontinalis hypnoides var. *duriaei* (Schimp.) Kindb.

RECORDS. — Schimper (1876), Bescherelle (1882), Jelenc (1955a), Welch (1960): Prope La Calle ad ripas lacus el Hout Algeriae in Alni. Bescherelle (1882), Jelenc (1955a), Welch (1960): Alger, Bassin de la fontaine du Café maure de Kaddous. Jelenc (1951, 1967): Monts de Tlemcen, forêt de Zariflet, 1000-1100 m, cascades de l'oued Ouadallah. Jelenc (1955a): Kabylie du Djurdjura, Akfadou; Tiaret, oued Mina; Tixerain. Jelenc (1955a), Welch (1960): Oued Réghaia, barrage; Oued Saoula. Jelenc (1955a), Ahayoun *et al.* (2007): Birtouta. Rare.

Fontinalis squamosa Hedw.

RECORDS. — Bescherelle (1882), Jelenc (1955a): *sine loco*. Very rare.

COMMENT

The only report of the species in Algeria is based on a single specimen collected by Durieu de Maisonneuve.

Funaria altissima Dixon

RECORDS. — Dixon (1931), Ros *et al.* (2023): Taharaut, southern part of Hoggar Mts., Central Sahara, 5900 ft. Jelenc (1955a): Hoggar méridional, Fort Motylinski. Very rare.

COMMENT

According to Ros *et al.* (2023), the locality in Jelenc (1955a) is with high probability the same as in the protologue. Currently, it is a species endemic to Algeria.

**Funaria flavicans* Michx.

RECORDS. — Montagne (1838): Alger.

COMMENT

Doubtfully present in Algeria. The single report of Montagne (1838) was not included in the checklist of Jelenc (1955a) and Ros *et al.* (1999, 2013). The presence in Algeria of this species which is mainly distributed in North America and also present in Japan (Miller & Miller 2007; Kiguchi & Sawada 2020) is highly doubtful.

Funaria hygrometrica Hedw.

RECORDS. — Desfontaines (1799), Gandoger (1883), Ahayoun *et al.* (2007): *sine loco*. Montagne (1838), Bescherelle (1882), Jelenc (1955a): Alger. Bescherelle (1882): Barbarie; Djurdjura; Sud d'Oran. Bescherelle (1882), Corbière (1889): Blidah. Bescherelle (1882), Jelenc (1955a): Bône; Édough; Kabylie du Djurdjura, Tizi Ouzou; Sidi-Ferruch. Trabut (1887a): D'Oran à Mécheria, Chott. Julien (1894): Région de Constantine. Corbière (1904), Jelenc (1955a): Cherchell. Corbière (1905), Jelenc (1955a): Environs de Constantine, La Corniche; Environs de Constantine, Moulin Laire; Environs de Constantine, Pépinière du djebel Ouach. Camus (1906), Jelenc (1955a): Oran. Lapie (1909): Kabylie du Djurdjura. Thériot (1931, 1933), Jelenc (1955a), Ros & Cano (2008): Ahaggar, Ideles, 1450-1500 m. Braun-Blanquet (1954):

Forêt de Terni, près de Tlemcen. Léréde (1954): Tassili N'Aijer. Jelenc (1951, 1967): Djebel Brouse; Sahel d'Arzeu, plateau du djebel Orouse, 630 m; Sahel d'Oran, plateau des Ghamras, 400 m. Jelenc (1954b, 1967): Massif du Bou Zezga, gorges de Keddara, 400 m; Monts de Tlemcen, Massif de Ghar Rouban, l'oued Zaouia; Chaîne des Zahrez, au nord du Zahrez Chergui, djebel Touilila, 1000 m, l'oued M'Kamza. Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m; Djemila; Hauts-plateaux oranais; Kabylie du Djurdjura, djebel Afroun; Kabylie du Djurdjura, Fort National; Marengo; Miliana; Ouarsenis; Tipaza, Tombeau de la Chrétienne; Tlemcen. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

COMMENT

Two invalid names were used in Algeria by Jelenc (1955a) whose identity is unknown: *F. hygrometrica* var. *brevipes* Jelenc *nom. nud.* (reported from Alger and Blida) and *F. hygrometrica* var. *macrocarpa* Jelenc *nom. nud.* from Hauts-plateaux oranais.

Funaria microstoma Bruch ex Schimp.

RECORDS. — Jelenc (1955b, 1967): Massif de la Bouzaréa. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Funariella curviseta (Schwägr.) Sérgio

RECORDS. — Montagne (1838), Bescherelle (1882), Jelenc (1955a): Alger. Bescherelle (1882): Oran. Bescherelle (1882), Jelenc (1955a): Blidah; La Calle; Philippeville. Trabut (1887a): D'Oran à Mécheria. Corbière (1904): Alger, talus humide du chemin de Telemly, 80 m. Camus (1906): environs de Tlemcen. Jelenc (1954b, 1967): Massif du Bou Zezga, gorges de Keddara, 400 m. Jelenc (1955a): Baba Ali; Birmandreïs; Kabylie du Djurdjura, Aït Idjer; Kabylie du Djurdjura, Tala Ghizan; Nador de Médéa. Jelenc (1955a), Ahayoun *et al.* (2007): Bouzaréah. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Grimmia anodon Bruch & Schimp.

RECORDS. — Bescherelle (1882): Blidah, Petit Atlas, Sommet de l'Atlas. Jelenc (1953, 1967): Massif de l'Aurès, sommet du djebel Lazreg, 1900 m. Jelenc (1955a): Atlas de Blida; Bou Saâda; Monts de Ksour, djebel Mzi. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Grimmia capillata De Not.

RECORDS. — Coppey (1911), Trabut (1927), Jelenc (1950, 1955a): Ravin de Ben Zireg près Beni-Ounif, dans l'extrême-Sud Oranais. Jelenc (1950, 1951, 1967): Environs d'Hadjerat el Mguil, 950 m; Hadjerat el Mguil. Jelenc (1950, 1955a): Entre Ghardaia et El Goléa. Jelenc (1951): Atlas saharien (région de Figuig), djebel Grouz au cirque de Djahfat, 1400 m. Jelenc (1955a): Mzab. Frahm (1978): Laghouat. Greven (1995): Bani Oussif, Vivgargel; Biscra, Col de Sfa. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Grimmia crinita Brid.

RECORDS. — Bescherelle (1882): Chardina; Djebel Gharribou; El-Outaïa; Mont de Sel. Bescherelle (1882), Jelenc (1955a): Monts de Constantine;

Oran, colonie agricole du Saint-Denis-du-Sig; Plateau de Mansourah; Tiaret. Bescherelle (1882), Frahm (1978): Biskra. Trabut (1887a): D'Oran à Mécheria. Julien (1894): Région de Constantine. Jelenc (1955a): El Kantara; Tlemcen. Greven (1995): Laghouat. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

COMMENT

Grimmia crinita var. *elongata* Bruch & Schimp. was reported by Camus (1906) from the environs de Tlemcen and by Jelenc (1955a) from Aumale and Biskra. Although Index Muscorum (Wijk *et al.* 1962) stated that this is a synonym of *Grimmia capillata* De Not., Muñoz & Pando (2000) considered the identity of the name uncertain.

Grimmia crinita Brid. f. *compacta* Besch. *nom. nud.* was reported by Jelenc (1955a) from Outaia. Muñoz & Pando (2000) could not locate the original material and its identity has not been revised (Ros *et al.* 2013).

Grimmia decipiens (Schultz) Lindb.

RECORDS. — Corbière (1904), Jelenc (1955a): Médéa. Jelenc (1953, 1967): Massif de Bélézma, cédraies de l'oued Chaba, 1400 m; Massif de l'Aurès, forêt de Sgag, 1700 m. Jelenc (1955a): Atlas de Blida, oued el Kebir, 300 m; Kabylie des Babor, cap Aokas; Kabylie du Djurdjura, Fort National; Kabylie du Djurdjura, Michelet, 1000-1200 m. Rare.

Grimmia funalis (Schwägr.) Bruch & Schimp.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Aurès. Jelenc (1955a): Atlas de Blida, 1400 m. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Rare.

Grimmia hartmannii Schimp.

RECORDS. — Jelenc (1955a): Souk-Ahras. Very rare.

Grimmia laevigata (Brid.) Brid.

RECORDS. — Bescherelle (1882): Bab-Azoun; Vallée de l'oued Koubba. Bescherelle (1882), Jelenc (1955a): Alger; Édough; Philippeville; Pic Belloua; Tizi-Ouzou; Vallon de Birkadem. Gandoger (1883): *sine loco*. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Jelenc (1953, 1967): Massif du Bélézma, crêtes de Bordjem, 2200 m. Jelenc (1955a): Akfadou; Atlas de Blida, oued el Kebir, 300 m; Bône; Kabylie du Djurdjura, Fort National, 1000 m; Médéa. Frequent.

Grimmia lisae De Not.

RECORDS. — Montagne (1856): Circa lacum El Hout. Jelenc (1955a): Constantine. Jelenc (1955b, 1967): Bône; La Calle. Rare.

Grimmia meridionalis (Müll. Hall.) E.Maier

RECORDS. — Bescherelle (1882), Corbière (1904), Jelenc (1955a): Bône; Djebel Édough. Bescherelle (1882), Jelenc (1955a): Alger;

Mascara. Jelenc (1955a): Kabylie du Djurdjura, Ait Idjer; La Calle; Lac el Hout; Palestro. Rare.

COMMENT

After the recognition of *G. dissimulata* E.Maier (Maier 2002), it is highly probable that some reports of *G. meridionalis* actually pertain to the former species.

Grimmia montana Bruch & Schimp.

RECORDS. — Jelenc (1955a): El Outaya. Very rare.

Grimmia orbicularis Bruch ex Wilson

RECORDS. — Bescherelle (1882): Aïn Timendert; Oran, hauts plateaux, entre Chellala Dahrana et Arba Tahtani; Sahara algérien. Bescherelle (1882), Meylan (1931): Constantine, sommet du Mansourah. Bescherelle (1882), Jelenc (1955a): Aurès; Bou-Sâada; Djelfa; Guelt es Stel. Bescherelle (1882), Jelenc (1955a), Frahm (1978): Laghouat. Trabut (1887a): D'Oran à Mécheria. Corbière (1889): Blida. Corbière (1904), Jelenc (1955a): Batna, rochers calcaires sur le flanc sud du djebel Tougourth, 1600 m; Médéa; Tiaret, région des Hauts-Plateaux, plaine du Douar Torrich, 1000 m. Corbière (1905): Environs de Constantine, Aïn Yagout; Environs de Constantine, blocs calcaires au bord de l'oued M'Gharoud; Environs de Constantine, Les Pins; Environs de Constantine, Sidi M'Cid. Corbière (1905), Jelenc (1955a), Muñoz & Pando (2000): Constantine, Chettabah, près l'usine Micout. Coppey (1911), Jelenc (1955a): Beni-Ounif, Sahara algérien. Jelenc (1951, 1967): Monts de Tlemcen, djebel el Hassi, 1100 m. Jelenc (1953, 1967): Massif de l'Aurès, flanc nord du djebel Pharaoun, 1800 m. Braun-Blanquet (1954), Jelenc (1955a): Tlemcen, 1000 m. Jelenc (1954b, 1967): Chaîne des Zahrez, au Nord du Zahrez Chergui, crête du Draa Ferchet-el-Arbi. Jelenc (1955a): Atlas de Blida, oued el Kebir; Biban; Boghar; Djebel Amour, Aïn Timandert; Djebel Dirra; El Guerrah; El Kantara; Gorges de la Chiffa, 300 m; Oran, Monts de Tlemcen; Ouarsenis; Reibell; Saïda; Sud constantinois, Biskra; Tebessa; Téniet Zebboudj. Jelenc (1956, 1967): Massif du Bou Zegza, dans les gorges de Keddara, 400 m. Jelenc (1966, 1967): Zahrez Chergui, oued Mlilia au djebel Touilila, 1000 m. Bizot (1973): Fontaine Chaude à 30 km NE de Batna; Ruines de Timgad. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Very common.

COMMENT

Grimmia orbicularis var. *longipila* Husn. was reported by Jelenc (1955a) from several localities (Aumale; Coll d'Aïn Kebira; El Aricha; El Kantara; Tiaret) but according to Ros *et al.* (2013), its identity has not been revised since. Muñoz & Pando (2000) could not locate the original material.

Grimmia ovalis (Hedw.) Lindb.

RECORDS. — Bescherelle (1882): Petit Atlas. Bescherelle (1882), Jelenc (1955a): Djebel Ksel, près de Géryville; Kabylie du Djurdjura, Fort National, 1000 m. Corbière (1889), Jelenc (1955a): Atlas de Blida, Beni-Salah, région des Cèdres. Lapie (1909): Kabylie du Djurdjura. Jelenc (1953, 1955a, 1967): Massif de l'Aurès, flanc nord du Chélia, 1700 m; Massif de l'Ouarsenis, cédraie de Téniet

el Had, 1500 m. Jelenc (1953, 1967): Aurès, Ras-el-Ma, flanc nord du djebel Pharaoun, 1800 m; Kabylie du Djurdjura, Aizer, Aux Beni Kouffi, 1600 m; Massif de l'Ouarsenis, Kef Siga, 1700 m; Massif du Bèlezma, crêtes de Bordjem, 2200 m. Jelenc (1955a): Akfadou; Bône; Col de Tirourda, 1700 m; Djebel Amour; Dra Inguel; Édough; Hauts-plateaux oranais; Orléansville; Tiaret. Jelenc (1955b): Camp-du Maréchal au marabout de Sidi Ali bou Nab, 885 m; Kabylie du Djurdjura, N d'Aizer, 1500 m. Jelenc (1967): Camp du Maréchal, 885 m. Bizot (1973): Djebel Belezma à 15 km à l'ouest de Batna. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

Grimmia pulvinata (Hedw.) Sm.

RECORDS. — Montagne (1838), Bescherelle (1882), Jelenc (1955a): Alger. Bescherelle (1882): Chatabch; Col d'Ain Kebira; Petit Atlas; Tiaret; Tlemcen. Bescherelle (1882), Brongniart (1882): Blidah. Bescherelle (1882), Corbière (1904), Jelenc (1955a): Médéah. Bescherelle (1882), Corbière (1905): Constantine. Bescherelle (1882), Jelenc (1955a): Aurès; Bouzaréah; Philippeville; Tizi-Ouzou. Gandoger (1883): *sine loco*. Corbière (1889): Blida, oued Beni-Aza; Blida, près du marabout Sidi-Mohamed-er-Rarbi. Cardot (1904), Maire (1916), Jelenc (1955a): Province d'Oran, Djebel Aïssa, 1800 m, 2250 m. Corbière (1904), Jelenc (1955a): Sétif, 1100 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, Les Pins; Environs de Constantine, Sidi M'Cid. Camus (1906): Oran. Braun-Blanquet & Maire (1924): Tlemcen, 800-900 m. Jelenc (1951): Massif du Tessala, pic de Tafaraoui, 650 m. Jelenc (1951, 1967): Monts de Tlemcen, djebel el Beniane, 1100 m. Jelenc (1953): Aurès, flanc nord du Chélia, 1700 m; Flanc nord du djebel Pharaoun, 1800 m; Sommet du djebel Lazreg, 1900 m. Jelenc (1953, 1967): Maadid, maison forestière de Mahali, 1300 m; Massif de Guethiane, Kef Tachrit, 1850 m. Jelenc (1955a): Aïn el Hadjar; Akfadou; Atlas de Blida, oued el Kebir, 300 m; Azéba; Batna; Col de Tirourda, 1700 m; Djebel Chenoua; Gorges de la Chiffa; Guelt es Stel; Kabylie du Djurdjura, Afensou; Kabylie du Djurdjura, Fort National, 1000-1200 m; Lambèse; Monts de Ksour, djebel Mzi; Ouarsenis, Téniet el Had Tablabalt. Jelenc (1956, 1967): Atlas Mitidjien, pic Mouzaïa; Massif du Bou Zegza, dans les gorges de Keddara, 400 m. Jelenc (1967): Massif de l'Aurès, 1700-1900 m. Jelenc (1967), Ahayoun *et al.* (2007): Aumale. Bizot (1973): Djebel Belezma à 15 km à l'ouest de Batna. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Very common.

COMMENT

Grimmia pulvinata var. *longipila* Schimp. was reported by Jelenc (1955a) from Monts de Constantine and by Jelenc (1967) from Massif du Tessala, pic de Tafaraoui, 650 m. According to Ros *et al.* (2013), its identity has not been revised since. Muñoz & Pando (2000) could not locate the original material.

Grimmia teretineris Limpr.

RECORDS. — Jelenc (1955a): Kabylie du Djurdjura, Fort National, 1000 m. Very rare.

Grimmia tergestina Tomm. ex Bruch & Schimp.

RECORDS. — Corbière (1905), Jelenc (1955a): Environs de Constantine, Les Pins. Very rare.

Grimmia trichophylla Grev.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Édough, rochers des caroubiers. Trabut (1887a): D'Oran à Mécheria. Jelenc (1955a): Boghar; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Fort National; Mascara; Oran; Palestro; Portes de Fer. Rare.

Gymnostomum aeruginosum Sm.

RECORDS. — Jelenc (1955a): Kabylie du Djurdjura, gorges de Tifrit, 1340 m. Very rare.

Gymnostomum calcareum Nees & Hornsch.

RECORDS. — Corbière (1904), Camus (1906), Jelenc (1955a): Tlemcen. Corbière (1904), Jelenc (1955a): Alger; Blida; Tiaret, Hauts-Plateaux. Corbière (1905): Environs de Constantine, Les Pins; Environs de Constantine, route de la Corniche. Corbière (1905), Whitehouse & Crundwell (1992): Environs de Constantine, Sidi M'Cid. Jelenc (1951, 1967): Massif du Tessala, pic de Tafaraoui, 600 m. Jelenc (1954b, 1967): Sahel d'Alger, colline du Hamma. Jelenc (1954b, 1955a, 1967): Kabylie du Djurdjura, Monts de Saida, cascades de Tifrit. Jelenc (1955a): Alger, Frais Vallon; Arba; Atlas de Blida, oued el Kebir, 200 m; Constantine; Djebel Chenoua; Kabylie du Djurdjura, Ait Idjer; Khodjaberry; Mascara; Médéa; Monts de Tlemcen, Mazer; Zaccar. Jelenc (1956, 1967): Sahel d'Alger, dans environs d'El Biar. Ros *et al.* (1990): Chiffa's Gorge. Whitehouse & Crundwell (1992): Cascades of El Ourit, Tlemcen; Constantine, chemin des Touristes. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

COMMENT

Gymnostomum calcareum var. *gracillimum* Besch. *nom. nud.* was reported by Bescherelle (1882) and Jelenc (1955a) from Alger. According to Ros *et al.* (2013), the identity of this name seems not to have been revised since. It is not a synonym of *Hymenostylium gracillimum* (Nees & Hornsch.) Köckinger & Jan Kučera.

Gymnostomum viridulum Brid.

RECORDS. — Bescherelle (1882): Birkadem; Birmandreïs, rochers ombragés; Mustapha. Bescherelle (1882), Jelenc (1955a): Alger; Constantine, Chute du Rummel; Mansourah; Mascara. Trabut (1887a), Jelenc (1955a): D'Oran à Mécheria, Tell. Jelenc (1955a), Ros *et al.* (1990): Djebel Chenoua. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Gyroweisia reflexa (Brid.) Schimp.

RECORDS. — Montagne (1838), Jelenc (1955a): Alger. Bescherelle (1882): Alger, mur humide de la Salpêtrière. Bescherelle (1882), Corbière (1905), Jelenc (1955a): Environs de Constantine, au bord du oued bou Merzoug. Bescherelle (1882), Jelenc (1955a): Blidah. Corbière (1905): Environs de Constantine, Telemly près Alger. Jelenc (1955a): Azéba. Rare.

Habrodon perpusillus (De Not.) Lindb.

RECORDS. — Bescherelle (1882): Blidah; Kabylie. Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, près de pic Belloa, 1550 m; Kabylie du Djurdjura, Tizi-Ouzou. Gandoger (1883): *sine loco*. Corbière (1889), Jelenc (1955a): Atlas de Blida, forêt des Beni Salah. Jelenc (1951, 1967): Monts de Tlemcen, forêt de Zariflet, près de l'Aïn Defla. Jelenc (1955a): Alger; Kabylie du Djurdjura, Aït Ali; Kéddara. Jelenc (1956, 1967): Atlas Mitidjien, près du Col des Deux-Bassins. Jelenc (1966, 1967): Monts de Constantine au djebel Ouach, 1000 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

**Hamatocaulis vernicosus* (Mitt.) Hedenäs

RECORDS. — Jelenc (1955a): Alger; Gorges de la Chiffa.

COMMENT

Doubtfully present in Algeria. The presence of this Circumpolar Boreal-montane species (Blockeel *et al.* 2014b) in Algeria is unlikely in the reported locality. Given the challenges in locating these collections, this species could only be retained in the Algerian catalogue upon the discovery of new specimens.

Hedwigia ciliata (Hedw.) P.Beauv.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Bône; Djebel Mouzaïa; Djurdjura; Kabylie du Djurdjura, Tizi Ouzou; Massif de la Mahouna, Serdj el Aouda. Jelenc (1955a): Atlas de Blida; Djidjelli; Édough; Kabylie du Djurdjura, Akfadou. Rare.

Hedwigia emodica Hampe ex Müll. Hal.

Hedwigia ciliata var. *leucophaea* Bruch & Schimp.

Nomenclature follows Ignatova *et al.* (2016).

RECORDS. — Jelenc (1955a): Édough. Very rare.

Herzogiella seligeri (Brid.) Z.Iwats.

RECORDS. — Bescherelle (1882): *sine loco*. Jelenc (1955a): Atlas de Blida. Very rare.

Homalia lusitanica Schimp.

RECORDS. — Bescherelle (1882), Corbière (1904), Jelenc (1955a), Ahayoun *et al.* (2007): Gorges de la Chiffa, ruisseau des Singes. Bescherelle (1882), Jelenc (1955a): Djebel Édough, fond des ravins, au nord. Trabut (1888): *sine loco*. Lapie (1909): Kabylie du Djurdjura. Battandier *et al.* (1914), Jelenc (1955a): Forêt des Aït-Ouaban, groute l'Ifri-bou-Anou. Feldmann (1947), Jelenc (1955a, 1959): Kabylie de Collo, Baie de Tamanart, moins de 50 m. Jelenc (1954b, 1967): Sahel de Koléa, au ravin des Voleurs. Jelenc (1955a): Arba; Atlas de Blida; Djebel Chenoua; Kabylie du Djurdjura, forêt des Aït Ouaban; Kabylie du Djurdjura, Ifr Smeden. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Homalia trichomanoides (Hedw.) Schimp.

RECORDS. — Jelenc (1955a) *sine loco*. Jelenc (1955b, 1967) Constantine. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Homalothecium aureum (Spruce) H.Rob.

RECORDS. — Durieu de Maisonneuve (1849), Gandoger (1883), Trabut (1888): *sine loco*. Bescherelle (1882): Djebel Beni-Salah; Djurdjura; Kabylie. Bescherelle (1882), Litschauer (1904), Jelenc (1955a): Fort National und Michelet, 1000-1200 m. Bescherelle (1882), Jelenc (1955a): Alger, près de la Maison-Carrée; Bouïroun; Mascara; Tiaret. Brongniart (1882): Blidah. Trabut (1887a): D'Oran à Mécheria, Tell. Corbière (1904): Tiaret, Hauts-Plateaux, Douar Torrich. Corbière (1904), Jelenc (1955a): Médéa, bois de Tibarrine; Orléansville, bois de la Pépinière. Litschauer (1904), Jelenc (1955a): Chiffaschlucht bei Blidah, 200 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, Chettabah; Environs de Constantine, djebel Ouach; Environs de Constantine, Les Pins; Environs de Constantine, route de Sétif; Environs de Constantine, route du Séminarie. Lapie (1909): Kabylie du Djurdjura. Jelenc (1955a): Alger; Atlas de Blida; Monts de Tlemcen, djebel Tenouchfi; Tala Ghizan. Hofmann (1998): Algier, Ojebelonach foret de l'cOru. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Frequent.

Homalothecium lutescens (Hedw.) H.Rob.

RECORDS. — Litschauer (1904): Chiffaschlucht bei Blidah, 200 m; Kabylie du Djurdjura, Tirourda, 1700 m. Jelenc (1949, 1967): Haute-Plaine de Sétif, Ain Trich, 1100 m. Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m; Kabylie du Djurdjura, Aizer; Médéa; Monts de Tlemcen, djebel Tenouchfi. Rare.

Homalothecium lutescens var. *fallax* H.Philib. ex Schimp.

RECORDS. — Corbière (1904): Médéa. Very rare.

COMMENT

This variety was not included in Ros *et al.* (1999) because it was not accepted as different from var. *lutescens* by Jelenc (1955a) and was overlooked. Nor did Ros *et al.* (2013) consider this taxon for Algeria.

Homalothecium philippeanum (Spruce) Schimp.

RECORDS. — Bescherelle (1882): Djurdjura, près Bordj Boghni; Kabylie; Taguement-Azouz. Bescherelle (1882), Jelenc (1955a): Aurès; Blidah, petit Atlas, rochers; Bouzaréah. Bescherelle (1882), Jelenc (1955a), Hofmann (1998): Aurès. Corbière (1904, 1905): Constantine, djebel Ouasch, 1100 m, et rochers calcaires sur la route de la Corniche. Jelenc (1953, 1955a, 1967): Massif de l'Ouarsenis, cédraie de Téniet el Had, 1500 m. Jelenc (1953, 1967): Bèlezma, cédraies de l'oued Chaba, 1400 m; Massif de l'Aurès, flanc nord du djebel Pharaoun, 1800 m; Massif de l'Aurès, flanc sud du djebel Chélia, 1700 m; Massif de l'Aurès, forêt de Sgag, 1700 m; Monts du Hodna, Massif de Guethiane au Kef Tachrit, 1850 m. Jelenc (1955a): Boghar; Constantine. Jelenc (1966, 1967): Kabylie du Djurdjura à Aït Ouabane. Bizot (1973): Djebel Belezma à 15 km à

l'ouest de Batna. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

COMMENT

Homalothecium philippeanum var. *kabylica* Trab. ex Jelenc *nom. inval. descr. gall.* was reported by Jelenc (1955a) from Kabylie du Djurdjura, Taguemmount-Azouz, but according to Ros *et al.* (2013), its identity has not been revised since.

Homalothecium sericeum (Hedw.) Schimp.

RECORDS. — Desfontaines (1799), Gandoger (1883), Tra-but (1888): *sine loco*. Montagne (1838), Jelenc (1955a): Alger. Bescherelle (1882): Alger, Atlas; Constantine; Djurdjura. Bescherelle (1882), Jelenc (1953, 1955a, 1967): Kabylie des Babor, crête du djebel Tababor, 1950 m. Bescherelle (1882), Jelenc (1955a): Édough; Kabylie du Djurdjura, Tizi Ouzou; La Calle; Philippeville. Corbière (1889): Blida. Corbière (1904), Jelenc (1955a): Gorges de la Chiffa, ruisseau des Singes; Médéa. Litschauer (1904): Qued-Kebir, 200 m. Litschauer (1904), Jelenc (1955a): Desgleichen bei Fort National, 1000 m; Kabylie du Djurdjura, col de Tirourda, 1700 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, Sidi M'Cid. Camus (1906), Jelenc (1955a): Oran. Lapie (1909): Kabylie du Djurdjura. Braun-Blanquet & Maire (1924): Tlemcen. Maire & Sevenet (1928), Jelenc (1955a): Tombeau de la Chrétienne, près de Bérard. Jelenc (1949, 1955a, 1967): Monts de Tlemcen, Sidi Djilali; Monts de Tlemcen, Tlemcen. Jelenc (1951, 1967): Massif du Tessala, pic Tessala, 1000 m. Jelenc (1953, 1955a, 1967): Kabylie du Djurdjura, massif de l'Aizer, fissures des falaises en contre-bas du Chemin Lapie, 1750 m; Massif de l'Aurès, flanc nord du djebel Chélia, 1700 m. Jelenc (1953, 1967): Atlas de Blida, ravin Bleu de Chréa; Massif du Bélézma, cédraies de l'oued Chaba, 1400 m. Jelenc (1955a): Atlas de Blida, oued el Kebir; Bou Saâda, djebel Fernane, 1600 m; Djebel Chenoua; Djebel Diria; Djebel Doui; Kabylie des Babor, Djidjelli; Kabylie des Babor, Dra el Arba; Kabylie du Djurdjura, Ait Khalfoun; Kabylie du Djurdjura, pic Belloua; Monts de Ksour, djebel Mzi; Ouarsenis, Téniet el Had. Jelenc (1955a, 1966, 1967): Kabylie du Djurdjura dans le massif de l'Akfadou au Camping Blank, 1500 m. Jelenc (1956, 1967): Atlas Mitidjien, Massif du Tessala, pic Mouzaïa. Jelenc (1967): Massif de l'Aurès, Ras el Ma; Massif du Tessala, pic de Tafaraoui, 600 m. Ros *et al.* (1990): Texenna's wood, 700 m. Ahayoun *et al.* (2007): Atlas de Blida. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Very common.

**Hydrogonium arcuatum* (Griff.) Wijk & Margad.

Barbula arcuata Griff.

Nomenclature follows Kučera *et al.* (2013).

RECORDS. — Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed.

COMMENT

Doubtfully present in Algeria. This American species was previously reported from Egypt by Shabbara (2006). As stated by Ros *et al.* (2013), its presence in the Mediterranean Region is unlikely and requires verification.

Hydrogonium bolleanum (Müll. Hal.) A.Jaeger

Barbula bolleana (Müll. Hal.) Broth.

Barbula ehrenbergii var. *algeriae* (Müll. Hal. ex Geh.) Latzel

Didymodon mediterraneum var. *algeriae* (taxon not formally published but name used by Corbière 1905).

Hydrogonium ehrenbergii var. *algeriae* (Müll. Hal. ex Geh.) Podp.

Hyophila ehrenbergii var. *algeriae* (Müll. Hal. ex Geh.) Pavletic

Trichostomum mediterraneum var. *algeriae* Müll. Hal. ex Geh.

Nomenclature follows Kučera *et al.* (2013) and Ros *et al.* (2023).

RECORDS. — Philibert (1880a), Jelenc (1955a): Gorges de la Chiffa, près de Blidah. Corbière (1904): Tlemcen, cascade sur la route des cascades. Jelenc (1951, 1967): Haute plaine de Tlemcen, cascades de l'oued Bou Ennag à la traversée des collines des Beni Mester. Jelenc (1954b, 1967): Monts de Saida, cascades de Tifrit. Jelenc (1955a): Kabylie du Djurdjura, Palestro; Mazer; Monts de Tlemcen, Tlemcen. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

COMMENT

Barbula ehrenbergii var. *immersa* Trab. ex Jelenc *nom. inval.* was proposed by Jelenc (1955a) from Sebdou. According to Ros *et al.* (2013), the identity of this name has not been revised since its description.

Barbula trabutii Jelenc *nom. inval. descr. gall.* was proposed by Jelenc (1955a) for the specimens collected and identified by Corbière as *Didymodon trabutii* Corb. ex Jelenc *nom. inval.*, cited as a synonym, that was sent to Trabut and remained unpublished. Jelenc (1955a) indicated that this name could be just a local variation of *Barbula ehrenbergii* (synonym: *Hydrogonium bolleanum*). According to Ros *et al.* (2013), its identity has not been revised because the material has not been traced. The localities reported by Jelenc (1955a) were: Cascade du Khémis à Mazer, 1230 m; Monts de Tlemcen; Monts des Ksour, djebel Mekter au ravin de Aïn ed Diss Foukania, 1400 m.

Hydrogonium croceum (Brid.) Jan Kučera

Barbula crocea (Brid.) F.Weber & D.Mohr

Nomenclature follows Kučera *et al.* (2013).

RECORDS. — Bescherelle (1882), Jelenc (1955a): Bône. Jelenc (1955a): Philippeville. Rare.

Hydrogonium orientale (F.Weber) Jan Kučera

Barbula indica (Hook.) Spreng.

Nomenclature follows Kučera *et al.* (2013).

RECORDS. — Geheeb (1879), Bescherelle (1882): Cascade du Rimel, prope Constantine Algeriae. Bescherelle (1882): Cascades des gorges de la Chiffa; Constantine, bords d'une source thermique. Bescherelle (1882), Jelenc (1955a): Alger. Corbière (1904): Constantine, sources

thermales de Sidi M'Cid. Corbière (1905): Environs de Constantine, Moulin Laire. Corbière (1905), Jelenc (1955a): Environs de Constantine, ravin du Rummel; Environs de Constantine, ruisseau près Salah Bey. Jelenc (1949, 1967): Haute plaine de Tlemcen, Aïn Defla, 620 m; Haute plaine de Tlemcen, oued Saf-Saf, vers 600 m; Monts de Tlemcen, cirque d'El Ourit. Jelenc (1955a): Gorges de la Chiffa, ruisseau des Singes. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Hygroamblystegium fluviatile (Hedw.) Loeske

RECORDS. — Jelenc (1955a): Blida; Gorges de la Chiffa; Tlemcen. Rare.

Hygroamblystegium tenax (Hedw.) Jenn.

RECORDS. — Bescherelle (1882): Oued Sidi-Kebir. Bescherelle (1882), Jelenc (1955a): Alger. Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Jelenc (1949, 1967): Vallée de l'Isser, lieu dit "El Kasbat", près de Lamoricière, 500 m. Jelenc (1955a): Monts de Batna, djebel Touggour, 1300 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Hygroamblystegium varium (Hedw.) Mönk.

RECORDS. — Litschauer (1904), Jelenc (1955a): Kabylie du Djurdjura, col de Tirourda, 1700 m. Jelenc (1955a): Alger. Rare.

**Hylocomiadelphus triquetrus* (Hedw.) Ochyra & Stebel

Rhytidiadelphus triquetrus (Hedw.) Warnst.

Nomenclature follows Ochyra & Stebel (2008) and Ignatov *et al.* (2019).

RECORDS. — Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, Tizi Ouzou; Tlemcen. Trabut (1888): *sine loco*. Jelenc (1955a): Kabylie du Djurdjura, Ait Idjer.

COMMENT

Doubtfully present in Algeria. The presence of this Circumpolar Boreo-temperate species (Blockeel *et al.* 2014b) in Algeria is unlikely. Given the challenges in locating the collections, this species could only be retained in the Algerian catalogue upon the discovery of new specimens.

**Hylocomium splendens* (Hedw.) Schimp.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, Tizi Ouzou.

COMMENT

Doubtfully present in Algeria. The report of this Circumpolar Wide-boreal species (Blockeel *et al.* 2014b) in Algeria is based on a single specimen collected by Gandoger, and its reliability is doubtful. Considering the difficulties encountered in locating this collection, the species can only be included in the Algerian catalogue upon the discovery of new specimens.

Hymenoloma crispulum (Hedw.) Ochyra

RECORDS. — Bescherelle (1882): Djebel Aurès. Jelenc (1953, 1955a, 1967): Aurès, flanc nord du Chélia, au Ras Keltoum, 2200 m. Jelenc (1953, 1967): Aurès, forêt de Sgag, 1700 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Hymenostomum subrostellatum Schimp. ex Besch.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Philippeville.

COMMENT

It was described from Algeria by Bescherelle (1882), but according to Ros *et al.* (2013), the type has not been traced and its identity has not been studied; if it merits recognition, then a new combination in the genus *Weissia* Hedw. may be required.

Hymenostylium recurvirostrum (Hedw.) Dixon

RECORDS. — Jelenc (1951, 1955a): Monts de Tlemcen, Lalla Setti, 1000 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Hypnum cupressiforme Hedw. var. *cupressiforme*

RECORDS. — Bescherelle (1882): Kabylie; La Galite. Bescherelle (1882), Jelenc (1955a): Alger, petit Atlas; Édough; La Calle; Philippeville. Gandoger (1883), Trabut (1888): *sine loco*. Corbière (1889): Blida. Corbière (1904), Jelenc (1955a): Gorges de la Chiffa, ruisseau des Singes et Camp des Chênes. Corbière (1904, 1905), Jelenc (1955a): Constantine, bois du djebel Ouasch, 1100 m. Litschauer (1904): Chiffaschlucht und im Tal des Qued-Kebir bei Blidah, 300 m. Corbière (1905): Environs de Constantine, Les Pins. Corbière (1905), Jelenc (1955a): Environs de Constantine, Sidi M'Cid. Camus (1906), Jelenc (1955a): Oran. Lapie (1909), Kabylie du Djurdjura. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, Baie de Tamanart. Jelenc (1949, 1967): Monts de Tlemcen, pentes du djebel el Béniane, 1050 m, dans la "Forêt des Pins"; Monts de Tlemcen, Forêt de Zariffet, berges de l'oued Zariffète, 1100 m; Monts de Tlemcen, Koudiat d'Hafir, 1250 m. Jelenc (1953, 1967): Atlas de Blida, ravin Bleu de Chréa. Jelenc (1954b, 1967): Atlas mitidjien, forêt d'El Aïoun, 500 m; Massif du Bou Zegza, gorges de Keddara, 400 m. Jelenc (1955a): Alger, Tixérain; Aumale; Aurès; Djidjelli; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Beni Khalfoun; Kabylie du Djurdjura, Fort National; Kabylie du Djurdjura, Izer Zougaren; Kabylie du Djurdjura, Tala Ghizan; Ouarsenis, Téniet el Had; Oued el Kébir. Jelenc (1956, 1967): Atlas Mitidjien, pic Mouzaïa. Ros *et al.* (1990): Texenna's wood, 700 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

Hypnum cupressiforme var. *lacunosum* Brid.

RECORDS. — Litschauer (1904), Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m; Fort National und Michelet, 1000-1200 m. Doignon (1953): *sine loco*. Jelenc (1967): Oran, Batterie Espagnole; Massif de l'Ouarsenis, Téniet el Had. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Rare.

Hypnum cupressiforme var. *subjulaceum* Molendo

RECORDS. — Litschauer (1904), Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m. Very rare.

Hypnum jutlandicum Holmen & E. Warncke

RECORDS. — Corbière (1889), Jelenc (1955a): Blida. Jelenc (1956, 1967): Massif du Bou Zegza, dans les gorges de Keddara. Jelenc (1967): Kabylie du Djurdjura, Tizi Ouzou. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Rare.

***Hypnum uncinulatum* Jur.

COMMENT

Excluded from Algeria. According to Ros *et al.* (2013), this species was erroneously listed by Ros *et al.* (1999) for Algeria caused by a misinterpretation of the name *Hypnum cupressiforme* var. *uncinatum* Boulay, which in fact is a synonym of *Hypnum cupressiforme* var. *cupressiforme* and not of *Hypnum uncinulatum*.

Imbriobryum alpinum (Huds. ex With.) N. Pedersen

RECORDS. — Desfontaines (1799): *sine loco*. Brongniart (1882): Blidah. Litschauer (1904), Jelenc (1955a): Chiffaschlucht und im Tal des Qued-Kebir bei Blidah, 300 m; Fort National, 1000 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Trabut (1914), Jelenc (1955a): Kabylie du Djurdjura, Tirourda. Jelenc (1955a): Alger; Atlas de Blida, Aïn Talazid; Aurès, djebel Chélia; Djebel Smir; Monts de Tlemcen, forêt d'Hafir. Rare.

Imbriobryum mildeanum (Jur.) J. R. Spence

RECORDS. — Corbière (1905): Environs de Constantine, Bellevue. Jelenc (1955a): Djurdjura; Monts de Constantine, djebel Ouach. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Rare.

Isopterygiopsis pulchella (Hedw.) Z. Iwats.

RECORDS. — Jelenc (1955a): Djurdjura, Ifri n'Ouadnèf. Very rare.

Isothecium alopecuroides (Lam. ex Dubois) Isov.

RECORDS. — Bescherelle (1882): Djurdjura. Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, Tizi Ouzou. Bescherelle (1882), Jelenc (1955a, 1967): Djebel Goufi. Lapie (1909): Kabylie du Djurdjura. Jelenc (1955a): Atlas de Blida; Boghar; Djidjelli; Kabylie du Djurdjura, Aït Idjer; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Izer Zouggar. Jelenc (1955a), Ahayoun *et al.* (2007): Kabylie du Djurdjura, Tala Ghizan. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Isothecium myosuroides Brid.

RECORDS. — Bescherelle (1882): Kabylie des Babor, Tababor; Oued Afziz. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, sommet du djebel Goufi, versant Nord, 1000 m. Jelenc (1955a): Atlas de Blida; Djebel Chenoua; Tlemcen. Rare.

Kindbergia praelonga (Hedw.) Ochrya

RECORDS. — Bescherelle (1882): Birkadem, sous les pins; Djurdjura; Édough; Kabylie. Bescherelle (1882), Gandoger (1883), Trabut (1888), Ahayoun *et al.* (2007): *sine loco*. Bescherelle (1882), Jelenc (1955a): Alger; Kabylie du Djurdjura, Tizi Ouzou; Tixerain. Bescherelle (1882), Jelenc (1955a), Boukhatem *et al.* (2017): La Calle, bords du lac du Touga (Tonga). Corbière (1889): Blida, intérieur de la fontaine Aïne-el-Mudoi, 500 m. Corbière (1905): Environs de Constantine, bords de l'Oued Bou Merzoug; Environs de Constantine, ravin du Rummel. Corbière (1905), Jelenc (1955a): Environs de Constantine, Pépinière du djebel Ouach. Lapie (1909): Kabylie du Djurdjura. Jelenc (1954b, 1967): Massif du Bou Zegza, gorges de Keddara, 400 m. Jelenc (1955a): Aurès, djebel Chélia; Kabylie du Djurdjura, Aizer; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Azerou Tidjer; Kabylie du Djurdjura, Fort National, 1000 m; La Bouzaréa; Philippeville. Jelenc (1956, 1967): Massif de la Bouzaréa, près des Bains-Romains. Common.

Leptobryum pyriforme (Hedw.) Wilson

RECORDS. — Jelenc (1955a): Tlemcen. Very rare.

Leptodictyum riparium (Hedw.) Wanrst.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger. Bescherelle (1882), Jelenc (1955a), Boukhatem *et al.* (2017): La Calle, bois marécageux, marais du Tonga; Maison-Carrée. Corbière (1904), Jelenc (1955a): Médéa, bois de Tibarrine. Rare.

Leptodon smithii (Hedw.) F. Weber & D. Mohr

RECORDS. — Bescherelle (1882): Alger, de Birmandreïs à Birkadem; Djebel Babor; Kabylie. Bescherelle (1882), Corbière (1904), Jelenc (1955a), Ahayoun *et al.* (2007): Gorges de la Chiffa. Bescherelle (1882), Jelenc (1955a): Constantine, Hammam Meskoutine; Djebel Thaya; Kabylie du Djurdjura, Akfadou; La Calle; Philippeville. Gandoger (1883): *sine loco*. Corbière (1904), Jelenc (1955a): Monts de Tlemcen, Sidi-Bou-Médine. Litschauer (1904), Jelenc (1955a): Bône. Corbière (1905), Lapie (1909), Jelenc (1955a): Kabylie du Djurdjura, Beni Khal-foun. Jelenc (1949): escarpements du djebel el Béniane. Jelenc (1951, 1967): Monts de Tlemcen, El Aguiaba, 900 m. Jelenc (1955a): Alger, La Bouzaréa; Atlas de Blida; Aurès; Corso; Djebel Mouzaïa; Édough; Kabylie des Babor, cap Aokas; Kabylie du Djurdjura, Toudja; Oued Djemaa. Jelenc (1955a, 1967): Kabylie de Collo, djebel Goufi; Jelenc (1956, 1967): Atlas Mitidjien, près du Col des Deux-Bassins; Massif du Bou Zegza, gorges de Keddara, 400 m. Jelenc (1966, 1967): Monts de Constantine, djebel Ouach, 1000 m. Common.

Lescurea incurvata (Hedw.) E. Lawton

Pseudoleskea perraldieri Besch.

Nomenclature follows Ellis *et al.* (2017).

RECORDS. — Bescherelle (1882), Jelenc (1955a): Kabylie des Babor, Djebel Tababor. Lapie (1909): Kabylie du Djurdjura. Jelenc (1953, 1955a, 1967): Kabylie du Djurdjura, massif de l'Aizer, flanc nord du djebel Tachgagalt, 1950-2000 m. Jelenc (1955a): Kabylie du Djurdjura, Aït Ali; Monts de Tlemcen, forêt d'Hafir. Rare.

Lescuraea mutabilis (Brid.) Lindb. ex I.Hagen

RECORDS. — Bescherelle (1882), Jelenc (1955a): Atlas, sur les cèdres; Kabylie, Tizi-Ouzou, sommet du Belloua. Gandoger (1883): *sine loco*. Jelenc (1955a): Alger; Atlas de Blida. Rare.

Leskea polycarpa Hedw.

RECORDS. — Jelenc (1955a): Alger. Very rare.

Leucodon sciuroides (Hedw.) Schwägr.

RECORDS. — Bescherelle (1882): Djebel Édough; Djurdjura; La Calle; Le petit Atlas; Médéah; Philippeville. Bescherelle (1882), Jelenc (1955a): Aurès; Djebel Babor; Kabylie du Djurdjura, Akfadou; Oran, partie méridionale. Brongniart (1882): Blidah. Trabut (1887a): D'Oran à Mécheria. Corbière (1889), Jelenc (1955a): Atlas de Blida, sommet de l'Abd-el-Kader. Litschauer (1904): Col de Tirourda, 1700 m. Litschauer (1904), Jelenc (1955a): Fort National nach Michelet, 1000 m. Corbière (1905), Jelenc (1955a, 1966, 1967): Monts de Constantine au djebel Ouach, 1000 m. Lapie (1909): Kabylie du Djurdjura, Beni Khalfoun. Jelenc (1949, 1967): Haute-Plaine de Sétif, Ain Trich, 1100 m; Monts de Tlemcen, djebel el Beniane, 1150 m. Jelenc (1953, 1967): Atlas de Blida, Cédraies du ravin Bleu à Chrèa; Kabylie du Djurdjura, massif de l'Aizer, forêt de Ait Ali, 1600 m; Massif de l'Ouarsenis, flanc nord du Pic Sidi Abdelkader, 1500 m. Jelenc (1953, 1967), Ahayoun *et al.* (2007): Massif de l'Ouarsenis, cédraie de Téniet el Had, 1500 m. Jelenc (1954b, 1967): Massif de l'Akfadou, camping Blank, 1500 m. Jelenc (1955a): Alger; Kabylie de Collo, djebel Goufi; Kabylie des Babor, Dra el Arba; Kabylie du Djurdjura, Aït Ali; Kabylie du Djurdjura, Aït Idjer; Kabylie du Djurdjura, Aït Ouaban; Kabylie du Djurdjura, Dra el Mizan; Kabylie du Djurdjura, Dra Inguel; Kabylie du Djurdjura, Tala Ghizan; Massif de la Mahouna, Serdj el Aouda; Ouarsenis, djebel Doui. Jelenc (1956): Atlas Mitidjien. Jelenc (1967): Atlas Mitidjien, col des Deux-Bassins, 850 m; Kabylie de Collo. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

Lewinskya acuminata

(H.Philib.) F.Lara, Garilleti & Goffinet

Orthotrichum acuminatum H.Philib.

Nomenclature follows Lara *et al.* (2016).

RECORDS. — Corbière (1904, 1905), Jelenc (1955a): Environs de Constantine, bois du djebel Ouasch, 1100 m. Jelenc (1955a): Kabylie. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Rare.

Lewinskya affinis

(Schr. ex Brid.) F.Lara, Garilleti & Goffinet

Orthotrichum affine Schr. ex Brid.

Nomenclature follows Lara *et al.* (2016).

RECORDS. — Bescherelle (1882): Petit Atlas. Brongniart (1882): Blidah. Corbière (1889), Jelenc (1955a): forêt des Beni-Salah, 1500 m. Corbière (1904, 1905), Jelenc (1955a, 1966, 1967): Environs de Constantine, djebel Ouasch, 1000-1100 m. Camus (1906), Jelenc (1955a): Oran. Jelenc (1953, 1967): Massif de l'Ouarsenis, cédraie de Téniet el Had, 1500 m. Jelenc (1955a): Kabylie du Djurdjura, Aït Idjer; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Fort National, 1000 m; Monts de Batna, djebel bou Arif; Monts de Constantine. Jelenc (1955a), Ahayoun *et al.* (2007): Atlas de Blida. Jelenc (1956, 1967): Massif du Tessala, pic Tessala, 1000 m. Jelenc (1967): Kabylie du Djurdjura, Aizer au pic des Cèdres, 1880 m; Massif de l'Ouarsenis, pic Sidi Abdelkader, 1500 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Frequent.

Lewinskya breviseta (F.Lara, Garilleti & Mazimpaka)

F.Lara, Garilleti & Goffinet

Orthotrichum speciosum var. *brevisetum* F.Lara, Garilleti & Mazimpaka

Nomenclature follows Lara *et al.* (2016).

RECORDS. — Draper *et al.* (2003): Jijel, djebel Tababor. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Rare.

COMMENT

Erroneously, Ros *et al.* (2013) did not report this taxon from Algeria.

Lewinskya fastigiata (Bruch ex Brid.)

Vigalondo, F.Lara, Garilleti & Goffinet

Orthotrichum fastigiatum Bruch ex Brid.

Nomenclature follows Vigalondo *et al.* (2019).

RECORDS. — Bescherelle (1882), Jelenc (1955a): Sommet de l'Atlas, Atlas de Blida. Very rare.

COMMENT

This species was previously considered a synonym of *Lewinskya affinis* (synonym: *Orthotrichum affine* Schr. ex Brid.), and so was considered by Ros *et al.* (1999, 2013) but it was reinstated by Vigalondo *et al.* (2019).

Lewinskya rupestris

(Schleich. ex Schwägr.) F.Lara, Garilleti & Goffinet

Orthotrichum rupestre Schleich. ex Schwägr.

Orthotrichum rupestre var. *vulgare* Venturi

Nomenclature follows Garilleti *et al.* (2007) and Lara *et al.* (2016).

RECORDS. — Bescherelle (1882): Blidah, troncs des chênes verts; Djebel Édough, sur le chêneliège; Kabylie. Bescherelle (1882), Jelenc (1955a): Aurès; Djebel Tababor; Massif de la Mahouna, Serdj el Aouda. Corbière (1889), Jelenc (1953): Pic Sidi Abdelkader, 1500 m. Camus (1906): Oran. Jelenc (1951, 1955a, 1967): Monts

de Tlemcen, forêt de Tessera Mramet, 1400 m. Jelenc (1953): Djurdjura, Aizer, au sommet du pic des Cédres, 1880 m. Jelenc (1953, 1955a, 1967): Kabylie des Babor, flanc nord du djebel Babor, 1700 m. Jelenc (1953, 1967): Massif de l'Ouarsenis, cédraie de Téniet el Had, 1500 m. Jelenc (1955a): Atlas de Blida; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, col de Tirourda, 1700 m; Kabylie du Djurdjura, djebel Afroun; Kabylie du Djurdjura, Tala Ghizan; Monts de Tlemcen, forêt d'Hafir. Jelenc (1955a), Ahayoun *et al.* (2007): Tiaret. Jelenc (1967): Massif du Bou Zegga, gorges de Keddara, 400 m. Bizot (1973): Djebel Belezma à 15 km à l'ouest de Batna. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

Lewinskya speciosa (Nees) F.Lara, Garilleti & Goffinet

Orthotrichum speciosum Nees

Nomenclature follows Lara *et al.* (2016).

RECORDS. — Corbière (1889), Jelenc (1955a): Atlas de Blida, sommet du pic Abd el Kader. Jelenc (1948): Atlas de Blida; Djurdjura. Jelenc (1955a): Kabylie du Djurdjura, Ait Ouaban. Bizot (1973): Djebel Belezma à 15 km à l'ouest de Batna. Rare.

Lewinskya striata (Hedw.) F.Lara, Garilleti & Goffinet

Orthotrichum striatum Hedw.

Orthotrichum biocarpum Bruch & Schimp., invalid, orthographic variant of *O. leiocarpum* Bruch & Schimp.

Nomenclature follows Vitt (1973) and Lara *et al.* (2016).

RECORDS. — Bescherelle (1882): Atlas, sur les chênes-verts. Corbière (1889), Jelenc (1955a): Atlas de Blida, forêt des Beni Salah, 1500 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Jelenc (1953, 1967): Massif de l'Aurès, forêt de Sgag, 1700 m. Jelenc (1954b, 1967): Monts de Tlemcen, forêt(fort) de Zariflet, près de l'Ain Defla, 1200 m. Jelenc (1955a): Kabylie du Djurdjura, Tala Ghizan. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Rare.

**Loeskeobryum brevirostre* (Brid.) M.Fleisch.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, Taguemmount Azouz. Very rare.

COMMENT

Doubtfully present in Algeria. The report of this European temperate species (Blockeel *et al.* 2014b) in Algeria is based on a single specimen collected by Gandoger, and its reliability is doubtful. Considering the difficulties encountered in locating this collection, the species could only be retained in the Algerian catalogue upon the discovery of new specimens.

Metaneckera menziesii (Drumm.) Steere

Neckera menziesii Drumm.

Nomenclature follows Enroth *et al.* (2022).

RECORDS. — Philibert (1880b): Forêt de Ceiba. Bescherelle (1882), Jelenc (1955a): Djebel Mouzaïa, 1100 m. Jelenc (1955a): Djurdjura; Gorges de la Chiffa; Kabylie des Babor, Tababor. Rare.

Microbryum curvicolium (Hedw.) R.H.Zander

RECORDS. — Montagne (1856), Bescherelle (1882), Jelenc (1955a): Blidah, bord des haies. Jelenc (1949, 1955a): Monts de Tlemcen, djebel el Beniane, 900 m. Guerra *et al.* (1991), Ros *et al.* (2005): *sine loco*. Rare.

Microbryum davallianum (Sm.) R.H.Zander

RECORDS. — Bescherelle (1882): Constantine; Coteaux de Bab-Azoun, de l'Agha; Mustapha. Bescherelle (1882), Corbière (1904), Jelenc (1955a): Alger; Oran. Bescherelle (1882), Jelenc (1955a): Blidah; La Calle. Trabut (1887a): D'Oran à Mécheria. Corbière (1904), Jelenc (1955a): Orléansville. Corbière (1905), Jelenc (1955a): Environs de Constantine, près de l'oued Melah. Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Jelenc (1949, 1967): Haute plaine de Tlemcen, Berges du chabet bel Abbès, 775 m; Haute plaine de Tlemcen, Vallée de l'oued Safsaf au pied du djebel el Melah, 650 m; Vallée de l'Isser, source thermale de Sidi Abdellj, 375 m. Jelenc (1951), Jelenc (1967): Haute plaine de Tlemcen, 600 m. Jelenc (1955a): Bône; Kabylie du Djurdjura, Fort National; Monts de Constantine, oued bou Merzoug. Ros *et al.* (1990): Ouled Mimoum. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

COMMENT

No varieties have been recognized within *M. davallianum*, following the criterium of Ros *et al.* (1996) as the morphological characteristics of *M. davallianum* var. *conicum* (Schleich. ex Schwägr.) R.H.Zander and *M. davallianum* var. *commutatum* (Limpr.) R.H.Zander accepted in Hodgetts *et al.* (2020) and described in detail by Pilkington (2022) for Britain and Ireland overlap to a great extent in Mediterranean samples.

Microbryum floerkeanum (F.Weber & D.Mohr) Schimp.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Philippeville. Very rare.

Microbryum rectum (With.) R.H.Zander

RECORDS. — Bescherelle (1882): Agha-Supérieur; Alger; Birkadem, cimetière israélite. Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, pic Belloua, 1450 m. Gandoger (1883): *sine loco*. Jelenc (1955a): Kabylie du Djurdjura, Tizi Ouzou. Jelenc (1955b, 1967): Maison-Carrée. Rare.

Microbryum starckeanum (Hedw.) R.H.Zander

RECORDS. — Montagne (1838), Bescherelle (1882), Jelenc (1955a), Ahayoun *et al.* (2007): Alger. Bescherelle (1882): Oran. Bescherelle (1882), Corbière (1889), Jelenc (1955a): Blidah. Bescherelle (1882), Jelenc (1955a): Alma; Bône; Constantine; Djebel Mansourah; La Calle; Sommet du Bouzaréah. Trabut (1887a): D'Oran à Mécheria. Corbière (1904): Alger, talus dans le faubourg de

Telemly. Corbière (1905): Environs de Constantine, chemin de la tuilerie Moutin; Environs de Constantine, Les Pins; Environs de Constantine, ravin de Constantine; Environs de Constantine, Salah Bey; Environs de Constantine, Sidi M'Cid. Coppey (1911), Trabut (1927): Beni-Ounif, Sahara algérien. Jelenc (1951, 1967): Sahel d'Oran, Massif du Murdjadjo, forêt de M'sila, près de Msabia. Jelenc (1955a): Atlas de Blida, oued el Kebir; Corso; Djebel Ouach; Littoral oranais; Rouiba; Sud oranais, Beni Ounif, à Beni Zireg. Jelenc (1956, 1967): Monts de Tlemcen, vallée de l'oued Isser près de Lamoricière, 750 m. Frahm (1978): Laghouat. Ros *et al.* (1990): Dellys, 0-40 m; Ouled Mimoum. Cano *et al.* (2000): Grès à Ben Zireg. Ahayoun *et al.* (2007): Alger, ponite Pescade. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

Microbryum starckeanum agg.

RECORDS. — Warnstorf (1916), Jelenc (1955b, 1967): Algier, Sidi Madaus, Grique de la chife. Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Jelenc (1955a): Alger; Atlas de Blida, oued el Kebir, 200 m; Oran; Pointe-Pescade.

COMMENT

Ros *et al.* (1996) assigned to this aggregate three names related to *Microbryum starckeanum* and *M. davallianum* whose identification is difficult to assess because the spore ornamentation present intermediate characters between *M. davallianum* and *M. starckeanum* or are completely smooth; also they treated as belonging to this aggregate those whose types were destroyed. The Algerian reports included here correspond to the names *Pottia appertii* Warnst., *Pottia mutica* Vent., and *Pottia recurvifolia* Warnst.

Microeurhynchium pumilum (Wilson)
Ignatov & Vanderp.

RECORDS. — Bescherele (1882), Jelenc (1955a): Djebel Édough, fond des ravins humides. Lapie (1909): Kabylie du Djurdjura. Jelenc (1953, 1967): Kabylie du Djurdjura, plateau de l'Aizer, 1900 m. Jelenc (1955a): Alger; Kabylie; Kéddara. Rare.

Mnium hornum Hedw.

RECORDS. — Bescherele (1882), Jelenc (1955a): Djurdjura. Very rare.

Mnium marginatum (Dicks. ex With.) P.Beauv.

RECORDS. — Lapie (1909): Kabylie du Djurdjura. Jelenc (1953, 1955a, 1967): Kabylie du Djurdjura, massif de l'Aizer flanc nord du djebel Tachgalt, 2000 m. Rare.

Mnium stellare Hedw.

RECORDS. — Battandier *et al.* (1914), Jelenc (1955a): Kabylie du Djurdjura, Forêt des Aït-Ouaban, grotte l'Ifri-bou-Anou. Lapie (1909): Kabylie du Djurdjura. Trabut (1914), Jelenc (1955a): Kabylie du Djurdjura, forêt d'Akfadou. Jelenc (1953, 1955a, 1967): Kabylie

du Djurdjura, plateau de l'Aizer, 1900 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Myurella tenerrima (Brid.) Lindb.

RECORDS. — Bescherele (1882): Kabylie. Jelenc (1955a): Djurdjura. Rare.

Neckera pumila Hedw.

RECORDS. — Feldmann (1947), Jelenc (1955a, 1959): Kabylie de Collo, pentes Nord du djebel Goufi, 1000 m. Very rare.

Neotrichostomum crispulum (Bruch) R.H.Zander

Trichostomum crispulum Bruch

Nomenclature follows Zander (2023).

RECORDS. — Bescherele (1882): Bab-Azoun; Blidah; Pointe-Pescade; Tiaret. Bescherele (1882), Jelenc (1955a): Alger; Alger, près de la Masion-Carrée; Bône; Bouzaréah; Kouba, plants d'olivers; La Calle; Philippeville; Stora. Gandoger (1883): *sine loco*. Julien (1894): Région de Constantine. Corbière (1904), Jelenc (1955a): Orléansville, bois de la Pépinière. Lapie (1909): Kabylie du Djurdjura. Jelenc (1949, 1967): Monts de Tlemcen, flanc nord du djebel el Béniane, 1000 m. Jelenc (1951): Monts de Tlemcen. Jelenc (1951, 1967): Massif du Tessala, pic de Tafaraoui, 500 m. Jelenc (1953, 1967): Atlas de Blida, ravin Bleu de Chréa. Jelenc (1955a): Atlas de Blida, oued el Kebir; Aurès; Constantine; Djebel Chenoua; Gorges de la Chiffa, ruisseau des Singes, 300 m; Gue de Constantine; Kabylie du Djurdjura, Aït Khalfoun; Kabylie du Djurdjura, Dellys. Jelenc (1956, 1967): Massif du Bou Zegza, dans les gorges de Kéddara, 400 m. Jelenc (1966, 1967): Monts de Constantine au djebel Ouach; Monts de Tlemcen, forêt de Zaarifett, 1100 m. Ros *et al.* (1990): Texenna's wood, 700 m. Ahayoun *et al.* (2007): Mont Chanoua. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

Nogopterium gracile (Hedw.) Crosby & W.R.Buck

RECORDS. — Bescherele (1882): Atlas, troncs et rochers. Bescherele (1882), Jelenc (1955a): Bône; Gorges de la Chiffa; Kabylie du Djurdjura, Tizi Ouzou; La Calle; Philippeville. Gandoger (1883): *sine loco*. Litschauer (1904), Jelenc (1955a): Kabylie du Djurdjura, Fort National, Michelet, 1000-1200 m; Qued-Kebir bei Blidah, 200 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach; Environs de Constantine, Sidi M'Cid. Jelenc (1949, 1956, 1967): Monts de Tlemcen, djebel el Béniane, forêt de Zariflet, 1100 m. Jelenc (1955a): Alger; Djidjelli; Kabylie de Collo, djebel Goufi; Kabylie du Djurdjura, Aizer; Kabylie du Djurdjura, Port Gueydon; Ouarsenis, djebel Doui; Tlemcen. Ros *et al.* (1990): Texenna's wood, 700 m. Ahayoun *et al.* (2007): Atlas de Blida. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

Orthothecium intricatum (Hartm.) Schimp.

RECORDS. — Jelenc (1955a): *sine loco*. Jelenc (1955b, 1967): Kabylie du Djurdjura, Ouadenfej. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Orthotrichum anomalum Hedw.

RECORDS. — Bescherelle (1882): Atlas; Constantine, rochers du Rummel et du Chatabah. Bescherelle (1882), Jelenc (1955a): Djebel Thaya, rochers; Milah; Tlemcen. Corbière (1904): Tlemcen, rochers sur les hauteurs, entre Sidi-Bou-Médine et les cascades. Corbière (1905), Jelenc (1955a): Environs de Constantine, Les Pins; Environs de Constantine, route de la Corniche; Environs de Constantine, Sidi M'Cid. Thériot & Trabut (1930), Jelenc (1955a), Ros & Cano (2008): Babor. Jelenc (1949): Monts de Tlemcen, forêt de Tessera Mramet, 1400 m. Jelenc (1955a): Atlas de Blida, oued el Kébir, 200-300 m; Constantine; Djebel Chenoua; Gorges de la Chiffa; Kabylie du Djurdjura, Aït Idjer; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Fort National; Kabylie du Djurdjura, Tirourda; Lambèse. Jelenc (1956): Massif du Bou Zegza, dans les gorges de Keddara. Bizot (1973): Djebel Belezma à 15 km à l'ouest de Batna. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

Orthotrichum cupulatum Hoffm. ex Brid.

RECORDS. — Bescherelle (1882), Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Bescherelle (1882), Jelenc (1955a): Alger; Atlas de Blida, Beni Salah; Constantine, ravin du Rummel; Djebel Thaya; Kabylie du Djurdjura, col de Tirourda; Médéah. Julien (1894): Région de Constantine. Corbière (1904), Jelenc (1955a): Sétif, 1100 m. Corbière (1905): Environs de Constantine, Les Pins; Environs de Constantine, route de la Corniche; Environs de Constantine, Sidi M'Cid. Jelenc (1953, 1967): Massif du Bélézma, cédraies de l'oued Chaba, 1400 m. Jelenc (1955a): Aumale; Djebel Chenoua; Djebel Doui; Kabylie du Djurdjura, djebel Afroun; Lambèse; Ouarsenis. Jelenc (1956, 1967): Atlas Mitidjien, pic Mouzaïa; Massif du Dahra, à Lapasset. Jelenc (1967): Monts de Tlemcen, forêt de Tessera Mramet, 1400 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

Orthotrichum cupulatum var. *riparium* Huebener

RECORDS. — Bescherelle (1882), Jelenc (1955a): Constantine. Bescherelle (1882), Jelenc (1955a, 1955b): Batna. Jelenc (1955a): Aurès. Jelenc (1955b, 1967): Monts de Constantine. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Rare.

Orthotrichum diaphanum Brid.

RECORDS. — Bescherelle (1882): Constantine. Bescherelle (1882), Jelenc (1955a): Alger, sur les cactées; Bouzaréah; La Calle; Mascara; Philippeville. Trabut (1887a): D'Oran à Mécheria. Corbière (1889): Blida. Corbière (1904), Jelenc (1955a): Médéa; Sétif, 1060 m. Corbière (1905): Environs de Constantine, Bellevue; Environs de Constantine, Chettabah; Environs de Constantine, Menidj; Environs de Constantine, Sidi M'Cid. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Jelenc (1949, 1967): Massif du Murdjado (Oran), Ravin de l'oued Tammermouth; Monts et Haute-Plaine de Tlemcen. Jelenc (1955a): Atlas de Blida; Aumale; Djebel Smir; Kabylie du Djurdjura, col des Aït Aïcha; Kabylie du Djurdjura, Fort National; Tixerain; Tlemcen, 1000 m. Jelenc (1956, 1967): Sahel d'Alger, environs d'El Biar. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

Orthotrichum letourneuxii Besch.

COMMENT

This species was described from Algeria by Bescherelle (1882) from Djebel Thaya and later compiled in Jelenc (1955a). According to Lewinsky (1993), the type cannot be located, and it is impossible to conclude from the protologue whether it is an *Orthotrichum* or not.

Orthotrichum macrocephalum

F.Lara, Garilleti & Mazimpaka

RECORDS. — Mazari *et al.* (2024): Sétif, Djebel Megriss Mountain, Ain Guelou, 36°21'40.0"N, 5°20'19.8"E, c. 1108 m; Sétif, Djebel Megriss Mountain, Oued El Bordj, 36°20'5.8"N, 5°20'31.5"E, c. 1554 m. Rare.

Orthotrichum patens Bruch ex Brid.

RECORDS. — Jelenc (1955a): Kabylie du Djurdjura, Tala Ghizan. Very rare.

Orthotrichum philibertii Venturi

RECORDS. — Blockeel *et al.* (2003): Forêt des Senhadja, near Dem El Begrat, south of Skikda. Very rare.

Orthotrichum pumilum Sw. ex anon.

RECORDS. — Corbière (1905): Constantine. Corbière (1905), Jelenc (1955a): Environs de Constantine, Pépinière du djebel Ouach; Environs de Constantine, Sidi M'Cid; Environs de Constantine, sur des arbres au Hamma; Environs de Constantine, sur des aulnes au bord du Rummel. Jelenc (1955a): Kabylie du Djurdjura, Fort National. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Rare.

Orthotrichum scanicum Grönvall

RECORDS. — Mazari & Boulaacheb (2023): Setif, Megriss Mountain, Ain Guelou, 36°21'40.0"N, 5°20'19.8"E, c. 1108 m. Very rare.

Orthotrichum schimperi Hammar

RECORDS. — Bescherelle (1882), Jelenc (1955a): *sine loco*. Corbière (1904): Médéa. Corbière (1904), Jelenc (1955a): La Calle; Tlemcen, sur tronc d'olivier à Sidi-Bou-Médine. Camus (1906), Jelenc (1955a): Oran. Jelenc (1955a): Kabylie du Djurdjura, Fort National. Rare.

Orthotrichum stramineum Hornsch. ex Brid.

RECORDS. — Trabut (1914), Jelenc (1955a): Kabylie du Djurdjura, forêt d'Akfadou. Very rare.

Orthotrichum tenellum Bruch ex Brid.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger; Kabylie du Djurdjura, Tizi Ouzou; La Calle; Oued-el-Aneb, près Sidi-el-Akhdar; Philippeville. Gandoger (1883): *sine loco*. Corbière (1904), Jelenc (1955a): Médéa. Corbière (1905): Constantine; Environs de Constantine, Le Hamma; Environs de Constantine, Sidi M'Cid. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Jelenc (1951, 1967): Monts de Tlemcen, forêt de Tessera Mramet, 1400 m. Jelenc (1955a): Édough; Khodjaberry; La Réghaia; Tlemcen, 1000 m. Frequent.

Orthotrichum urnigerum Myrin

RECORDS. — Jelenc (1955a): Atlas de Blida; Duperré; Kabylie du Djurdjura, Tala Ghizan; Ouarsenis, djebel Doui. Rare.

Oxyrrhynchium hians (Hedw.) Loeske

RECORDS. — Jelenc (1949, 1955a, 1967): Monts de Tlemcen, Mazer. Jelenc (1953, 1967): Kabylie du Djurdjura, massif de l'Aizer, 1900 m. Jelenc (1954b, 1967): Monts de Saïda, cascades de Tifrit; Sahel d'Alger, colline du Hamma. Jelenc (1955a): Alger, La Bouzaréa; Atlas de Blida; Constantine, oued bou Merzoug; Édough; Kabylie du Djurdjura, Tizi Ouzou. Jelenc (1956): Fontaine du Musée des Beaux-Art. Jelenc (1956, 1967): Sahel d'Alger, dans le ravin du Frais-Vallonn. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

COMMENT

Oxyrrhynchium hians var. *vulgare* (Boulay) Podp. was reported in Algeria by Corbière (1904) (sub *Eurhynchium praelongum* var. *vulgare* (Boulay) Limpr.) from Bône, djebel Édough, but Ros *et al.* (2013) mentioned its presence only in Tunisia. Its identity remains unchecked at present.

Oxyrrhynchium speciosum (Brid.) Warnst.

RECORDS. — Corbière (1905): Environs de Constantine, bords de l'oued Bou Merzoug. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, vallée de l'oued Elli Ankou, 500-600 m. Jelenc (1949, 1967): Monts de Tlemcen. Jelenc (1955a): Djurdjura, Taourirt Ighil. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Oxystegus tenuirostris (Hook. & Taylor) A.J.E.Sm.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Kabylie des Babor, djebel Tababor. Very rare.

COMMENT

The criterion established by Zander & Eckel (2019) was followed to classify this species within the genus *Oxystegus* (Limpr.) Hilp., rather than *Chionoloma* Dixon who advocate for the maintenance of paraphyletic taxa.

Palustriella commutata (Hedw.) Ochrya

RECORDS. — Bescherelle (1882): Alger, près des sources; Djurdjura; Sources d'Ain-Talazid. Bescherelle (1882), Jelenc (1955a): Kabylie

orientale, Adghar Amellal. Brongniart (1882): Blidah. Corbière (1904), Litschauer (1904): Gorges de la Chiffa, ruisseau des Singes. Corbière (1904), Jelenc (1955a): Tlemcen. Litschauer (1904), Jelenc (1955a): Tal des Qued-Kebir bei Blidah, 300 m. Lapie (1909): Kabylie du Djurdjura. Jelenc (1951, 1967): Monts de Tlemcen, cirque d'El Ourit. Jelenc (1955a): Dra Inguel; Kabylie des Babor, Aït Embarek; Kabylie du Djurdjura, Aït Ali; Kabylie du Djurdjura, Aït Daoud; Kabylie du Djurdjura, Tala bou Idhen; Kabylie du Djurdjura, Tala Ghizan. Jelenc (1967): Kabylie des Babor, djebel Babor, 1300 m; Massif de l'Aurès, Ain Mimoun; Massif de l'Aurès, djebel Chélia, 1500 m; Massif de l'Aurès, djebel Pharaoun. Frequent.

Palustriella falcata (Brid.) Hedenäs

RECORDS. — Bescherelle (1882): Atlas, commun dans les ruisseaux; Djurdjura. Corbière (1889), Jelenc (1955a): Blida, gorges de la Chiffa. Litschauer (1904), Jelenc (1955a): Kabylie du Djurdjura, col de Tirourda, 1700 m. Jelenc (1953): Aurès, flanc nord du Chélia, 1500 m; Babor, flanc nord du Babor, 1300 m. Jelenc (1954b, 1967): Kabylie du Djurdjura, lac Goulmine, 1600 m. Jelenc (1955a): Atlas de Blida, Ain Talazid; Kabylie du Djurdjura, Aït Daoud; Kabylie du Djurdjura, Tala Ghizan. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Philonotis caespitosa Jur.

RECORDS. — Pierrot (2000): Environs de Blida, gorges de l'oued el Kébir. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Philonotis calcarea (Bruch & Schimp.) Schimp.

RECORDS. — Bescherelle (1882): Atlas; Constantine; Djurdjura. Bescherelle (1882), Litschauer (1904), Jelenc (1955a): Cascades de la Chiffa. Bescherelle (1882), Jelenc (1955a): Blidah, les Deux-Frères; Bône; Kabylie des Babor, djebel Tababor; Oran. Trabut (1887a): D'Oran à Mécheria. Corbière (1889): Blida, Fontaine-Fraîche. Corbière (1889), Litschauer (1904), Jelenc (1955a): Blida, l'oued Sidi-el-Kebir, 200 m. Julien (1894): Région de Constantine. Jelenc (1949, 1967): Monts de Tlemcen, cirque d'el Ourit au pied de la cascade supérieure. Jelenc (1951, 1967): Haute plaine de Tlemcen, cascades de l'oued bou Ennag à la traversée des collines des Beni Mester, 500 m. Jelenc (1953): Aizer, dans une source en contre-bas du chemin Lapie, 1800 m; Aurès, flanc sud du Chélia, dans l'oued Tacherchar, 1700 m; Bèlezma, suintement d'une source ad Chel-lala, 1800 m; Flanc nord du djebel Pharaoun, dans les torrents près d'Ain Mimoun. Jelenc (1953, 1967): Djurdjura, Dra Inguel, au-dessous de Tizi Toudelt, 1600 m. Jelenc (1954b, 1967): Massif du Djurdjura, en contre-bas du lac Goulmine, 1600 m. Jelenc (1955a): Djebel Dira; Kabylie des Babor, Aït Embarek; Kabylie des Babor, Seb des Beni Sliman; Kabylie du Djurdjura, Aït Ali; Kabylie du Djurdjura, Aït Daoud; Kabylie du Djurdjura, djebel Gouraya; Kabylie du Djurdjura, gorges de l'oued Isser; Kabylie du Djurdjura, Tirourda; Monts de Constantine. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

Philonotis capillaris Lindb.

RECORDS. — Litschauer (1904), Jelenc (1955a): Fort National und Michelet, 1000-1200 m. Jelenc (1951, 1967): Monts de Tlemcen, Oued Khémis près du village du Khémis, 800 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Philonotis fontana (Hedw.) Brid.

RECORDS. — Desfontaines (1799): *sine loco*. Bescherelle (1882): Rive gauche de l'Adda. Bescherelle (1882), Jelenc (1955a): Blidah, sources d'Aïn-Talasid; Tiaret. Litschauer (1904), Jelenc (1955a): Kabylie du Djurdjura, Fort National, Michelet, 1000-1200 m. Lapie (1909): Kabylie du Djurdjura. Jelenc (1951, 1967): Monts de Tlemcen, cirque d'El Ourit. Jelenc (1954b, 1967): Grand Atlas central: refuge d'Isougane n'Ouagoun, 3000 m. Jelenc (1955a): Acherchour n'Tensaout; Akfadou; Bérard; Gorges de la Chiffa; Tala bou Idhen; Tirourda. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Philonotis marchica (Hedw.) Brid.

RECORDS. — Bescherelle (1882): Constantine, rochers humides, aux moulins; Édough, talus de la route Randon. Bescherelle (1882), Jelenc (1955a): Atlas de Blida, gorges de la Chiffa. Corbière (1904), Jelenc (1955a): Bône, ravin humide aux flancs de d'Édough, 200 m. Jelenc (1955a): Monts de Constantine. Jelenc (1967): Aizer, 1800 m; Kabylie du Djurdjura, Yakouren, 1000 m; Lac Goulmine, 1600 m; Massif de Bélézma, Chellala, 1800 m; Massif de l'Aurès, djebel Chélia, 1700 m; Massif de l'Aurès, djebel Pharaoun, Ain Mimoun; Massif de l'Aurès, oued Tacherchar. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Philonotis rigida Brid.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Bône. Litschauer (1904), Jelenc (1955a): Kabylie du Djurdjura, Fort National, 1000 m. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, Baie de Tamanart. Jelenc (1948): Hauts-plateaux, Skourah. Rare.

Philonotis tomentella Molendo

RECORDS. — Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Rare.

*****Physcomitrium eury stomum* subsp. *acuminatum*** (Bruch & Schimp.) Giacom.

COMMENT

Excluded from Algeria. This taxon was reported by Bescherelle (1882) from Const. Sahara Mehounch, 390 m, under the name "*Physcomitrium acuminatum* Schl.". Jelenc (1955a) while compiling previous northern African reports, considered that Bescherelle referred to a new undescribed taxon "*P. acuminatum* Besch. non Schleich." and put it as a synonym of *Physcomitrium longicollum* Trab. (synonymized by Ros & Cano (2008) with *Entosthodon hungaricus*). Therefore, it was not included in the Algerian checklists of Ros *et al.* (1999, 2013).

****Physcomitrium pyriforme*** (Hedw.) Hampe

RECORDS. — Desfontaines (1799), Bescherelle (1882), Jelenc (1955a): *sine loco*.

COMMENT

Doubtfully present in Algeria. The report in Algeria of this species is based on a single specimen collected by A. Letourneux without indication of locality. Furthermore, its reliability is doubtful as it is a rare species in the Mediterranean Region (Ros *et al.* 2013; Sabovljevic 2019). Due to difficulties in finding this collection, the species can only be kept in the Algerian catalogue if new specimens are found.

Plagiomnium affine (Funck) T.J.Kop.)

RECORDS. — Bescherelle (1882): *sine loco*. Corbière (1889): Blida. Dubuis & Faurel (1945), Jelenc (1953, 1955a, 1967): Kabylie du Djurdjura, plateau de l'Aizer, 1900-2000 m. Jelenc (1953, 1967): Atlas de Blida, Cédraies du ravin Bleu à Chrèa; Djurdjura, Aizer, flanc nord du djebel Tachgagalt, 1950-2000 m. Jelenc (1955a): Atlas de Blida; Aurès, djebel Chélia. Rare.

Plagiomnium cuspidatum (Hedw.) T.J.Kop.)

RECORDS. — Jelenc (1955a): Djurdjura. Very rare.

Plagiomnium elatum (Bruch & Schimp.) T.J.Kop.

RECORDS. — Jelenc (1955a): Atlas de Blida; Aurès; Djurdjura. Rare.

Plagiomnium rostratum (Schr.) T.J.Kop.)

RECORDS. — Bescherelle (1882): Atlas. Lapie (1909): Kabylie du Djurdjura. Jelenc (1955a): Atlas de Blida; Kabylie du Djurdjura, Dra Inguel. Jelenc (1954b, 1967): Massif du Bou Zezga, gorges de Keddara, 400 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Plagiomnium undulatum (Hedw.) T.J.Kop.)

RECORDS. — Bescherelle (1882), Lapie (1909): Djurdjura. Bescherelle (1882), Jelenc (1955a): Alger; Bône; Édough; L'Arba, pied de l'Atlas. Brongniart (1882): Blidah. Trabut (1888): *sine loco*. Jelenc (1949, 1956, 1967): Monts de Tlemcen, forêt de Zariflet, berges de l'oued Zarifète, 1000 m. Jelenc (1949, 1967): Monts de Tlemcen, Koudiat d'Hafir, 1250 m. Jelenc (1953, 1967): Atlas de Blida, parois d'une source au-dessous de Chrèa, 1000 m; Kabylie du Djurdjura, Aizer, au pied des grandes falaises du chemin Lapie, 1700 m; Massif de l'Aurès, flanc nord du djebel Chélia, 1900 m. Jelenc (1954b, 1967): Monts de Tlemcen, massif de Ghar Rouban, l'oued Zaouia. Jelenc (1955a): Aïn Taya; Atlas de Blida; Djebel Mouzaïa; Gorges de la Chiffa; Kabylie du Djurdjura, Acherchour n'Tensaout; Kabylie du Djurdjura, Yakouren. Jelenc (1955a, 1956): Kabylie du Djurdjura, massif de l'Akfadou. Jelenc (1967): Akfadou, fontaine des Ifs, 1200 m. Frequent.

COMMENT

Mnium undulatum var. *kabylicum* Trab. ex Jelenc *nom. inval. descr. gall.* was reported by Jelenc (1955a) from Djurdjura. According to Ros *et al.* (2013), its identity has not been revised

since. If it merits recognition, then a new combination under *Plagiomnium undulatum* (Hedw.) T.J.Kop. may be required.

Plagiothecium nemorale (Mitt.) A.Jaeger

RECORDS. — Bescherelle (1882): Atlas; Kabylie. Bescherelle (1882), Jelenc (1955a): Édough. Trabut (1888): *sine loco*. Jelenc (1955a): Atlas de Blida; Kabylie du Djurdjura, Akfadou. Rare.

Plasteurhynchium meridionale (Schimp.) M.Fleisch.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Djebel Édough, fond des ravins humides; Kabylie. Rare.

Plasteurhynchium striatulum (Spruce) M.Fleisch.

RECORDS. — Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m. Very rare.

**Platygyrium repens* (Brid.) Schimp.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Kabylie, Tizi-Ouzou.

COMMENT

Doubtfully present in Algeria. The report of this Circumpolar Temperate species (Blockeel *et al.* 2014b) in Algeria is based on a single specimen collected by Gandoger, and its reliability is doubtful. Due to the difficulties in finding this collection, the species can only be kept in the Algerian catalogue if new specimens are found.

Pleuridium acuminatum Lindb.

RECORDS. — Pierrot (2000): Forêt de Baïnem. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Pleuridium subulatum (Hedw.) Rabenh.

RECORDS. — Bescherelle (1882): Djebel Beni-Salah. Bescherelle (1882), Corbière (1889), Jelenc (1955a): Blidah. Bescherelle (1882), Corbière (1904), Jelenc (1955a): Bouzaréa. Bescherelle (1882), Jelenc (1955a): Alger; Birkadem; Bône; La Calle; Philippeville; Tiaret. Corbière (1904), Jelenc (1955a): Kabylie, Fort National, 1000 m, 1200 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach, 1000 m. Jelenc (1956, 1967): Plaine de la Mitidja, forêt de la Règhaia. Frequent.

**Pleurozium schreberi* (Willd. ex Brid.) Mitt.

RECORDS. — Jelenc (1967): *sine loco*.

COMMENT

Doubtfully present in Algeria. According to Jelenc (1967), the only report of the species in Algeria was taken from the distribution data of the species in Allorge (1955), who stated that it was based on a record of Feldmann in 1940,

although it was not included in any of the publications of this author.

Pogonatum aloides (Hedw.) P.Beauv.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger; Bône; Djurdjura; Édough. Litschauer (1904), Jelenc (1955a): Fort National nach Michelet, 1000-1200 m. Jelenc (1951, 1967): Monts de Tlemcen, forêt de Zariffet au Koudiat d'Hafir, 1250 m. Jelenc (1955a): Atlas de Blida; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Tifrit; Kabylie du Djurdjura, Tirourda. Jelenc (1956, 1967): Kabylie du Djurdjura, massif de l'Akfadou, fontaine des Ifs, 1200 m; Maison forestière de l'Agoulmine Ab-erkane. Frequent.

Pogonatum nanum (Hedw.) P.Beauv.

RECORDS. — Bescherelle (1882): Atlas; Djebel Édough. Bescherelle (1882), Lapie (1909): Djurdjura. Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, Tizi Ouzou. Brongniart (1882), Corbière (1889): Blidah, près la gracière Laval. Litschauer (1904), Jelenc (1955a): Fort National und Michelet, 1000-1200 m. Jelenc (1949, 1967): Monts de Tlemcen, forêt de Zariffet, 1150 m; Jelenc (1955a): Atlas de Blida; Kabylie du Djurdjura, Aït Yahia; La Calle. Jelenc (1967): Kabylie du Djurdjura, Yakouren, 1000 m; Monts de Tlemcen, Hafir. Frequent.

Pohlia annotina (Hedw.) Lindb.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Kabylie, pic du Lalla-Khadidja. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Pohlia atropurpurea (Wahlenb.) Lindb.

RECORDS. — Gandoger (1883): *sine loco*. Litschauer (1904): Chiffaschlucht und im Tal des Qued-Kebir bei Blidah, 300 m; Michelet und Fort National, 1000 m; Vallon bei Alger, 300 m. Braun-Blanquet & Maire (1924): Tlemcen. Rare.

COMMENT

The reports included here are those published as *Bryum atropurpureum* in which Wahlenberg (Wahlenb.) appears as the authors. Whereas those in which Bruch & Schimp. are indicated, are considered as reports of *Bryum dichotomum* (*Bryum atropurpureum* Bruch & Schimp. *nom. illeg.*). Nevertheless, as *Pohlia atropurpurea* is an unfrequent species in the Mediterranean region, the presence of the species in Algeria should be confirmed.

Pohlia cruda (Hedw.) Lindb.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Kabylie des Babor, djebel Tababor. Jelenc (1955a): Aurès. Rare.

Pohlia elongata Hedw.

RECORDS. — Bescherelle (1882), Jelenc (1955a): *sine loco*. Very rare.

COMMENT

The only report of this species in Algeria is based on a single specimen collected by Cordier without indication of locality (Bescherelle 1882).

Pohlia melanodon (Brid.) A.J.Shaw

RECORDS. — Bescherelle (1882): Alger-Mustapha, rochers humides; Atlas; Constantine, talus humides du Mansourah; Ravins de Babel Oued. Bescherelle (1882), Jelenc (1955a): Gorges de la Chiffa, 300 m; Réghaïa. Julien (1894): Région de Constantine. Corbière (1904), Jelenc (1955a): Sidi-Bel-Abbès. Corbière (1905): Environs de Constantine, La Pépinière; Environs de Constantine, Le Hama. Maire (1916), Jelenc (1955a): Sud oranais, le djebel Mzi, 2130 m. Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Jelenc (1955a): Alger; Atlas de Blida; Constantine; Kabylie du Djurdjura, djebel Gouraya; Orléansville. Frequent.

Pohlia wahlenbergii

(F.Weber & D.Mohr) A.L.Andrews

RECORDS. — Bescherelle (1882), Jelenc (1955a): Blidah, cascades de l'Atlas. Corbière (1904), Jelenc (1955a): Vallon d'El Biar près Alger, 140 m. Corbière (1905): Environs de Constantine, fossé près les Arcades romaines; Environs de Constantine, gue Martin; Environs de Constantine, ruisseau près Salah Bey. Jelenc (1955a): Cherrhell; Constantine. Rare.

Polytrichastrum alpinum (Hedw.) G.L.Sm.

RECORDS. — Jelenc (1955a): Kabylie du Djurdjura, Aït Yahia. Very rare.

Polytrichum commune Hedw.

RECORDS. — Pierrot (2000): Kabylie de Collo, djebel Goufi. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Polytrichum formosum Hedw.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, Tala Ghizan. Jelenc (1955a): Kabylie du Djurdjura, Tifrit. Rare.

Polytrichum juniperinum Hedw.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Blidah, petit Atlas; Djebel Édough, route de Randon. Litschauer (1904), Jelenc (1955a): Fort National und Michelet, 1000-1200 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Lapie (1909): Kabylie du Djurdjura. Jelenc (1951): Monts de Tlemcen. Jelenc (1955a): Bône; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Djemaâ Saharidij; Kabylie du Djurdjura, Port Gueydon. Jelenc (1955a, 1967): Monts de Tlemcen, Tlemcen, forêt d'Hafir. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Polytrichum piliferum Hedw.

RECORDS. — Feldmann (1947), Jelenc (1955a): Kabylie de Collo, Taoulet, 600 m. Very rare.

Polytrichum strictum Menzies ex Brid.

RECORDS. — Jelenc (1956, 1967): Kabylie du Djurdjura, massif de l'Akfadou, fontaine des Ifs, 1200 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Pottiopsis caespitosa (Bruch ex Brid.)

Blockeel & A.J.E.Sm.

RECORDS. — Bescherelle (1882), Jelenc (1955a): *sine loco*. Jelenc (1966, 1967): Mitidja, forêt de la Réghaia; Monts de Tlemcen à Lamoricière, 750 m. Ros *et al.* (1990): Between Mostaganem and Cap Ivi, Abdelmaimalek-Ramdan beach, 0 m; Chiffa's Gorge; Djebel Chenoua, 5-40 m; Oued Rhiou. Rare.

Pseudephemerum nitidum (Hedw.) Loeske

RECORDS. — Bescherelle (1882), Jelenc (1955a): Bône. Jelenc (1955a): Alger; Blida; La Calle; Tiaret. Rare.

Pseudocrossidium hornschruchianum

(Schultz) R.H.Zander

RECORDS. — Bescherelle (1882): Alger, au-dessus du Fort l'Empereur; Constantine, cimetière maure. Bescherelle (1882), Jelenc (1955a): Philippeville. Corbière (1904), Jelenc (1955a): Sétif, côteau au N-E de la ville, 1080 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, près de l'oued Melah. Jelenc (1955a): Alger; Maison-Carrée; Rovigo. Ros *et al.* (1990): Between Mostaganem and Cap Ivi, Abdelmaimalek-Ramdan beach, 0 m; Oued Rhiou; Ouled Mimoum. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Frequent.

Pseudocrossidium revolutum (Brid.) R.H.Zander

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger; Bouzaréah; Constantine. Julien (1894): Région de Constantine. Corbière (1905): Environs de Constantine, Les Pins; Environs de Constantine, Mansourah. Jelenc (1955a): Atlas de Blida, oued el Kebir; Médéa. Bizot (1973): Fontaine Chaude à 30 km NE de Batna. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Pseudoleskeella catenulata (Brid. ex Schrad.) Kindb.

RECORDS. — Jelenc (1953, 1967): Massif de l'Aurès, forêt de Sgag, 1700 m. Very rare.

Pseudoleskeella rupestris (Berggr.) Hedenäs & L.Söderstr.

RECORDS. — Jelenc (1955a): *sine loco*. Very rare.

COMMENT

The only report of the species in Algeria is based in a single specimen collected by Allorge without indication of locality (Jelenc 1955a).

Pseudorhynchostegiella duriaei
(Mont.) Ignatov & Vanderp.

RECORDS. — Bescherelle (1882), Philibert (1889): La Galite, pentes et broussailles du pic central. Feldmann (1947), Jelenc (1955a), Sérgio & Hébrard (1982): Kabylie de Collo, Baie de Tamanart. Jelenc (1955a): La Calle. Rare.

Pseudoscleropodium purum (Hedw.) M.Fleisch.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, Tizi Ouzou. Trabut (1888): *sine loco*. Feldmann (1947), Jelenc (1955a): Grande Kabylie, dans la forêt de Chênes-Lièges de Taourirt Ighil, 900 m; Kabylie de Collo, Bessombour, 500-600 m; Kabylie de Collo, Taoulet, 500-600 m. Jelenc (1955a): Édough. Rare.

Pterigynandrum filiforme Hedw.

Pterigynandrum filiforme var. *majus* (De Not.) De Not.

Nomenclature follows Hodgetts *et al.* (2020).

RECORDS. — Bescherelle (1882): Djurdjura. Bescherelle (1882), Jelenc (1955a): Atlas de Blida, 1400 m; Djebel Babor; Édough; Kabylie des Babor, Djebel Tababor. Brongniart (1882): Blidah. Corbière (1889), Jelenc (1955a): Blida, sommet de l'Abd-el-Kader. Lapie (1909): Kabylie du Djurdjura. Jelenc (1953, 1967): Atlas de Blida, ravin Bleu de Chrèa; Kabylie du Djurdjura, massif de l'Aizer, au pic des Cèdres, 1880 m; Massif de l'Aurès, flanc nord du djebel Pharaoun, 1800 m; Massif de l'Ouarsenis, cédraie de Téniet el Had, 1500 m. Jelenc (1955a); Kabylie du Djurdjura, Agoulmin Aberkan; Kabylie du Djurdjura, Ait Ali; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Dra Inguel. Jelenc (1955a), Ahayoun *et al.* (2007): Kabylie du Djurdjura, Tala Ghizan. Jelenc (1955a, 1967): Massif de l'Ouarsenis, Téniet el Had, 1500 m. Bizot (1973): Djebel Belezma à 15 km à l'ouest de Batna. Frequent.

Pterygoneurum ovatum (Hedw.) Dixon

RECORDS. — Montagne (1838): Alger. Bescherelle (1882): Constantine; Djebel Mansourah; La Calle, pâturages. Bescherelle (1882), Jelenc (1955a): Batna. Trabut (1887a): D'Oran à Mécheria. Corbière (1904), Jelenc (1955a): Sétif, sommet d'une coline pierreuse au N-E de la ville, 1112 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, Chettabah. Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Jelenc (1955a): Berges du Rhumel; La Calle; Oran; Sud oranais, Kreider. Ros *et al.* (1990): Ouled Mimoum. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

COMMENT

Pottia apoda Durieu ex Besch. *nom. nud.* was reported by Bescherelle (1882) based on a sample of Durieu's herbarium, indicating that it looks like an impoverished form of *Pterygoneurum cavifolium*. Its identity has not been revised since.

Pterygoneurum ovatum var. *perraldieri* (Besch.) Wijk & Margad. was described from Algeria as *Pottia cavifolia* var. *perraldieri* Besch. (Bescherelle 1882). It was reported by Bescherelle (1882), Corbière (1905), and Jelenc (1955a) from Constantine, Djebel Mansourah, and by Corbière (1905)

from environs de Constantine, Chettabah. Its identity has not been reassessed since its description (Ros *et al.* 2013).

Pterygoneurum subsessile (Brid.) Jur.

Pottia chottica Trab.

Pterygoneurum chotticum (Trab.) Broth.

Nomenclature follows Jelenc (1955a).

RECORDS. — Battandier & Trabut (1886), Trabut (1887b), Jelenc (1955a): Prope fontem El Khreider, provinciae Oranensis australis. Trabut (1887a): D'Oran à Mécheria, Chott. Corbière (1904), Jelenc (1955a): Sétif, sommet d'une coline pierreuse au N-E de la ville, 1112 m. Brotherus (1924): Algier. Jelenc (1955a): Monts de Tlemcen, Mazer; Sud algérois, Bou Saâda. Rare.

Ptychostomum capillare

(Hedw.) Holyoak & N.Pedersen

RECORDS. — Montagne (1838), Bescherelle (1882), Jelenc (1955a): Alger. Bescherelle (1882), Lapie (1909): Djurdjura. Bescherelle (1882), Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Bescherelle (1882), Jelenc (1955a): Beni-Salah; La Calle, clairières des bois; Stora; Tiaret. Brongniart (1882): Blidah. Corbière (1889): Blida. Corbière (1904), Jelenc (1955a): Cherchell; Orléansville. Corbière (1905): Environs de Constantine, la Corniche; Environs de Constantine, route de Sétif; Environs de Constantine, Sidi M'Cid; Environs de Constantine, tuileries du Rummel. Corbière (1905), Jelenc (1955a, 1966): Environs de Constantine, djebel Ouach, 1000 m. Jelenc (1953, 1967): Atlas de Blida, Cédraies du ravin Bleu à Chrèa; Kabylie des Babor, flanc nord du djebel Babor, 1700 m; Massif de l'Aurès, flanc nord du djebel Pharaoun, 1800 m. Jelenc (1955a): Atlas de Blida, oued el Kébir; Boufarik; Constantine; Corso; Gorges de la Chiffa; Kabylie des Babor, Djidjelli; Kabylie du Djurdjura, Azerou Tidjer; Kabylie du Djurdjura, Fort National, 1000 m; Kabylie du Djurdjura, Tizi Ouzou; Marengo; Oran; Ouarsenis, djebel Doui; Ouarsenis, Téniet el Had. Jelenc (1955a, 1967): Alger, La Bouzaréa. Jelenc (1955a), Ochi (1972): Kabylie des Babor, cap Ras Aokas. Jelenc (1956): Ravin du Frais-Vallon; Sahel d'Alger, environs d'El Biar. Jelenc (1956, 1967): Massif du Zaccar. Jelenc (1966, 1967): Kabylie du Djurdjura, massif de l'Akfadou. Jelenc (1967), Ahayoun *et al.* (2007): Massif du Chénoua. Ros *et al.* (1990): Skikda beach, 0 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Very common.

Ptychostomum cellulare

(Hook.) D.Bell & Holyoak

Bryum cellulare Hook.

Nomenclature follows Hodgetts *et al.* (2020).

RECORDS. — Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Very rare.

Ptychostomum compactum Hornsch.

RECORDS. — Bescherelle (1882): Kabylie. Jelenc (1955a): Ben Chicao; Kabylie du Djurdjura, Fort National; Kabylie du Djurdjura, gorges de l'oued Isser. Rare.

Ptychostomum donianum
(Grev.) Holyoak & N.Pedersen

RECORDS. — Bescherelle (1882): Birmandreïs, chemins creux; Blidah; Constantine, aux moulins; Kabylie; Kaddous; Oran, au sud du djebel Santo. Bescherelle (1882), Jelenc (1955a): Alger; Édough; La Calle; Philippeville; Sidi-Ferruch; Tlemcen, rochers. Brongniart (1882): Blidah. Gandoger (1883): *sine loco*. Trabut (1887a): D'Oran à Mécheria. Cardot (1904), Corbière (1904): Environs d'Alger, Bouzarea. Corbière (1904), Jelenc (1955a): Kabylie, Fort National, 1000 m. Litschauer (1904): Jardin de Marengo in Alger, 50 m. Litschauer (1904), Jelenc (1955a), Ochi (1972): Frais-Vallon bei la Bouzaréa, 300–400 m. Corbière (1905): Environs de Constantine, Moulin Laire. Camus (1906), Jelenc (1955a): Oran. Lapie (1909): Kabylie du Djurdjura. Jelenc (1949, 1967): Vallée de l'Isser, lieu dit “El Kasbat” près de Lamoricière, 500 m. Jelenc (1955a): Atlas de Blida; Baba Ali; Constantine; El Biar; Kabylie du Djurdjura, Acherchour n'Tensaout; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, djebel Gouraya; Khodjaberry; Mascara; Monts de Tlemcen, forêt d'Hafir; Nador de Médéa; Tiaret. Common.

Ptychostomum elegans (Nees) D.Bell & Holyoak

Bryum elegans Nees

Nomenclature follows Hodgetts *et al.* (2020).

RECORDS. — Corbière (1905): Environs de Constantine, ravin de Constantine. Jelenc (1955a): Monts de Constantine, ravin de Rhumel. Jelenc (1955a, b, 1967): Tiaret. Rare.

Ptychostomum funkii (Schwägr.) J.R.Spence

Bryum funkii Schwägr.

Nomenclature follows Hodgetts *et al.* (2020).

RECORDS. — Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Very rare.

Ptychostomum imbricatum
(Müll. Hal.) Holyoak & N.Pedersen

RECORDS. — Montagne (1838), Bescherelle (1882), Jelenc (1955a): Alger. Bescherelle (1882): La Galite. Bescherelle (1882), Jelenc (1955a): Oran, partie méridionale de la province; Tiaret. Corbière (1904): Batna, 1600 m. Corbière (1904), Jelenc (1955a): Kabylie, Fort National, 1000 m. Litschauer (1904): Col de Tirourda, männlicher Rasen, 1700 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, Les Pins; Environs de Constantine, ravin du Séminarie; Environs de Constantine, Sidi M'Cid. Lapie (1909): Kabylie du Djurdjura. Jelenc (1951, 1967): Massif du Tessala, pic de Tafaraoui, 650 m. Jelenc (1953): Bèlezma, Téniet el Gantos, 1900 m. Jelenc (1953, 1967): Massif de l'Aurès, flanc nord-ouest du Ras Keltoun, 2200 m. Jelenc (1954b, 1967): Atlas Mitidjien, forêt d'El Aioun, 500 m. Jelenc (1955a): Aizer; Arba; Kreider; La Rassauta; La Réghaia; Mascara; Monts de Batna, djebel Touggour; Ouarsenis; Tizi-Ouzou. Jelenc (1955a, 1967), Ahayoun *et al.* (2007): Massif du Bèlezma, Téniet el Had. Jelenc (1966, 1967): Massif du Bou Zegga, gorges de Keddara, 400 m. Common.

Ptychostomum inclinatum (Sw. ex Brid.) J.R.Spence

Ptychostomum archangelicum (Bruch & Schimp.) J.R.Spence

Nomenclature follows Hodgetts *et al.* (2020) and Holyoak (2021).

RECORDS. — Bescherelle (1882), Jelenc (1955a): *sine loco*. Very rare.

COMMENT

The only report of the species in Algeria (*sub Bryum inclinatum* (Sw. ex Brid.) Turton *hom. illeg.*) is based on a single specimen collected by Durieu de Maisonneuve in Herbarium Motelay without indication of locality (Bescherelle 1882).

Ptychostomum kunzei (Hornsch.) J.R.Spence

Bryum kunzei Hornsch.

Nomenclature follows Hodgetts *et al.* (2020).

RECORDS. — Jelenc (1953, 1967): Babor, flanc nord du Babor, 1700 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Ptychostomum moravicum (Podp.) Ros & Mazimpaka

RECORDS. — Jelenc (1953, 1967): Massif de l'Aurès, flanc nord du djebel Chélia, 2200 m. Jelenc (1967): Ras Kaltoun. Bizot (1973): Djebel Belezma à 15 km à l'ouest de Batna. Rare.

Ptychostomum pallens (Sw.) J.R.Spence

RECORDS. — Litschauer (1904): Fort National, 1000 m. Lapie (1908, 1909), Trabut (1914), Jelenc (1955a): Kabylie du Djurdjura, Forêt d'Akfadou. Jelenc (1953, 1967): Ouarsenis, cédraie de Téniet el Had, 1650 m. Jelenc (1955a): Constantine; Dellys; La Calle. Jelenc (1966, 1967): Kabylie du Djurdjura, massif de l'Akfadou au Camping Blank, 1500 m. Rare.

Ptychostomum pallescens
(Schleich. ex Schwägr.) J.R.Spence

Ptychostomum boreale (F.Weber & D.Mohr) Ochrya & Bednarek-Ochrya

Nomenclature follows Hodgetts *et al.* (2020).

RECORDS. — Litschauer (1904): Constantine, auf der Route de la Corniche, 700 m. Jelenc (1953, 1967): Massif de Ouarsenis, cédraie de Téniet el Had, 1500 m. Jelenc (1955a): Kabylie du Djurdjura, Michelet, Fort National, 1000 m. Rare.

Ptychostomum pseudotriquetrum
(Hedw.) J.R.Spence & H.P.Ramsay

RECORDS. — Bescherelle (1882): Alger, El-Biar; La Calle. Bescherelle (1882), Jelenc (1955a, 1955b, 1967): Djurdjura. Trabut (1888): *sine loco*. Litschauer (1904): Col de Tirourda, 1700 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel

bel Ouach. Jelenc (1953, 1967): Kabylie du Djurdjura, Aizer, flanc nord du djebel Tachgagalt, 1950 m; Massif de l'Aurès, flanc nord du djebel Pharaoun. Jelenc (1955a): Alger, La Bouzaréa; Chenoua; Djebel Dira, Aumale; Gorges de la Chiffa; Guergour. Jelenc (1967): Kabylie du Djurdjura, Aizer, 1750 m; Massif de l'Aurès, Ain Mimoun. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Frequent.

COMMENT

Holyoak (2021) confirmed that *Bryum pseudotriquetrum* var. *algeriense* (Corb.) Wijk & Margad. (synonym: *B. ventricosum* var. *algeriense* Corb. nom. illeg.), that was reported by Jelenc (1955a) from Monts de Constantine, 1000 m, belongs to the species *Ptychostomum pseudotriquetrum* but without assigning to the typical or var. *bimum* (Schreb.) Holyoak & N. Pedersen. The same applies to *B. pseudotriquetrum* var. *duvalioides* Itzigs. in Rabenh. (synonym: *Bryum ventricosum* var. *duvalioides* (Itzigs.) Glow.) and *Bryum pseudotriquetrum* var. *gracilescens* Schimp. (synonym: *Bryum ventricosum* var. *gracilescens* (Schimp.) Lindb. nom. inval.).

Ptychostomum rubens

(Mitt.) Holyoak & N. Pedersen

Bryum trabutii Thér.

Nomenclature follows Ros *et al.* (2023).

RECORDS. — Thériot & Trabut (1930), Jelenc (1955a), Ros *et al.* (2023): Numidia prope La Calle. Very rare.

Ptychostomum schleicheri

(DC.) J.R. Spence ex D. Bell & Holyoak

Bryum schleicheri DC.

Bryum schleicheri var. *latifolium* (Schwägr.) Schimp.

Ptychostomum schleicheri var. *latifolium* (Schwägr.) D. Bell & Holyoak

Nomenclature follows Holyoak (2021).

RECORDS. — Corbière (1904), Jelenc (1955a): Bône, ravin aux flancs de l'Édough, 200 m. Trabut (1914), Jelenc (1955a): Djurdjura. Thériot (1931, 1933): Atakor-n-Ahaggar; Tarouda, 2100 m; Tehi-n-Tekart, 2000 m. Thériot (1931, 1933), Jelenc (1955a): Ahaggar, Ideles, 1500 m; Hoggar, Imarera, 2000 m; Hoggar, Tessekimt, 1900 m; Tamanghasset, 1500 m; Tefedest, Ahetes, 1150 m. Thériot (1931), Jelenc (1955a), Frahm (1978): Hoggar, Gueltas von Is-sakarassene, 1880 m. Frahm (1978): Hoggar, Gueltas von Afilale, 2000 m. Frequent.

COMMENT

Bryum schleicheri fo. *peracutifolium* Thér. and *B. schleicheri* fo. *stenophyllum* were described from Algeria by Thériot (1931) from Hoggar, Tamanghasset (in Tehi-n-Tekart, at 2000 m the first, and in Tessekimt at 1900 m the second), and later compiled in Jelenc (1955a). Its identity has not been reassessed since its description (Ros *et al.* 2013). They are probably synonyms of *P. schleicheri*.

Ptychostomum torquescens

(Bruch & Schimp.) Ros & Mazimpaka

RECORDS. — Bescherelle (1882): Constantine, rochers du Mansourah; Djurdjura. Bescherelle (1882), Corbière (1889): Blidah. Bescherelle (1882), Jelenc (1955a): Alger; La Calle; Philippeville. Julien (1894): Région de Constantine. Corbière (1904), Jelenc (1955a): Cherchell. Corbière (1905): Environs de Constantine, Bellevue; Environs de Constantine, Chettabah; Environs de Constantine, djebel Ouach; Environs de Constantine, Les Pins; Environs de Constantine, près l'usine à gaz; Environs de Constantine, route du Séminarie; Environs de Constantine, Sidi M'Cid. Camus (1906), Jelenc (1955a): Oran. Jelenc (1949, 1967): Monts de Tlemcen. Jelenc (1951, 1967): Massif du Tessala, 730 m; Sahel d'Arzeu, Dejbél (B)Orouse, 630 m. Jelenc (1953): Aurès, flanc nord du djebel Pharaoun, 1800 m. Jelenc (1953, 1967): Massif de l'Ouarsenis, cédraie de Téniet el Had, 1500 m. Jelenc (1954b, 1967): Dune de la Station d'Aquiculture et de Pêche de Castiglione. Jelenc (1955a): Arba; Atlas de Blida, oued el Kebir, 200 m; Azéba; Djebel Chenoua; El Kantara; Frais Vallon, 300 m; Kabylie des Babor, cap Aokas; Kabylie du Djurdjura, Aït Khalfoun; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, djebel Gouraya; La Bouzaréa; Lambèse; Monts de Constantine, gorges de Rhumel; djebel Murdjadjo; Ouarsenis. Jelenc (1955a, 1967): Saïda. Jelenc (1956, 1967): Kabylie du Djurdjura, près de Tizi-Ouzou; Massif de la Bouzaréa, forêt de Baïnem; Massif de la Bouzaréa, ravin près des Bains Romains. Bizot (1973): Ruines de Timgad. Syed (1973): Kabylia minor, Ras Aokas. Ros *et al.* (1990): Skikda beach, 0 m. Ahayoun *et al.* (2007): *sine loco*. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Very common.

COMMENT

Ros *et al.* (1990) reported *Ptychostomum* gr. *torquescens* from Oued Rhiou.

Ptychostomum turbinatum (Hedw.) J.R. Spence

Bryum turbinatum (Hedw.) Turner

Bryum turbinatum var. *gracilifolium* Besch.

Nomenclature follows Hodgetts *et al.* (2020) and Holyoak (2021).

RECORDS. — Bescherelle (1882): Atlas; Constantine, chute du Rumel; La Calle, pentes gazonnées humides. Lapie (1909): Kabylie du Djurdjura. Jelenc (1951, 1967): Haute plaine de Tlemcen, cascades de l'oued bou Ennag à la traversée des collines des Beni Mester, 500 m, 650 m. Jelenc (1955a): Blida. Jelenc (1955a, 1956, 1967): Kabylie du Djurdjura, Main du Juif, 1600 m. Rare.

Pulvigerella lyellii

(Hook. & Taylor) Plášek, Sawicki & Ochrya

Orthotrichum lyellii Hook. & Taylor

Nomenclature follows Plášek *et al.* (2015).

RECORDS. — Bescherelle (1882): Atlas, troncs d'arbres; Bouzazi. Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, Tizi Ouzou; La Calle. Corbière (1889): Blida, forêt des Beni-Salah, 1500 m. Corbière (1905): Environs de Constantine, djebel Ouach. Lapie (1909): Kabylie du Djurdjura, Beni Khalfoun. Jelenc (1949, 1967): Monts de Tlemcen, forêts de Zariflet et d'Hafir, 1000-1400 m. Jelenc (1955a): Kabylie de Collo, djebel Goufi; Kabylie du Djurdjura, Aït Daoud; Monts de Constantine; Téniet el Had. Ahayoun

et al. (2007): Djebel Bonti, Collo. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Frequent.

**Pylaisia polyantha* (Hedw.) Schimp.

RECORDS. — Trabut (1887a): D'Oran à Mécheria.

COMMENT

Doubtfully present in Algeria. The report of this Circumpolar Temperate species (Blockeel *et al.* 2014b) in Algeria is based on a single specimen, and its reliability is doubtful. Due to the difficulty in locating this collection to be revised, the species can only remain in the Algerian catalogue if new specimens are found.

Pylaisia polyantha fo. *gracillima* Besch. was described by Bescherelle (1882) from Sahara d'Oran, entre Chellala et Arba-Tatani, and later compiled in Jelenc (1955a). According to Ros *et al.* (2013), its identity has not been revised since. Its taxonomic value is doubtful.

Pyramidula tetragona (Brid.) Brid.

RECORDS. — Douin (1904): Aux environs de Constantine, 1000 m. Corbière (1905), Jelenc (1955a): Monts de Constantine, djebel Ouach. Rare.

Racomitrium aciculare (Hedw.) Brid.

RECORDS. — Jelenc (1948), Bednarek-Ochyra (2006): Kabylie, Babor. Jelenc (1955a), Bednarek-Ochyra (2006): Kabylie du Djurdjura, Aït Idjer; Kabylie du Djurdjura, Tala Ghizan; Kabylie du Djurdjura, Tamesguida; Kef Mcid el Aïssa, Dépt. de Constantine. Rare.

Racomitrium affine (F.Weber & D.Mohr) Lindb.

RECORDS. — Corbière (1905): Environs de Constantine, djebel Ouach. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Racomitrium canescens (Hedw.) Brid.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, Tizi Ouzou. Very rare.

Racomitrium heterostichum (Hedw.) Brid.

RECORDS. — Corbière (1905), Jelenc (1955a): Monts de Constantine, djebel Ouach. Very rare.

Rhizomnium punctatum (Hedw.) T.J.Kop.

RECORDS. — Feldmann (1947), Jelenc (1955a): Kabylie de Collo, l'oued Medjerrah près de Bou Noghra, 700 m; Kabylie de Collo, près de Taoulet, 600 m; Kabylie de Collo, source à Krerach Mayoun

près de Bou Touya, 600 m. Jelenc (1954b, 1956, 1967): Kabylie du Djurdjura, massif de l'Akfadou, à la Fontaine des Ifs, 1200 m. Jelenc (1955a): Djidjelli. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Rhynchostegiella curviseta (Brid.) Limpr.

Hypnum algerianum (Brid. ex P.Beauv.) Brid.

Rhynchostegiella algeriana (Brid. ex P.Beauv.) Warnst.

Nomenclature follows Patiño *et al.* (2017).

RECORDS. — Desfontaines (1799), Gandoger (1883): *sine loco*. Lamarck (1813), Montagne (1838), Bescherelle (1882), Jelenc (1955a), Ahayoun *et al.* (2007): Environs d'Alger. Bescherelle (1882), Corbière (1904), Jelenc (1955a): Bône. Bescherelle (1882), Jelenc (1955a): Blidah; La Calle; Tlemcen. Corbière (1904), Jelenc (1955a): La Bouzaréah, près Alger. Jelenc (1949, 1967): Massif du Murdjadjo (Oran), Forêt de Msila, ravin de la source de Gueddara, 180 m. Jelenc (1951, 1967): Massif du Tessala, pic Tafaraoui, 600 m. Jelenc (1953, 1967): Massif de l'Aurès, forêt de djebel Sgag, 1700 m. Jelenc (1955a): Birkadem; Djebel Beni Smir; Edough; Gouraya. Jelenc (1956, 1967), Jovet-Ast (1956): Atlas Mitidjien, pic Mouzaïa. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

COMMENT

The criterium of Patiño *et al.* (2017) has been followed for considering the reports of the genus *Rhynchostegiella* in Algeria. These authors excluded *R. letourneuxii* of the synonyms of *R. curviseta* and included it within *Rhynchostegium confertum*. Also, they considered *Rhynchostegiella algeriana* a synonym of *R. curviseta*, instead of *R. tenella* as was considered in Ros *et al.* (1999, 2013), and in Jelenc (1955a). Therefore, the reports of *Rhynchostegiella curviseta* here included are: 1) the original reports under the names *Rhynchostegiella curviseta* (Brid.) Limpr. and *Rhynchostegium curvisetum* (Brid.) Schimp., and 2) the reports of *Rhynchostegiella algeriana* and their homotypic synonyms (*Hypnum algerianum* (Brid. ex P.Beauv.) Brid. and *Rhynchostegium algerianum* (Brid. ex P.Beauv.) Lindb.) but excluding those of Jelenc (1955a, 1956, 1967), whose identity is doubtful as can correspond to any of both species [Jelenc (1955a): Constantine; Frais Vallon; Kabylie des Babor, Cap Aokas; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Yakouren. Jelenc (1956): Massif de la Bouzaréa, ravin de la prise d'eau près des Bains-Romains. Jelenc (1956, 1967): Sahel d'Alger, environs d'El Biar. Jelenc (1967): Massif du Bou Zegza, gorges de Keddara, 400 m].

Given the great taxonomical changes proposed in the last decades, the identity of old Algerian *Rhynchostegiella* reports is unsure and therefore, the presence and distribution of the species in the country should be reevaluated.

Rhynchostegiella litorea (De Not.) Limpr.

Rhynchostegiella tenella var. *meridionalis* (Boulay) Zodda

Nomenclature follows Patiño *et al.* (2017).

RECORDS. — Bescherelle (1882): Mustapha. Bescherelle (1882), Jelenc (1955a): Alger; Bouzaréah; Staouéli. Corbière (1904): Telemly près Alger. Corbière (1904), Jelenc (1955a): Gorges de la Chiffa, ruisseau des Singe. Dixon (1904): in the neighbourhood of Algiers. Litschauer (1904), Jelenc (1955a): Vallon bei la Bouzarea, 300 m. Corbière (1905): Environs de Constantine, Moulin Laire. Corbière (1905), Jelenc (1955a): Environs de Constantine, bords de l'oued Bou Merzoug, 550 m. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, les crêtes de Boudra, 500-600 m. Jelenc (1951): Monts de Tlemcen, Koudiat d'Hafr, 1250 m. Jelenc (1954b): Sahel d'Alger, Bois de Boulogne. Jelenc (1954b, 1967): Massif du Bou Zegza, gorges de Keddara, 400 m. Jelenc (1955a): Atlas de Blida; Birkadem; Constantine. Jelenc (1956, 1967): Massif du Bou Zegza, dans les gorges de Keddara, 400 m; Sahel d'Alger, colline du Jardin d'Essai. Jelenc (1967): Monts de Tlemcen, Koudiat d'Hafr, 1250 m. Düll (1986): *sine loco*. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

COMMENT

The reports included here are the original reports those of *Rhynchostegiella litorea*, and their homotypic synonyms (*Rhynchostegiella tenella* var. *litorea* (De Not.) P.W.Richards & E.C.Wallace, and *Rhynchostegium litoreum* (De Not.) Bott.), as well as those of *Rhynchostegiella tenella* var. *meridionalis* and their homotypic synonyms (*Rhynchostegiella algeriana* var. *meridionalis* (Boulay) Corb., *Rhynchostegium algerianum* var. *meridionale* (Boulay) Corb. *nom. illeg.*, and *Rhynchostegium tenellum* var. *meridionale* (Boulay) Paris).

Rhynchostegiella tenella (Dicks.) Limpr.

RECORDS. — Bescherelle (1882): Alger; Birkadem; Édough, près la route Randon; Bougie; Oran; Philippeville; Tlemcen. Trabut (1887a): D'Oran à Mécheria. Julien (1894): Région de Constantine. Ros *et al.* (1990): Djebel Chenoua, 5-40 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

COMMENT

Only the original Algerian reports sub *Rhynchostegiella tenella* (Dicks.) Limpr. and *Rhynchostegium tenellum* (Dicks.) Schimp. are included here.

Rhynchostegiella teneriffae (Mont.) Dirkse & Bouman

RECORDS. — Bescherelle (1882), Jelenc (1955a): La Calle. Corbière (1889): Blida, dans un ruisseau derrière Mimich. Jelenc (1955a): Atlas de Blida; La Bouzaréa. Rare.

COMMENT

According to Dirkse & Bouman (1995), the presence of this species in Algeria is based on the reports of *Eurhynchium teesdalei* (Schimp.) Milde and *Rhynchostegiella teesdalei* (Schimp.) Limpr. Although Patiño *et al.* (2017) considered this synonymy doubtful, Hodgetts *et al.* (2020) maintained it pending further work, and this is the criterium also followed here.

Rhynchostegium confertum (Dicks.) Schimp.

Rhynchostegiella letourneuxii (Besch.) Broth.

Rhynchostegium letourneuxii Besch.

Nomenclature follows Patiño *et al.* (2017).

RECORDS. — Bescherelle (1882), Jelenc (1955a): Djebel Édough, ravin de Ringa et sur le sentier du bas; Djebel Édough, sentier du milieu; La Calle, marais du Tonga; La Chiffa; Oued El-Aneb. Corbière (1889): Blida, derrière Mimich. Corbière (1904), Jelenc (1955a): Gorges de la Chiffa, ruisseau des Singes. Corbière (1904, 1905), Jelenc (1955a): Environs de Constantine, Route de la Corniche, les Pins, Dj. Ouach, 1000 m, 850 m. Litschauer (1904), Jelenc (1955a): Bône, 50 m. Camus (1906): Oran. Braun-Blanquet & Maire (1924): Tlemcen. Jelenc (1955a): Kabylie des Babor, cap Aokas; Kabylie du Djurdjura, djebel Afroun; Kabylie du Djurdjura, forêt d'Akfadou; Kabylie du Djurdjura, Tala Ghizan; La Bouzaréa; Monts de Tlemcen. Jelenc (1967): *sine loco*. Frequent.

COMMENT

Rhynchostegium confertum var. *latifolium* Renaud in Jelenc *nom. inval.* was reported by Jelenc (1955a) from Monts de Constantine, djebel Ouach, but according to Ros *et al.* (2013), its identity has not been revised since.

Rhynchostegium megapolitanum (Blandow ex F.Weber & D.Mohr) Schimp.

RECORDS. — Bescherelle (1882): Birmandreis; Kabylie; Mustapha, ravins de l'Agha. Bescherelle (1882), Jelenc (1955a): Alger; Bône; Dunes des Beni-Urgin; La Calle; Vallée de Biskader. Gandoger (1883), Trabut (1888): *sine loco*. Corbière (1889): Blida. Corbière (1904): Alger, le Bois de Boulogne. Corbière (1904), Jelenc (1955a): Médéa; Orléansville, bois de la Pépinière. Litschauer (1904), Jelenc (1955a): Chiffaschlucht und im Tal des Qued-Kebir bei Blidah, 300 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, Bellevue; Environs de Constantine, djebel Ouach; Environs de Constantine, Le Hamma; Environs de Constantine, Les Pins; Environs de Constantine, Menidj; Environs de Constantine, pont d'Aumale; Environs de Constantine, près les Arcades romaines. Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Jelenc (1949, 1967): Monts de Tlemcen, djebel el Béniane, 950 m. Jelenc (1951, 1967): Massif du Tessala, pic Tafaraoui, 550 m. Jelenc (1953, 1967): Kabylie du Djurdjura, massif de l'Aizer, flanc nord du djebel Tachgalt, 2000 m. Jelenc (1954b, 1967): Chaîne des Zahrez, djebel Touilila, 1000 m, l'oued M'Kamza. Jelenc (1955a): Alger, Tixérain; Atlas de Blida; Kabylie des Babor, cap Aokas; Kabylie du Djurdjura, Tirourda; La Bouzaréa; Maison-Carrée. Jelenc (1956, 1967): Massif de la Bouzaréa, forêt de Baïnem; Massif du Dahra, Petit-Port dans la callitriaie. Ros *et al.* (1990): Hammam-Riga, 500 m. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

COMMENT

Rhynchostegium megapolitanum var. *hygrophillum* Renaud in Jelenc *nom. inval.* was reported by Jelenc (1955a) from Monts de Constantine, djebel Ouach, but according to Ros *et al.* (2013), its identity has not been revised since.

Rhynchostegium murale (Hedw.) Schimp.

RECORDS. — Montagne (1838): Alger. Bescherelle (1882), Jelenc (1955a): Édough; Gorges de la Chiffa; Tlemcen. Trabut (1888): *sine loco*. Jelenc (1955a): Bône; Kabylie du Djurdjura, Agoulmin Aberkan; Kabylie du Djurdjura, Akfadou. Rare.

Rhynchostegium riparioides (Hedw.) Cardot

RECORDS. — Bescherelle (1882): Blidah; Djurdjura; Oued El-Afran. Bescherelle (1882), Jelenc (1955a): Édough; Oran. Trabut (1887a): D'Oran à Mécheria. Corbière (1889): Blida, derrière Mimich. Corbière (1904), Jelenc (1955a): Tlemcen, parois de la cascade. Litschauer (1904), Jelenc (1955a): Kabylie du Djurdjura, Fort National, 1000 m. Corbière (1905): Environs de Constantine, djebel Ouach, 900 m. Lapie (1909): Kabylie du Djurdjura. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, oued Bin el Ouidane près de Taoulet. Jelenc (1949, 1967): Haute plaine de Tlemcen, oued Saf-Saf entre le village et le cirque d'el Ourit; Monts de Tlemcen, forêt de Zariffet aux cascades de l'oued Ouadallah. Jelenc (1951): Monts de Haute plaine de Tlemcen. Jelenc (1953, 1967): Babor, flanc nord du djebel Babor, 1300 m; Massif de l'Aurès, forêt de Sgag, 1650 m; Massif de l'Aurès, maison forestière du djebel Chélia, 1500 m. Jelenc (1955a): Atlas de Blida; Aurès, djebel Chélia, 1350 m; Djebel Dira; Gorges de la Chiffa; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Ansor Aberkane; Kabylie du Djurdjura, Dra Inguel; Kabylie du Djurdjura, Tirourda; Koléa; Maison-Carrée. Jelenc (1967): Kabylie des Babor, Tamerdjajout. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

COMMENT

Platyhypnidium rusciforme var. *squarrosus* (Boulay) Latzel was reported by Jelenc (1955a) from Monts de Constantine, djebel Ouach, but according to Ros *et al.* (2013), its identity has not been revised since. Also, it is the case of two invalid names: *Platyhypnidium rusciforme* var. *longifolium* Trab. in Jelenc *nom. inval. descr. gall.*, proposed by Jelenc (1955a) from Djebel Dira and Kabylie du Djurdjura, Tirourda, and *Platyhypnidium rusciforme* fo. *tophacea* Besch. *nom. nud.*, proposed by Bescherelle (1882) without precise locality in Algeria (*sine loco*), based on a specimen of Durieu de Maisonneuve and later compiled by Jelenc (1955a).

Schistidium agassizii Sull. & Lesq.

RECORDS. — Jelenc (1953, 1967): Kabylie du Djurdjura, Aizer, flanc nord du djebel Tachgagalt, 1950 m. Jelenc (1955a): Ouarsenis. Jelenc (1956, 1967): Atlas Mitidjien, pic Mouzaïa, 1200 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Schistidium apocarpum (Hedw.) Bruch & Schimp.

RECORDS. — Bescherelle (1882): Djurdjura; Petit Atlas. Bescherelle (1882), Jelenc (1955a): Constantine; Djebel Babor. Corbière (1904), Jelenc (1955a): Sétif, 1100 m. Corbière (1905): Environs de Constantine, La Corniche. Jelenc (1949, 1967): Monts de Tlemcen, pentes du djebel el Béniane, 850-1000 m. Jelenc (1951, 1967): Massif du Tessala, pic de Tafaraoui, 650 m. Jelenc (1955a): Alger; Atlas de Blida, oued el Kebir, 200 m; Aurès; Kabylie du

Djurdjura, Tablabalt; Monts de Tlemcen, Mazer; Ouarsenis, Téniet el Had. Jelenc (1956): Monts de Tlemcen, vallée de l'oued Isser près de Lamoricière. Jelenc (1967): Vallée de l'oued Isser à Lamoricière. Frequent.

COMMENT

As stated by Ros *et al.* (2013), the reports of *Schistidium apocarpum* complex in the Mediterranean published before the revision of Blom (1996) should be revised to establish to which of the presently accepted species they correspond.

Schistidium confertum (Funck) Bruch & Schimp.

RECORDS. — Cardot (1904), Maire (1916), Jelenc (1955a): Province d'Oran, Djebel Morghad, 1950 m, 2105 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, Sidi M'Cid. Jelenc (1956, 1967): Massif du Bou Zegza, dans les gorges de Keddara, 400 m. Rare.

Schistidium crassipilum H.H.Blom

RECORDS. — Bescherelle (1882), Jelenc (1955a), Ros & Cano (2008): Aurès. Jelenc (1955a): Lambèse; Ouarsenis, Téniet el Had. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Schistidium flaccidum (De Not.) Ochyra

RECORDS. — Cardot (1904), Maire (1916), Jelenc (1955a): Province d'Oran, Djebel Morghad, 1950 m, 2015 m. Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m; Kabylie du Djurdjura, col de Tirourda, 1700 m; Kabylie du Djurdjura, Fort National; Kabylie du Djurdjura, Michelet, 1000-1200 m. Bremer (1980): Oran. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

**Sciuro-hypnum plumosum*
(Hedw.) Ignatov & Huttunen

RECORDS. — Bescherelle (1882), Jelenc (1948, 1955a): Kabylie, Tala-Guizan. Jelenc (1955a): Kabylie du Djurdjura, Akfadou.

COMMENT

Doubtfully present in Algeria. The presence of this Circumpolar Boreo-temperate species (Blockeel *et al.* 2014b) in Algeria is unlikely. Given the challenges in locating the collections, this species could only be retained in the Algerian catalogue upon the discovery of new specimens. Orgaz *et al.* (2011) did not confirm any north African report.

Sciuro-hypnum populeum
(Hedw.) Ignatov & Huttunen

RECORDS. — Bescherelle (1882), Jelenc (1955a): Aurès; Djurdjura. Jelenc (1955a): Babor; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Tala Ghizan. Orgaz *et al.* (2011): *sine loco*. Rare.

Scleropodium touretii (Brid.) L.F.Koch

RECORDS. — Montagne (1838), Bescherelle (1882), Jelenc (1955a): Alger. Bescherelle (1882): Kabylie. Bescherelle (1882), Lapie (1909): Djurdjura. Bescherelle (1882), Jelenc (1955a): Bône; Constantine; La Calle; Philippeville; Tiaret. Gandoger (1883), Trabut (1888): *sine loco*. Corbière (1889): Blida. Corbière (1904): La Bouzaréah, près Alger. Corbière (1904, 1905): Environs de Constantine, djebel Ouchasch, 1100 m. Corbière (1904), Litschauer (1904), Jelenc (1955a): Kabylie, Fort National, Michelet, 1000-1200 m. Corbière (1904), Jelenc (1955a): Nador de Médéa. Litschauer (1904): Philippeville, 50 m. Litschauer (1904), Jelenc (1955a): Kabylie du Djurdjura, Col de Tirourda, 1700 m; Vallon bei Alger, 300 m. Litschauer (1904), Jelenc (1955a), Ros *et al.* (1990): Chiffaschlucht und im Tal des Qued-Kebir bei Blidah, 200-300 m. Corbière (1905): Environs de Constantine, ravin du Séminaire. Corbière (1905), Jelenc (1955a): Environs de Constantine, Azeba. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, Baie de Tamanart. Jelenc (1949, 1967): Monts de Tlemcen, pentes du djebel el Béniane, 1000 m, dans la "Forêt des Pins". Jelenc (1951, 1967): Sahel d'Oran, plateau des Ghamras, 400 m. Jelenc (1953, 1967): Atlas de Blida, ravin Bleu de Chréa; Massif de l'Aurès, flanc nord du djebel Pharaoun, 1800 m. Jelenc (1955a): Kabylie des Babor, cap Aokas; Kabylie du Djurdjura, Aït Khalfoun; Kabylie du Djurdjura, Tala Ghizan; La Réghaia. Jelenc (1956): Sahel d'Alger, colline du Jardin d'Essai. Jelenc (1956, 1967): Atlas Mitidjien, Meurdja, 1200 m; Massif du Tessala, pic Tessala, 1000 m; Massif du Zaccar. Jelenc (1966): Monts de Tlemcen, forêt de Zariffet, 1100 m. Jelenc (1967): Atlas Mitidjien, forêt d'El Aioun, 500 m; Atlas Mitidjien, pic Mouzaïa; Kabylie du Djurdjura, massif de l'Akfadou au Camping Blank. Ros *et al.* (1990): Djebel Chenoua, 5-40 m; Skikda beach, 0 m; Texenna's wood, 700 m. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

Scorpiurium circinatum (Bruch) M.Fleisch. & Loeske

Thamnium alopecurum var. *decipiens* Corb.

Nomenclature follows Ros *et al.* (2023).

RECORDS. — Bescherelle (1882): Kabylie; La Calle, sur les pierres inondées; Stora. Bescherelle (1882), Corbière (1904), Litschauer (1904), Jelenc (1955a): Alger. Bescherelle (1882), Jelenc (1955a): Bône; Constantine; Philippeville. Gandoger (1883), Trabut (1888): *sine loco*. Corbière (1889): Blida. Corbière (1904): Tlemcen, rochers entre Sidi-Bou-Médine. Corbière (1904), Jelenc (1955a): Médéa. Litschauer (1904): Constantine auf der Route de la Corniche, 700 m. Litschauer (1904), Jelenc (1955a): Vallon bei la Bouzarea, 400 m. Litschauer (1904), Jelenc (1955a), Ros *et al.* (1990): Chiffaschlucht und im Tal des Qued-Kebir bei Blidah, 200-300 m. Corbière (1905): Environs de Constantine, Les Pins; Environs de Constantine, ravin de Constantine; Environs de Constantine, Sidi M'Cid. Camus (1906), Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Lapie (1909): Kabylie du Djurdjura. Feldmann (1947), Jelenc (1955a): Kabylie de Collo, Baie de Tamanart. Jelenc (1949, 1967): Massif du Murdjadjo (Oran), ravin de l'oued Tammermouth. Jelenc (1951, 1967): Haute-Plaine de Tlemcen, cascades de l'oued bou Ennag à la traversée des collines des Beni-Mester, 500 m; Massif du Tessala, pic de Tafaraoui, 700 m; Monts de Tlemcen, forêt de Tessera Mramet, 1400 m. Jelenc (1954b, 1967): Atlas Mitidjien, forêt d'El Aioun, 500 m; Massif de l'Akfadou, Camping Black, 1500 m; Massif du Bou Zezga, gorges de Keddara, 400 m. Jelenc (1955a): Alma; Cherchell; Djurdjura; Gorges de la Chiffa, ruisseau des Singes; Kabylie des Babor, cap Aokas; Monts de Tlemcen, forêt d'Hafir; Tiaret, oued Mina. Jelenc (1955a, 1967): Sahel d'Alger, massif de la Bouzaréa. Jelenc (1956): Sahel d'Alger, au-dessus du Jardin d'Essai. Jelenc

(1966): Monts de Tlemcen, forêt de Zariffet, 1150 m. Ros *et al.* (1990): Between Mostaganem and Cap Ivi, Abdelmaïmalek-Ramdan beach, 0 m; Djebel Chenoua, 5-40 m. Ahayoun *et al.* (2007): Oran. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Very common.

Scorpiurium deflexifolium
(Solms) M.Fleisch. & Loeske

RECORDS. — Corbière (1904), Jelenc (1955a): Bône, ruisseau aux flancs de l'Édough. Corbière (1905), Jelenc (1955a): Environs de Constantine, bords de l'oued Bou Merzoug, 550 m. Jelenc (1951, 1967): Monts de Tlemcen, forêt de Zariffet, 1150 m. Jelenc (1955a): La Calle; Stora. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

***Sematophyllum demissum* (Wilson) Mitt.

COMMENT

Excluded from Algeria. The only report was made by Feldmann (1945, 1947) and compiled by Jelenc (1955a) from Kabylie de Collo, Oued Elli el Diab. Pierrot (2000) revised the specimen kept in the Faurel herbarium and concluded it corresponds to *S. substrumulosum*.

Sematophyllum substrumulosum (Hampe) E.Britton

RECORDS. — Bescherelle (1882): Kabylie; Ras-Aokas. Feldmann (1945, 1947), Jelenc (1955a), Pierrot (2000): Kabylie de Collo, oued Elli el Diab, près du Melhab. Feldmann (1945), Jelenc (1955a): Près d'Alger, forêt de Baïnem. Rare.

Sphagnum auriculatum Schimp.

Sphagnum subsecundum var. *algerianum* Cardot

Nomenclature follows Eddy (1985).

RECORDS. — Bescherelle (1882), Cardot (1884), Jelenc (1955a): Bône, marais dans le Senhadja; La Calle, petit marais au sud, sur le flanc d'une colline boisée and bruyères marécageuses. Bescherelle (1882), Jelenc (1955a): La Calle, petit marais au sud, sur le flanc d'une colline boisée. Gauthier-Lièvre (1931): 24 km from El Kala. Gauthier-Lièvre (1931), Jelenc (1967): Marais de Bou Merchen between Lac Melah and El Kala. Jelenc (1955a): Plaine de Bône, vallée de l'oued Aouicha entre le Bou Zioun et le Kef Zouara. Muller *et al.* (2010): Aïn Bergougaiia. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

***Sphagnum contortum* Schultz

COMMENT

Excluded from Algeria. It was reported as *S. subsecundum* var. *contortum* (Schultz) Huebener by Bescherelle (1882) from La Calle, petit marais au sud, sur le flanc d'une colline boisée and by Gauthier-Lièvre (1931) from Marais de Bou Merchen between Lac Melah and El Kala. According to Muller *et al.* (2010), only *S. auriculatum* is present in Algeria.

*****Sphagnum palustre* L.**

COMMENT

Excluded from Algeria. It was reported as *S. cymbifolium* (Ehrh.) Hedw. by Jelenc (1955a) from Plaine de Bône, vallée de l'oued Aouicha entre le Bou Zioun et le Kef Zouara. According to Muller *et al.* (2010), only *Sphagnum auriculatum* is present in Algeria.

*****Sphagnum subsecundum* Nees**

COMMENT

Excluded from Algeria. It was reported as *Sphagnum subsecundum* and its synonym *S. laricinum* (Wilson) Spruce ex Lindb. by Bescherelle (1882) and Jelenc (1955a) from Bône, marais dans le Souhadja and from La Calle, bruyères marécageuses, and by Gauthier-Lièvre (1931) and Jelenc (1967) from Marais de Bou Merchen between Lac Melah and El Kala. According to Muller *et al.* (2010), only *Sphagnum auriculatum* is present in Algeria.

***Streblotrichum convolutum* (Hedw.) P.Beauv.**

Barbula convoluta Hedw.

Nomenclature follows Kučera *et al.* (2013).

RECORDS. — Bescherelle (1882): Kabylie. Bescherelle (1882), Jelenc (1955a): Alger; Bône; Bouzaréah; Tiaret. Corbière (1904), Jelenc (1955a): Orléansville, bois de la Pépinière. Jelenc (1955a): Akfadou; Biban, Constantine; Cap Aokas; Chebka, oued Mredjar au Nord de Ghardaïa; Corso; Kabylie des Babor; Kabylie du Djurdjura, Aït Idjer; Oran; Sidi-Ferruch. Ros *et al.* (1990): Oued Rhiou. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Frequent.

***Streblotrichum enderesii* (Garov.) Loeske**

Barbula enderesii Garov.

Nomenclature follows Kučera *et al.* (2013).

RECORDS. — Jelenc (1955a): Philippeville; Stora. Rare.

Syntrichia caninervis* Mitt. var. *caninervis

RECORDS. — Trabut (1927), Jelenc (1954a, 1955a), Kramer (1980): Beni-Ounif. Very rare.

***Syntrichia fragilis* (Taylor) Ochrya**

RECORDS. — Gauthier (1987): Assekrem, Hoggar. Very rare.

***Syntrichia handelii* (Schiffn.) S.Agnew & Vondr.**

RECORDS. — Pierrot (2000): Massif de l'Aizer, 1900 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

***Syntrichia laevipila* Brid.**

RECORDS. — Bescherelle (1882): Kabylie; Petit Atlas. Bescherelle (1882), Corbière (1889), Gallego (2005): Blidah. Bescherelle (1882), Jelenc (1955a): Bône; Édough; La Calle; Philippeville. Bescherelle (1882), Jelenc (1955a), Gallego (2005): Bouzaréah. Bescherelle (1882), Jelenc (1955a), Gallego (2005), Ahayoun *et al.* (2007): Alger. Gandoger (1883), Barkman (1963): *sine loco*. Trabut (1887a): D'Oran à Mécheria, Tell. Corbière (1904): Tlemcen, à Sidi-Bou-Médine. Corbière (1904), Jelenc (1955a): Médéa; Sétif, 1080 m. Corbière (1905): Environs de Constantine, sur les arbres du square. Lapie (1909): Kabylie du Djurdjura. Jelenc (1951, 1967): Monts de Tlemcen, forêt de Zariffet près de l'aïn Defla. Jelenc (1955a): Aïn Taya; Alma; Atlas de Blida; Constantine; Frais Vallon, 300 m; Kabylie des Babor, cap Aokas; Kabylie des Babor, djebel Tababor; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, djebel Gouraya; Kabylie du Djurdjura, Fort National; Khodjaberry; Mascara; Mouzaïville; Tlemcen; Vallée du Chélif, Duperré. Jelenc (1966): Monts de Constantine au djebel Ouach. Jelenc (1967): Kabylie de Collo; Massif du Bou Zegza, gorges de Keddara, 400 m. Gauthier (1987): Assekrem, Hoggar. Gallego (2005): Tizi-Ouzou. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

***Syntrichia montana* Nees**

RECORDS. — Bescherelle (1882): Sommet de l'Atlas central. Bescherelle (1882), Jelenc (1955a): Constantine, rochers du ravin. Cardot (1904), Maire (1916), Jelenc (1955a): Province d'Oran, djebel Morghad, 1950 m, 2105 m. Corbière (1905): Environs de Constantine, Les Pins. Jelenc (1949, 1967): Monts de Tlemcen, pentes au sud de Tlemcen, 850-1000 m. Jelenc (1951), Jelenc (1967): Massif du Tessala, pic de Tafaraoui, 650 m. Jelenc (1953, 1967): Massif du Bélezma, cédraies de l'oued Chaba, 1400 m. Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m. Aurès; Boufarik; El Outaya; Hauts-plateaux oranais; Kabylie du Djurdjura, col de Tirourda, 1700 m; Monts de Constantine; Monts de Tlemcen, Mazer; Monts de Tlemcen, Tiaret; Ouarsenis, djebel Doui; Vallée du Chélif, Duperré. Jelenc (1956, 1967): Atlas Mitidjien, pic Mouzaïa. Bizot (1973): Djebel Belezma à 15 km à l'ouest de Batna. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

***Syntrichia montana* Nees var. *calva*
(Durieu & Sagot ex Bruch & Schimp.) J.J.Amann**

RECORDS. — Jelenc (1955b, 1967): Mila. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Rare.

***Syntrichia papillosissima* (Copp.) Loeske**

RECORDS. — Gallego (2005): Ancien département de Constantine. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

***Syntrichia princeps* (De Not.) Mitt.**

RECORDS. — Bescherelle (1882): Petit Atlas. Bescherelle (1882), Jelenc (1955a): Beni-Salah, sur les cèdres; Djebel Babor et Tababor; Monts Batna, djebel Aurès. Brongniart (1882): Blidah. Corbière (1904): Médéa. Corbière (1904), Jelenc (1955a): Batna, flancs sud et nord du djebel Tougourth. Jelenc (1953, 1955a, 1967): Massif de l'Ouarsenis, cédraie de Téniet el Had, 1500 m. Jelenc (1953, 1967): Massif de l'Aurès, flanc nord du djebel Pharaoun, 1800 m;

Massif de l'Aurès, forêt de Sgag, 1700 m. Jelenc (1955a): Atlas de Blida, gorges de la Chiffa; Kabylie du Djurdjura, Fort National. Jelenc (1967): Massif du Bou Zegza, gorges de Keddara, 400 m. Kramer (1980): Kabylie Mtns., Col de Tegma, Yakouren near Azazga. Frequent.

Syntrichia ruraliformis (Besch.) Mans

Syntrichia ruralis var. *ruraliformis* (Besch.) Delogne

Nomenclature follows Hedenäs *et al.* (2019).

RECORDS. — Corbière (1904), Jelenc (1955a): Médéa; Sétif, 1120 m. Jelenc (1955a): Hauts-plateaux oranais; Mila; Tala Ghizan. Kramer (1980): Djebel Belezma, 15 km W de Batna. Mazari & Boulaacheb (2023): Sétif, Megriss Mountain. Rare.

Syntrichia ruralis (Hedw.) F. Weber & D. Mohr

RECORDS. — Bescherelle (1882): Djurdjura; Kabylie; Petit Atlas. Bescherelle (1882), Jelenc (1955a): Constantine, sommet du Mansourah; Massif de la Mahouna, Serdj el Aouda; Oran, hauts plateaux; Tiaret, 1000 m. Brongniart (1882), Jelenc (1955a), Ahayoun *et al.* (2007): Atlas de Blida. Trabut (1887a): D'Oran à Mécheria. Corbière (1904): Tiaret, Hauts-Plateaux, Douar Torrich, 1000 m. Corbière (1904), Jelenc (1955a): Médéa. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Jelenc (1949, 1967): Haute plaine de Tlemcen, berges du chabet bel Abbès, 750 m; Monts de Tlemcen, Forêt de Tessera Mramet, 1350-1400 m; Jelenc (1949, 1951, 1967): Monts de Tlemcen, escarpements du djebel el Béniane, 1100-1150 m. Jelenc (1951): Djebel el Hassi, 1100 m. Jelenc (1951, 1967): Massif du Tessala, pic de Tafaraoui, 650 m. Jelenc (1953, 1955a, 1967): Kabylie du Djurdjura, Aizer, flanc nord du djebel Tachgagalt, 1950 m. Jelenc (1953, 1967): Bèlezma, crêtes de Bordjem, 2200 m; Kabylie Babor, flanc nord du Babor, 1700 m; Massif de l'Aurès, flanc nord du Chélia, 1800 m; Massif de l'Aurès, flanc nord-ouest du Chélia, 1500 m; Massif de l'Aurès, flanc nord-ouest du Ras Keltoun, 2000 m; Massif du Bèlezma, cédraies de l'oued Chaba, 1400 m. Jelenc (1955a): Akfadou; Aumale; Azéba; Col de Tirourda, 1700 m; Corso; Djebel Chenoua; Kabylie des Babor, cap Aokas; Kabylie du Djurdjura, Fort National, 1000 m; Lambèse; Monts de Tlemcen, Mazer. Jelenc (1967): Haute-Plaine de Tlemcen, Chabet bel-Abbès, 750 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Sétif, Megriss Mountain. Common.

Syntrichia subpapillosissima
(Bizot & R.B. Pierrot ex W.A. Kramer)
M.T. Gallego & J. Guerra

RECORDS. — Bizot (1973): Fontaine Chaude à 30 km NE de Batna. Bizot (1973), Kramer (1980): Djebel Belezma à 15 km à l'ouest de Batna. Rare.

Syntrichia virescens (De Not.) Ochya

RECORDS. — Jelenc (1955a): Kabylie du Djurdjura, Fort National, 1000 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Sétif, Megriss Mountain. Rare.

Tetrastichium fontanum (Mitt.) Cardot

COMMENT

Excluded from Algeria. It was reported by Jelenc (1955a) from Tassili n'Adrar, point d'eau Tig Hert, à l'ouest de Tamada, 600 m, but in the Addenda of the publication, the author rectified the identification to *Vesicularia reimersiana* Bizot & P. de la Varde.

Thamnobryum alopecurum (Hedw.) Gangulee

RECORDS. — Bescherelle (1882): Djurdjura. Bescherelle (1882), Corbière (1904), Jelenc (1955a): Gorges de la Chiffa, ruisseau des Singes. Bescherelle (1882), Jelenc (1955a): Bône; Édough; La Calle; Philippeville; Stora. Trabut (1888): *sine loco*. Dubuis & Faurel (1945): Kabylie du Djurdjura, plateau de l'Aizer, 1900 m. Feldmann (1947), Jelenc (1955a, 1959): Kabylie de Collo, Baie de Tamanart, moins de 50 m; Kabylie de Collo, vallée de l'oued Bin el Ouidane, près de Taoulet, 600 m. Jelenc (1951, 1967): Monts de Tlemcen, forêt de Zariflet, 1100-1200 m. Jelenc (1953, 1955a, 1967): Kabylie du Djurdjura, massif de l'Aizer, flanc nord du djebel Tachgagalt, 2000 m. Jelenc (1955a): Arba; Azerou d'Ait Zikki, Ifri bou Ouadufel; Kabylie de Collo; Kabylie du Djurdjura, Ait Ouaban; Kabylie du Djurdjura, Akfadou; Kabylie du Djurdjura, Azerou Goujane; Kabylie du Djurdjura, Tala Ghizan. Jelenc (1967): Monts de Tlemcen, forêt de Zariflet, 1100-1200 m; Sahel de Koléa, ravin des Voleurs. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

Thuidium assimile (Mitt.) A. Jaeger

COMMENT

Excluded from Algeria. It was cited in error for Algeria by Ros *et al.* (1999) under the name *T. philibertii* Limpr.

Thuidium recognitum (Hedw.) Lindb.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Kabylie du Djurdjura, Tizi Ouzou. Very rare.

Timmia bavarica Hessel.

RECORDS. — Trabut (1914), Jelenc (1955a): Kabylie du Djurdjura, forêt des Ait-Ali. Jelenc (1948, 1955a): Kabylie des Babor, Tababor. Jelenc (1953): Flanc nord du djebel Tachgagalt, 2000 m. Jelenc (1953, 1955a): Kabylie du Djurdjura, Aizer, parois rocheuses des puits de neige, 1900 m. Jelenc (1955a): Kabylie du Djurdjura, Ait Daoud; Kabylie du Djurdjura, Azerou Tidjer, 1300 m; Kabylie du Djurdjura, crêtes du Djurdjura; Kabylie du Djurdjura, Ifri Maarès; Kabylie du Djurdjura, Tizi Boussouil, 1800 m. Rare.

Timmia megapolitana Hedw.

RECORDS. — Bescherelle (1882): Djebel Goufi; Djurdjura, Djebel Tababor. Lapie (1909): Djurdjura. Rare.

COMMENT

There is confusion about the presence of the species of *Timmia* in Algeria, and even in northern Africa due to the taxonomical

difficulties in separating *T. megapolitana* and *T. bavarica*. Jelenc (1955a) considered both species synonyms, joining all the previous reports of the genus under *T. bavarica*. As Ros *et al.* (1999, 2013) did not realize of the old reports of *T. megapolitana*, this species was ignored also in both checklists. After Brassard (1984) they are considered different taxa. Unfortunately, no habitat information in Algerian literature has been given that could help to distinguish both species. The presence and distribution of *Timmia* species in Algeria should be reevaluated.

Timmiella barbuloidea (Brid.) Mönk.

RECORDS. — Montagne (1838), Bescherelle (1882), Corbière (1904): Alger. Bescherelle (1882): Géryville. Bescherelle (1882), Corbière (1904), Jelenc (1955a): Bône, vieux mur au pied de l'Édough. Bescherelle (1882), Jelenc (1955a): Constantine; Djebel Ksel; Oran; Philippeville. Gandoger (1883): *sine loco*. Trabut (1887a): D'Oran à Mécheria. Corbière (1889): Blida, Route de Dalmatie. Cardot (1904), Jelenc (1955a): Environs d'Alger, Bouzarea. Corbière (1904), Jelenc (1955a): Médéa; Orléansville. Corbière (1904), Jelenc (1955a), Ros *et al.* (1990): Gorges de la Chiffa, ruisseau des Singes. Corbière (1905): Environs de Constantine, ravin du Séminarie; Environs de Constantine, Sidi M'Cid. Camus (1906), Jelenc (1955a): environs de Tlemcen. Lapie (1909): Kabylie du Djurdjura. Jelenc (1951, 1967): Massif du Tessala, pic de Tafaraoui, 500 m; Sahel d'Arzeu, djebel Borousse. Jelenc (1955a): Ait Khalfoun; Atlas de Blida, oued el Kebir; Djebel Amour; Kabylie du Djurdjura, Fort National. Jelenc (1955a, 1956, 1967): Sahel d'Alger, dans le ravin du Frais-Vallon. Jelenc (1956, 1967): Atlas Mitidjien, pic Mouzaïa. Jelenc (1956, 1967): Massif de la Bouzaréa, forêt de Bâinem. Jelenc (1967): Massif du Bou Zegza, gorges de Keddara, 400 m; Zahrez Chergui, djebel Touilila, 1000 m. Ros *et al.* (1990): Between Mostaganem and Cap Ivi, Abdelmaïmalek-Ramdan beach, 0 m; Djebel Chenoua, 5–40 m; Hammam-Riga, 500 m; Texenna's wood, 700 m. Ahayoun *et al.* (2007): Mustapha supérieur. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Common.

Tortella flavovirens (Bruch) Broth.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger; Bône, dunes des Beni-Urgin, sur les genévriers; Bouzaréah; Kabylie du Djurdjura; La Calle; Philippeville. Corbière (1904), Jelenc (1955a): Monts de Batna, flanc sud du djebel Tougourth, 1700 m. Jelenc (1955a): Ain Taya; Alma; Atlas de Blida; Cap Matifou; Cherchell; Corso; Djebel Murdjadjo; Kabylie du Djurdjura, djebel Gouraya; Marengo; Oued el Kébir, 200 m; Sidi-Ferruch. Jelenc (1956, 1967): Monts du Dahra, au Cap Ivi. Jelenc (1967): Sahel de Koléa, Castiglione. Ros *et al.* (1990): Between Mostaganem and Cap Ivi, Abdelmaïmalek-Ramdan beach, 0 m; Cape Falcon, les Andalouses, 30–50 m; Dellys, 0–40 m; Skikda beach, 0 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

Tortella humilis (Hedw.) Jenn.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger; Birkadem; Constantine, fissures des rochers du djebel Chettaba. Gandoger (1883): *sine loco*. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel el Hadji Baba. Jelenc (1949, 1967): Monts de

Tlemcen, forêt de Tessera Mramet, 1375 m. Jelenc (1955a): Boghar; Ouarsenis. Rare.

Tortella inclinata (R.Hedw.) Limpr.

RECORDS. — Corbière (1904), Jelenc (1955a): La Calle. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Jelenc (1955a): Alger; Hammam Meskoutine. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

COMMENT

Tortella inclinata var. *brachypoda* (Besch.) Paris was described by Bescherelle (1882) from Alger as *Barbula inclinata* var. *brachypoda* Besch. and later compiled in Jelenc (1955a) but according to Ros *et al.* (2013), its identity has not been revised since.

Tortella inflexa (Bruch) Broth.

RECORDS. — Bescherelle (1882): Mustapha-Supérieur. Bescherelle (1882), Jelenc (1955a): Alger, rochers calcaires de Birmandreïs; Tixeraïn. Corbière (1904), Jelenc (1955a): Camp des Chênes, rive droite de la Chiffa; Orléansville, bois de la Pépinière. Rare.

Tortella nitida (Lindb.) Broth.

RECORDS. — Corbière (1889, 1904), Jelenc (1955a): Blida, grèves de l'oued Beni-Aza. Corbière (1904), Jelenc (1955a): Oran, Mont Santa-Cruz. Corbière (1904), Jelenc (1955a): Mostaganem. Corbière (1905), Jelenc (1955a): Environs de Constantine, Sidi M'Cid. Lapie (1909), Jelenc (1955a): Kabylie du Djurdjura. Maire (1916), Jelenc (1955a): Sud oranais, Monts des Ksour, le djebel Aïssa, 2250 m. Jelenc (1949, 1967): Monts de Tlemcen, col du Juif, 800 m. Jelenc (1951, 1967): Massif du Tessala, pic de Tafaraoui, 650 m. Jelenc (1955a): Alger, Atlas de Blida, oued el Kébir; Édough; Touggourt. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Frequent.

COMMENT

Tortella nitida var. *subtortuosa* (Boulay) Jelenc was reported by Corbière (1904) from Oran, Mont Santa-Cruz and Corbière (1905) from the environs de Constantine, Sidi M'Cid as *Barbula nitida* var. *subtortuosa* (Boulay) Corb. and later compiled in Jelenc (1955a) but according to Ros *et al.* (2013) its identity has not been revised since. The search of the type has not been fruitful (Ros, unpublished). Ros *et al.* (2013) mentioned erroneously that *Tortella nitida* var. *media* (Boulay) Corb. were reported from Algeria.

Tortella squarrosa (Brid.) Limpr.

RECORDS. — Bescherelle (1882): Bône; Constantine; Kabylie; Petit Atlas. Bescherelle (1882), Jelenc (1955a): Alger, au dessus du Fort l'Empereur; Batna; Djebel Babor; Oran; Tiaret. Gandoger (1883): *sine loco*. Trabut (1887a): D'Oran à Mécheria. Brongniart (1882), Corbière (1889): Blida. Corbière (1904), Corbière (1905): Constantine, bois du djebel Ouasch, 1100 m. Corbière (1904), Jelenc (1955a): Médéa; Orléansville, bois de la Pépinière. Lapie (1909):

Kabylie du Djurdjura. Thériot & Trabut (1930), Jelenc (1955a), Cano *et al.* (2000): Montium Aurasiorum prope Calceum Herculis, El Kantara. Jelenc (1949, 1967): Djebel Murdjadjo (Oran), ravin de l'oued Tammermouth; after the name used by the first author has been put and in parentheses. Jelenc (1951, 1967): Massif du Tessala, pic de Tafaraoui, 650 m. Jelenc (1954b): Atlas mitidjien: forêt d'El Aioun, au Sud de Bouinan, 500 m. Jelenc (1954b, 1967): Flanc nord du Sahel de Koléa (Alger), Castiglione, dune de la Station expérimentale d'Aquiculture at de Pêche; Massif du Bou Zegza, gorges de Keddara, 400 m. Monjauze (1954), Jelenc (1967): Forêt de Guetarnia, vallon du Chabet el Hamra, 680 m. Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m; Azéba; Djebel Tafrent; El Guerrah; Gorges de la Chiffa, 300-400 m; Kabylie du Djurdjura, Fort National, 1000-1200 m; Monts de Constantine, djebel Ouach, Hammam Meskoutine; Monts de Tlemcen, Sidi Djillali. Jelenc (1956, 1967): Massif du Tessala, pic Tessala, 1000 m. Bizot (1973): Fontaine Chaude à 30 km NE de Batna; Ruines de Timgad. Ros *et al.* (1990): Oued Rhieu; Ouled Mimoum. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

Tortella tortuosa (Hedw.) Limpr.

Tortella tortuosa var. *fragilifolia* (Jur.) Limpr.

Nomenclature follows Hodgetts *et al.* (2020).

RECORDS. — Bescherelle (1882): Sud d'Oran. Trabut (1887a): D'Oran à Mécheria, Tell. Jelenc (1951): Koudiat d'Hafir, 1250 m; Monts de Tlemcen: forêt de Tessera Mramet, 1400 m. Jelenc (1951, 1967): Monts de Tlemcen, djebel el Béniane, 1050 m. Jelenc (1953, 1967): Aurès, djebel Lazreg, 1900 m; Aurès, flanc nord du Chélia, 1700 m; Aurès, flanc sud du Chélia, 1700 m; Aurès, Ras-el-Ma, forêt de Sgag, 1700 m. Jelenc (1955a): Aurès; Constantine; Djurdjura; Hauts-plateaux oranais; Kabylie du Djurdjura, col de Tirourda, 1700 m; Littoral constantinois; Monts de Tlemcen, Mazer; Monts de Tlemcen, Tlemcen. Jelenc (1956, 1967): Massif du Tessala, pic Tessala, 1000 m. Jelenc (1966, 1967): Zahrez Chergui, oued M'Kamza. Jelenc (1967): Monts de Tlemcen, 1200-1400 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

COMMENT

Köckinger & Hedenäs (2023) identified eight morphologically and molecularly distinct entities at the species level within the former *T. tortuosa*. The identity and distribution of the *T. tortuosa* complex in Algeria should be reevaluated in accordance with the new taxonomic criteria.

Tortula acaulon (With.) R.H.Zander

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger; Constantine, collines de la Casbah; Oran. Corbière (1904), Jelenc (1955a): Sétif, 1112 m. Jelenc (1951, 1967): Haute-Plaine de Tlemcen, près le long de l'oued el Horra, au pied des collines de Bréa. Rare.

Tortula acaulon var. *pilifera* (Hedw.) R.H.Zander

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger; Constantine, collines de la Casbah; Oran. Trabut (1887a): D'Oran à Mécheria. Corbière (1905): Environs de Constantine, route de Batna; Environs de Constantine, Salah Bey. Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Rare.

Tortula acaulon var. *retortifolia* (J.Guerra & Ros) R.H.Zander

RECORDS. — Guerra *et al.* (1991): Tichi. Very rare.

Tortula atrovirens (Sm.) Lindb.

RECORDS. — Bescherelle (1882): Djurdjura. Bescherelle (1882), Corbière (1889), Jelenc (1955a): Blidah. Bescherelle (1882), Jelenc (1955a): Alger, pied des rochers, couteaux Bab-Azoun; Bouzaréah; Oran. Trabut (1887a): D'Oran à Mécheria. Corbière (1904), Jelenc (1955a): Médéa; Mostaganem, pente sablonneuse descendant à la Marine. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Camus (1906), Coppey (1911), Jelenc (1955a): Ben Zireg, dans l'extrême-Sud Oranais. Thériot (1931, 1933): Hoggar, in montibus Atakor-n-Ahaggar, 2000 m. Thériot (1931, 1933), Jelenc (1955a): Hoggar, djebel Amezzeroui, 2600 m. Jelenc (1955a): Biban; Hoggar, llaman, 2000 m; Kabylie du Djurdjura, Fort National, 1000-1200 m; Monts de Constantine; Ouarsenis. Collenot *et al.* (1960): Tassili N'Aijer, Afaitalèsse. Jelenc (1967): Atlas Mitidjien, forêt d'El Aioun, 650 m; Hoggar. Ros *et al.* (1990): Dellys, 0-40 m; Ouled Mimoum. Common.

Tortula canescens Mont.

RECORDS. — Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m; Aumale; Tiaret. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Tortula caucasica Broth.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Constantine, sur les rochers couverts de terre, chute du Rummel; Oran, près Mers-el-Kebir; Philippeville. Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Jelenc (1955a): Gorges de la Chiffa; Oran. Rare.

Tortula cuneifolia (Dicks.) Turner

RECORDS. — Montagne (1838), Bescherelle (1882), Jelenc (1955a): Alger. Bescherelle (1882): Philippeville. Bescherelle (1882), Jelenc (1955a): Bouzaréah; El Arrouch. Bescherelle (1882), Jelenc (1955a), Cano *et al.* (2000): La Calle, parois verticales des fossés, forêt du lac Touga (Tonga); Bône. Corbière (1904), Jelenc (1955a): Kabylie du Djurdjura, Fort National, 1000 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Lapie (1909): Kabylie du Djurdjura. Jelenc (1955a): Aïn Taya; Atlas de Blida, oued el Kebir, 200 m; Kabylie du Djurdjura, col des Aït Aïcha; Kabylie du Djurdjura, Isser; Kabylie du Djurdjura, pic Belloua; La Réghaia; Monts de Tlemcen, Tlemcen, forêt d'Hafir; Ouarsenis, Téniet el Had. Jelenc (1956, 1967): Atlas Mitidjien, pic Mouzaïa. Jelenc (1967): Kabylie du Djurdjura, Yakouren, 1000 m; Massif du Bou Zegza, gorges de Keddara, 400 m. Frequent.

Tortula freibergii Dixon & Loeske

RECORDS. — Pierrot (2000): Environs d'Alger, dans le Frais Vallon, près d'El Biar. Very rare.

Tortula inermis (Brid.) Mont.

RECORDS. — Bescherelle (1882): Petit Atlas; Sahara algérien. Bescherelle (1882), Corbière (1905): Constantine; Environs de Constantine, Chettabah. Bescherelle (1882), Jelenc (1955a): Alger; Bou-Sâada; Monts de Tlemcen, Tlemcen; Monts des Trara, Col de Nédroma; Oran, hauts plateaux; Sud algerois, Gueelt es Stel. Trabut (1887a): D'Oran à Mécheria. Corbière (1904): Tlemcen, sentier de Bou-Médine à la cascade. Corbière (1905): Environs de Constantine, Les Pins; Environs de Constantine, Menidj; Environs de Constantine, ravin du Séminaire; Environs de Constantine, route de la Corniche; Environs de Constantine, route de Sétif; Environs de Constantine, Sidi M'Cid. Camus (1906): Oran. Braun-Blanquet & Maire (1924): Tlemcen, 800 m. Szepesfalvi (1932), Andreánszky (1934), Jelenc (1955a): Aflou, in monte djebel Sidi Okba, 1700 m. Jelenc (1951, 1967): Monts de Tlemcen, djebel el Hassi, 1100 m. Jelenc (1953): Massif de Guethiane, Kef Tachrirt, 1850 m. Jelenc (1953, 1967): Massif de l'Ouarsenis, pente du pic Sidi Abdelkader, 1500 m. Jelenc (1955a): El Kantara, 1500 m; Kabylie des Babor, cap Aokas; Kabylie des Babor, Dra el Arba; Kabylie du Djurdjura, Fort National, 1000 m; Mila; Monts de Constantine; Monts de Tlemcen, Mazer; Oran; Ouarsenis, Téniet el Had. Jelenc (1955a), Ahayoun *et al.* (2007): Atlas de Blida, oued el Kebir, 200 m. Jelenc (1967): Gorges de Keddara, 400 m; Massif de Guethiane, Kef Tachrirt, 1500 m; Massif du Bou Zezga; Massif du Zaccar; Zahrez Chergui, djebel Touilila, 1100 m; Zahrez Chergui, oued M'Kamza, Ain Hallouf. Bizot (1973): Djebel Belezma à 15 km à l'ouest de Batna. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Very common.

Tortula lindbergii Broth.

RECORDS. — Bescherelle (1882): Djurdjura. Bescherelle (1882), Jelenc (1955a): Constantine. Trabut (1887a): D'Oran à Mécheria. Corbière (1904), Jelenc (1955a): Sétif, colline pierreuse à l'ouest de la ville, 1000-1100 m. Corbière (1905): Environs de Constantine, Menidj; Environs de Constantine, ravin du Séminaire. Corbière (1905), Jelenc (1955a): Environs de Constantine, ravin du Rummel. Jelenc (1955a): Kabylie du Djurdjura, Ait Idjer; Kabylie du Djurdjura, Fort National; Littoral oranais. Jelenc (1955b, 1967): Col de Sfa, près de Biskra. Jelenc (1966, 1967): Zahrez Chergui, oued Mlilia au djebel Toulila, 1000 m. Frequent.

Tortula marginata (Bruch & Schimp.) Spruce

RECORDS. — Bescherelle (1882): Birtraria. Bescherelle (1882), Jelenc (1955a): Alger, vieux murs; Blidah; Bône, parois des citernes; Constantine, chute du Rummel; Mostaganem; Philippeville. Trabut (1887a): D'Oran à Mécheria. Corbière (1904, 1905): Constantine, vieux mur entourant la piscine de Sidi M'Cid. Corbière (1905): Environs de Constantine, Moulin Laire. Jelenc (1951, 1967): Monts de Tlemcen, berges de l'oued Khémis au Khémis, 800 m. Jelenc (1955a): Frais Vallon; Kabylie du Djurdjura, Aberkan; Kabylie du Djurdjura, Agoulmin; Kabylie du Djurdjura, Ait Idjer; Oran. Jelenc (1966, 1967): Monts de Saïda, cascades de Tifrit. Ahayoun *et al.* (2007): Hydra. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Tortula muralis Hedw.

RECORDS. — Montagne (1838), Bescherelle (1882), Jelenc (1955a): Alger. Bescherelle (1882): Mustapha; Philippeville. Bescherelle (1882), Jelenc (1955a): Birmandreis, chemins creux; Constantine; Kabylie

du Djurdjura, Tizi Ouzou. Gandoger (1883), Ahayoun *et al.* (2007): *sine loco*. Trabut (1887a): D'Oran à Mécheria. Corbière (1889), Jelenc (1955a): Blida. Corbière (1904), Jelenc (1955a): Cherrhell, sur des ruines, chemin du cap Zizerine; Kabylie du Djurdjura, Fort National, 1000 m; Sétif, 1080 m. Corbière (1905): Environs de Constantine, Le Hamma; Environs de Constantine, Les Pins; Environs de Constantine, Menidj; Environs de Constantine, ravin du Rummel; Environs de Constantine, route de Sétif. Corbière (1905), Jelenc (1955a): Environs de Constantine, Sidi M'Cid. Corbière (1905), Jelenc (1966, 1967): Environs de Constantine, route du djebel Ouach. Camus (1906), Braun-Blanquet & Maire (1924): Environs de Tlemcen. Maire & Sevenet (1928), Jelenc (1955a): Tombeau de la Chrétienne, près de Bérard. Jelenc (1949, 1967): Monts et Haute-Plaine de Tlemcen. Jelenc (1951, 1967): Massif du Tessala, pic de Tafaraoui, 650 m. Jelenc (1953, 1967): Aurès, flanc nord du Ras Pharaoun, 1800 m; Bèlezma, cédras de l'oued Chaba, 1400 m. Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m; Batna; Cap Aokas; Djebel Tessala; Djemila; Kabylie des Babor; La Bouzaréa; Marnia; Mascara; Médéa; Monts de Constantine; Oran; Ouarsenis, djebel Doui; Rouiba. Collenot *et al.* (1960): Tassili N'Aijer, Afaïtalèsse. Ahayoun *et al.* (2007): Oran, aux "Planteurs". Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Very common.

Tortula muralis subsp. *muralis* var. *aestiva*
Brid. ex Hedw.

RECORDS. — Corbière (1905): Environs de Constantine, près du Rummel. Jelenc (1955a): Alger; Djebel Diras; Kabylie du Djurdjura, Fort National, 1000 m; Monts de Constantine. Jelenc (1956, 1967): Massif de la Bouzaréa, dans la forêt de Bainem. Rare.

Tortula muralis subsp. *obtusifolia* (Schwägr.) Culm.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Tiaret. Jelenc (1955a): Boghni; Djurdjura. Jelenc (1955b): *sine loco*. Rare.

Tortula revolvens (Schimp.) G.Roth

RECORDS. — Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Chettabah. Jelenc (1951): Tell oranais, forêt de Moulay Ismael, 110-120 m. Jelenc (1955a): Alger; Ben Chicao; Blida; Médéa. Collenot *et al.* (1960): Tassili N'Aijer, Afaïtalèsse. Ros & Guerra (1987a): El Kantara. Ros *et al.* (1990): Oued Rhiou. Rare.

Tortula schimperi M.J.Cano, O.Werner & J.Guerra

RECORDS. — Bizot (1973): Djebel Belezma à 15 km à l'ouest de Batna. Very rare.

Tortula solmsii (Schimp.) Limpr.

RECORDS. — Jelenc (1955a): Alger. Very rare.

Tortula subulata Hedw.

RECORDS. — Bescherelle (1882): Sommet de l'Atlas; Sud d'Oran. Bescherelle (1882), Lapie (1909): Djurdjura. Bescherelle (1882), Jelenc (1955a): Alger; Bordj-Boghni; Djebel Édough. Trabut (1887a), Jelenc (1955a): D'Oran à Mécheria, Tell. Corbière (1889), Jelenc (1955a):

Atlas de Blida, près de la glacière Laval, 1200 m. Corbière (1904), Jelenc (1955a): Kabylie, Fort National, Michelet, 1000-1200 m. Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Jelenc (1949, 1967): Monts de Tlemcen, Forêt de Tessera Mramet, 1350 m; Monts de Tlemcen, Forêt de Zariffet, 1100 m. Jelenc (1953): Aurès, flanc nord-ouest du Ras Keltoun, 2200 m; Babor, flanc nord du Babor, 1700 m. Jelenc (1953, 1967): Atlas de Blida, Cèdraies du ravin Bleu à Chrèa; Aurès, flanc sud du Chélia, 1700 m. Jelenc (1955a): Hauts-plateaux oranais; Kabylie du Djurdjura, col de Tirourda, 1700 m; Kabylie du Djurdjura, Dra Inguel; Monts de Ksour, djebel Aïssa; Monts de Tlemcen, Terni; Tiaret, 1000-1100 m. Jelenc (1956, 1967): Massif du Zaccar. Jelenc (1967): Aurès, Ras Kaltoun, 2200 m; Aurès, Ras-el-Ma; Massif du Babor, Le Babor, 1300 m; Massif du Bou Zegza, gorges de Keddara, 400 m. Jelenc (1967), Ahayoun *et al.* (2007): Aumale. Mazari & Boulaacheb (2023): Setif, Megriss Mountain. Common.

Tortula truncata (Hedw.) Mitt.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alma, champs sablonneux; Bône; La Calle. Trabut (1887a): D'Oran à Mécheria. Corbière (1889): Blida. Corbière (1904), Jelenc (1955a), Ahayoun *et al.* (2007): Alger. Jelenc (1955a): Baba Ali; Kabylie du Djurdjura, Fort National; Littoral oranais; Rouiba. Jelenc (1955a), Ahayoun *et al.* (2007): Maison-Carrée. Frequent.

COMMENT

Pottia truncata var. *archidioides* (Besch.) Paris was described by Bescherelle (1882) as *P. truncata* f. *archidioides* Besch. from Oran, bord de la mare du djebel Santo. Jelenc (1955a) compiled this report and added two localities (Maison-Carrée and Rouiba). According to Ros *et al.* (2013), its identity has not been revised since.

Tortula vahlia (Schultz) Mont.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger; Tiaret, 1150 m. Corbière (1904): Alger, faubourg de Telemly, talus. Corbière (1905), Jelenc (1955a): Environs de Constantine, Le Hamma; Environs de Constantine, près la tuilerie Moutin. Braun-Blanquet & Maire (1924), Jelenc (1955a): Tlemcen. Bizot (1973): Ruines de Timgad. Rare.

Tortula viridifolia (Mitt.) Blockeel & A.J.E.Sm.

RECORDS. — Corbière (1905), Jelenc (1955a): Environs de Constantine, djebel Ouach. Very rare.

Tortula wilczekii Meyl.

RECORDS. — Meylan (1936), Jelenc (1955a): Insula Habiba majore.

COMMENT

Meylan (1936) proposed the name *Tortula muralis* subsp. *mairei* Meyl. but was interpreted as species level as *Tortula mairei* Meyl. *nom. illeg.* later homonym by Jelenc (1955a), who replaced it by *Tortula wilczekii* Meyl. However, the identity of the taxon has not been revised because the type has not been traced (Ros *et al.* 2013).

Tortula wilsonii (Hook.) R.H.Zander

RECORDS. — Bescherelle (1882): Alger; Blidah; Collines du Bou-Ahmera et des Santons. Bescherelle (1882), Jelenc (1955a): Ravins du Bouzaréah. Jelenc (1955a): Atlas de Blida, oued el Kebir; Kabylie du Djurdjura, Bône; Kabylie du Djurdjura, Michelet. Jelenc (1955b, 1967): Monts de Constantine, djebel Ouach. Rare.

Trichostomum brachydontium Bruch

RECORDS. — Bescherelle (1882), Jelenc (1955a): Gorges de la Chiffa, ruisseau des Singes. Jelenc (1955a): Ait Khalfoun; Alger; Atlas de Blida, oued el Kebir, 200 m; Corso; Kabylie du Djurdjura, djebel Gouraya; Kabylie du Djurdjura, Fort National, 1000 m. Jelenc (1967): Sahel d'Alger, Haouch Khodja Berry, 150 m. Ros *et al.* (1990): Azazga; Between Mostaganem and Cap Ivi, Abdel-maimalek-Ramdan beach, 0 m; Hammam-Riga, 500 m; Texenna's wood, 700 m. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

COMMENT

Only the reports of *T. brachydontium* and *T. mutabile* Bruch ex De Not. *nom. illeg.* have been considered here for this species. Ros *et al.* (2022) recognized besides *T. brachydontium* s.s., another three species that had been considered as infraspecific taxa (*T. herzogii* Ros, O. Werner & R.D. Porley and *T. meridionale* Ros, O. Werner & R.D. Porley) or synonymized with *T. brachydontium* (*T. littorale* Mitt.). The identity and distribution of the *T. brachydontium* complex in Algeria should be reevaluated following the new taxonomical criteria.

Trichostomum littorale Mitt.

Nomenclature follows Ros *et al.* (2022).

RECORDS. — Feldmann (1947), Jelenc (1955a): Kabylie de Collo, vallée de l'oued Djerrah près du Melhab, 300-400 m. Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m. Rare.

COMMENT

See the previous comment. It was considered by Ros *et al.* (1999, 2013) as a synonym of *Trichostomum brachydontium*.

Vesicularia reimersiana Bizot & P. de la Varde

RECORDS. — Bizot & Potier de la Varde (1952), Jelenc (1955a): Tassili n'Adrar, point d'eau Tig Hert, à l'ouest de Tamada, 600 m. Very rare.

Warnstorfia fluitans (Hedw.) Loeske

RECORDS. — Bescherelle (1882): *sine loco*. Jelenc (1955a): Beni Foughal; Maison-Carrée. Rare.

Weissia armata (Thér. & Trab.) Fedosov

Weissia condensa var. *armata* (Thér. & Trab.) M.J.Cano, Ros & J. Guerra

Weissia papillosissima Laz.

Nomenclature follows Fedosov (2011).

RECORDS. — Thériot (1931, 1933), Jelenc (1955a), Cano *et al.* (2000): Hoggar, oued Haman, 2000 m. Jelenc (1955a): Est de Tazerouk. Collenot *et al.* (1960): Tassili N'Aijer, Afaïtalèsse. Frahm (1978): Laghouat. Rare.

Weissia brachycarpa (Nees & Hornsch.) Jur.

RECORDS. — Bescherelle (1882): Bougie; Édough; Stora. Bescherelle (1882), Jelenc (1955a): Alger. Corbière (1905), Jelenc (1955a): Environs de Constantine, route de la Corniche et près du Hama. Camus (1906), Jelenc (1955a): Oran; Tlemcen. Jelenc (1955b, 1967): Monts de Tlemcen, Mazer, dans les gorges de l'oued el Khémis. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Weissia condensa (Voit) Lindb.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger; Batna; Constantine, rochers du Rummel, Bougie. Corbière (1905), Jelenc (1955a): Environs de Constantine, Sidi M'Cid. Camus (1906), Jelenc (1955a): Monts de Tlemcen; Oran. Jelenc (1955a): Djebel Chenoua; El Kantara; Kabylie du Djurdjura, Aizer; Kabylie du Djurdjura, djebel Gouraya; Kef Mouella. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Frequent.

Weissia controversa Hedw.

RECORDS. — Montagne (1838), Bescherelle (1882), Jelenc (1955a): Alger. Bescherelle (1882): Blidah; Bône. Bescherelle (1882), Jelenc (1955a): La Calle; Philippeville. Corbière (1889): Blida, bords d'un ruisseau, aux Chênes-Lièges. Corbière (1904), Jelenc (1955a): Djebel Chenoua, La Bouzaréa. Corbière (1904, 1905), Jelenc (1955a): Constantine, bois du djebel Ouasch, 1100 m. Camus (1906), Jelenc (1955a): environs de Tlemcen. Lapie (1909): Kabylie du Djurdjura. Jelenc (1955a): Atlas de Blida, oued el Kebir, 200 m; Djebel Chenoua; Djidjelli; Kabylie du Djurdjura, Afensou; Kabylie du Djurdjura, col de Tirourda, 1700 m; Kabylie du Djurdjura, Fort National, 1000-1200 m. Jelenc (1956, 1967): Massif du Bou Zegza, dans les gorges de Keddara. Ros *et al.* (1990): Skikda beach, 0 m; Texenna's wood, 700 m. Frequent.

Weissia controversa var. *crispata* (Nees & Hornsch.)
Nyholm

RECORDS. — Jelenc (1955a): Kabylie du Djurdjura, col de Tirourda, 1700 m; Kabylie du Djurdjura, Fort National, 1000 m; Monts de Constantine, djebel Ouach. Jelenc (1956, 1967): Atlas Mitidjien, pic Mouzaïa. Rare.

Weissia controversa var. *densifolia* (Bruch & Schimp.)
Wilson

RECORDS. — Jelenc (1955a): La Bouzaréa; Monts de Constantine, djebel Ouach. Rare.

Weissia leptocarpa Schimp. ex Besch. *hom. illeg.*

RECORDS. — Paris (1894-1898): Algier? Jelenc (1955a): *sine loco*.

COMMENT

The report of Jelenc (1955a) was explicitly based on Paris' *Index Bryologicus* distribution data (Paris 1894-1898: 1364). Nevertheless, Paris gives as doubtful the presence in Africa, as he gives "Alger?", in addition to "Lusitania (Cintra)" in Europe. As no original report has been found in the Algerian bryophyte flora literature, the report in the country and northern Africa is doubtful. Furthermore it is an illegitimate and doubtful name (Sérgio & Carvalho 2003).

Weissia levieri (Limpr.) Kindb.

RECORDS. — Brotherus (1924): Algier. Jelenc (1955a): *sine loco*. Very rare.

COMMENT

Brotherus (1924) listed Algier in the distribution data of the species, and Jelenc (1955a) explicitly based his report on Brotherus work, indicating "*sine loco*" instead of the city of Algier. Ros *et al.* (1999, 2013), who based their lists on Jelenc (1955a) compilation interpreted it as an imprecise locality in northern Africa and was therefore not included in the Algerian list. Although the report is imprecise and no original report has been found in the Algerian bryophyte flora literature, the species could be present in the country, as it is not a rare species in the Mediterranean.

Weissia longifolia Mitt.

RECORDS. — Bescherelle (1882): Alger, Mustapha, coreaux de l'Ag-ha. Bescherelle (1882), Jelenc (1955a): Bône; Philippeville. Jelenc (1955a): Alger; Monts du Daya. Rare.

COMMENT

Astomum crispum var. *minus* Jelenc *nom. inval.* is based on the name *Systegium crispum* var. *minus* Besch. *nom. nud.* proposed by Bescherelle (1882) from Alger and Tiaret, and later compiled by Jelenc (1955a). According to Ros *et al.* (2013), the original material could not be found and therefore the identity of this name has not been studied; if it merits recognition, then a new combination under *Weissia longifolia* may be required.

Weissia multicapsularis (Sm.) Mitt.

RECORDS. — Corbière (1905), Jelenc (1955a): Environs de Constantine, plateau du Mansourah. Very rare.

Weissia rutilans (Hedw.) Lindb.

RECORDS. — Bescherelle (1882): Kabylie. Bescherelle (1882), Jelenc (1955a): Édough, bord des chemins maures; Kabylie du Djurdjura,

Bouiroun; Philippeville. Gandoger (1883): *sine loco*. Jelenc (1955a): Alger. Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Rare.

Weissia wimmeriana (Sendtn.) Bruch & Schimp.

RECORDS. — Bescherelle (1882), Jelenc (1955a): Alger; Philippeville. Rare.

Zygodon rupestris Schimp. ex Lorentz

RECORDS. — Boukhatem *et al.* (2017): El-Kala National Park, Tonga lake watershed. Very rare.

Zygodon viridissimus (Dicks.) Brid.

RECORDS. — Bescherelle (1882): Blidah; Kabylie; Oran. Bescherelle (1882), Jelenc (1955a): Alger; Birmandreïs; Bouzaréah; Gorges de la Chiffa; Hauts-plateaux oranais, Chellala Dahrana; La Calle, sur les chênes; Philippeville. Trabut (1887a): D'Oran à Mécheria. Jelenc (1955a): Alma; Kabylie des Babor, cap Aokas; Khodjaberry; Littoral oranais; Marengo. Frequent.

COMMENT

Zygodon viridissimus var. *vulgaris* Malta fo. *mediterranea* Malta was cited by Jelenc (1949, 1967) from Sahel d'Alger, Ben Aknoun, 250 m. The contradictory combination assignation of the two infraspecific taxa makes it not possible to assign any species to this name. As Ros *et al.* (1999, 2013) stated, *Zygodon viridissimus* var. *vulgaris* Malta *nom. illeg.* is an old name for *Zygodon rupestris* Schimp. ex Lorentz, and *Zygodon viridissimus* fo. *mediterraneus* Malta is a taxon related to *Zygodon viridissimus* (Dicks.) Brid.

DISCUSSION

SPECIES DIVERSITY

Based on this catalogue, a total of 477 species, as well as 21 infraspecific taxa, are reported from Algeria, resulting in a total of 498 taxa (Table 1). They include three hornwort species, 113 liverwort species (118 taxa), and 361 moss species (377 taxa).

Compared to the previous Algeria checklists (Ros *et al.* 2007a, 2013), which included five taxa of hornworts, 121 of liverworts, and 352 of mosses, the current update indicates a decrease of two species of hornworts and three of liverworts, alongside a net increase of 25 moss taxa.

The analysis of the floristic catalogue reveals that the hornwort and liverwort taxa are scarce, representing 24.3% of the total, whereas mosses represent 75.7%. Hornworts represent 0.6% of the bryophytes (2.5% of the total number of liverworts and hornworts together). Among hepatics, foliose species represent 39.7%, and thallose is 57.8%. These results are not surprising, as the hornworts grow in wet habitats (Frahm 2010) and are less-well adapted to the climatic and edaphic Mediterranean conditions, whereas the

thallose liverworts, especially the Marchantiopsida, are the best adapted (Bischler 2004).

Among mosses, there is a clear dominance of acrocarpous taxa (76.9% of the total number of mosses) over pleurocarpous taxa (23.1%). These data are also in agreement with the data of other Mediterranean countries (Ros *et al.* 2013).

Regarding the dominant families (Table 2), within hornworts and liverworts, Ricciaceae is the best represented, with 31 taxa (25.6% of the liverworts and hornworts' taxa). The aquatic and ephemeral Riellaceae, with eight taxa, is the second-best represented (6.6%), followed by Fossombroniaceae (seven taxa, 5.8%), Lophocoleaceae and Scapaniaceae (six taxa, 5.0% each), and Cephaloziellaceae and Porellaceae (five taxa, 4.1% each). The remaining 43.8% of hornwort and liverwort taxa belong to 25 different families. Concerning mosses, Pottiaceae is the dominant family, with 107 taxa (28.4% of the moss taxa), as it is well known for being the largest in the mosses in number of genera and consists of plants of small size well adapted to harsh environments (Zander 1993). It is followed at a great distance by Brachytheciaceae (39 taxa, 10.3%). Much fewer taxa belong to Bryaceae (27 taxa, 7.2%), Grimmiaceae (26 taxa, 6.9%), Orthotrichaceae (24 taxa, 6.4%), Fissidentaceae (20 taxa, 5.3%), Mniaceae (16 taxa, 4.2%), Funariaceae (15 taxa, 4.0%), and Bartramiaceae (10 taxa, 2.7%). The remaining 24.7% of the moss taxa belong to 37 different families. Further analysis of the catalogue (Table 2) reveals several genera that are especially well represented. It is not surprising that the genus *Riccia* is the most species-rich in Algeria, with 30 taxa (24.8% of the liverwort and hornwort taxa), followed at a great distance by *Riella* (eight taxa, 6.6%), *Fossombronia* (seven taxa, 5.8%), and *Cephaloziella* and *Porella* (five taxa, 4.1% each). Remarkably, most of them are annual or short-lived, and can develop during the short, humid periods, both in the Mediterranean and Saharan areas. The remarkable diversity of *Riccia* in the Mediterranean (Jovet-Ast 1986; Bischler 2004) is a well-known fact. But in the Maghreb countries in general, and Algeria in particular, the genus *Riella* is especially diverse (Jelenc 1957; Ros *et al.* 2013; Segarra-Moragues *et al.* 2014), probably due to the abundance of steppe areas in the Hauts Plateaux algériens, with many temporary lagoons.

Regarding mosses, the most species-rich genus is *Tortula*, with 22 taxa (5.8% of the moss taxa), followed by *Fissidens* (20 taxa, 5.3%); *Ptychostomum* (17 taxa, 4.5%), *Grimmia* (16 taxa, 4.2%), *Orthotrichum* (13 taxa, 3.4%), *Syntrichia* (12 taxa, 3.2%), *Weissia* (11 taxa, 2.9%), *Didymodon*, and *Entosthodon* (ten taxa, 2.7% each).

SPECIES RICHNESS

Analysis of Algerian species richness with other Maghreb countries (Table 3) places Algeria as the country with the second largest number of taxa. Having 498 taxa, Algeria is situated behind Morocco, which contains 526, and Tunisia, which has 305 taxa, is in the last place. Further analysis indicates that the percentages of the groups of bryophytes are similar. The percentages of liverworts and hornworts together are between 21.1 and 29.8% in the three countries (24.3% in Algeria,

TABLE 1. — Species diversity data of bryophytes in Algeria.

	Number of species	Number of infraspecific taxa	Number of taxa (%)	Percentages in hornworts+liverworts group	Percentages in mosses
Hornworts	3	0	3 (0.6%)	2.5%	—
Liverworts	113	5	118 (23.7%)	97.5% including 39.7% foliose and 57.8% thallose	—
Mosses	361	16	377 (75.7%)	—	76.9% acrocarpous 23.1% pleurocarpous
Total	477	21	498	—	—

21.1% in Morocco, and 29.8% in Tunisia). Moss percentages are in the range of 70.2 and 78.9% (75.7% in Algeria, 78.9% in Morocco, and 70.2% in Tunisia). Tunisia seems to have a higher percentage of liverworts and hornworts than Algeria and Morocco, despite having similar climatic conditions in the coastal areas. This is probably due to the deep study carried out by Jovet-Ast & Bischler (1971), who visited the country and made an exhaustive study of these plants. Even so, it was amplified recently by Ben Osman *et al.* (2019) by studying the Kroumiria region, in northern Tunisia. About mosses, the higher number of mosses in Morocco is clearly due to having been the object of much more attention and publications in the last decade of the 20th century and the first decade of the 21st century by Spanish bryologists of the University of Murcia and the Autonomous University of Madrid. Even lately, Moroccan researchers from the University of Ibn Tofail (Kenitra) are making many interesting additions to the country (e.g. Zaza *et al.* 2018; Laouzazni *et al.* 2020; Saadi *et al.* 2020). In Europe, the bryophytic flora is much better known than in the Maghreb. Countries like Greece, Italy, and Spain, neighboring countries of Algeria, have a greater bryophytic richness, containing 743, 1240, and 1182 taxa, respectively. The liverwort and hornwort species percentages in these European countries range from 20.1% to 24.6%, which coincides very well with that of Algeria and is within the range of the Maghreb countries. Concerning the mosses, the percentage of species in the European countries (from 75.4% to 79.9%) is very similar to the Algerian one and is close to the Maghreb countries. These proportions are within the expected range given that the Mediterranean climatic conditions limit the development of liverworts, which require a higher level of humidity than mosses (Frahm 2010).

This study shows that Algeria has the lowest species/km² ratio (0.20×10^{-3}), compared to the rest of the Maghreb and the selected European Mediterranean countries. It is not surprising, as Algeria is the biggest African country. With a surface area of 2 381 741 km², it is 5.3 times larger than Morocco and 14.5 times larger than Tunisia. Algeria is dominated by the Saharan Region, with very harsh weather conditions that hinder the development of bryophytes (Ozenda 1977). This ratio in the European countries is much higher than in the Maghreb. When looking at the species/km² ratio in the European Mediterranean countries, even in Greece, the smallest country considered (110 496 km²), it is much

higher (6.72×10^{-3}) than in any of the Maghreb countries, which allows us to confirm that the degree of knowledge of the bryophyte flora in northern African countries, which present physical environments, forests, and climatic conditions similar to those in the south of the European continent, is still incomplete.

SPECIES ABUNDANCE

According to the relative abundance of species in Algeria, 98 taxa (19.7%) are very rare, 263 taxa (52.8%) are rare, 77 (15.5%) are frequent, 48 (9.6%) are common, and only 12 (2.4%) are very common. These data indicate that 72.5% of the catalogued taxa are rare and very rare, and 27.5% are frequent, common, and very common. All the abundance categories surprisingly are present in very similar percentages in Algeria as in studies in other areas, e.g. in the Sierra Nevada Mountains, in southern Spain (Rams *et al.* 2014). That can lead to the assumption that the deviation due to the undercollection in Algeria is similar to other Mediterranean areas. Only 12 mosses are very common, but surprisingly some very common species in other Mediterranean areas (Ros & Guerra 1987b; García-Zamora *et al.* 1998; Rams *et al.* 2014; Muñoz 2023) are common or frequent in Algeria (e.g. *Bryum argenteum*, *Didymodon insulanus*, *D. vinealis*, *Funaria hygrometrica*, *Ptychostomum capillare*, *P. pseudotriquetrum*, *Syntrichia ruralis*, *Tortula subulata*...), which leads to the assumption that the country is still underexplored. Also, species such as *Plasteurynchium meridionale*, *Pohlia cruda*, and *Pottiopsis caespitosa*, which are rare in Algeria (reported from two to six localities), are expected to be much more abundant, as they are typical Mediterranean species (Dierßen 2001). On the contrary, it's plausible that certain species reported from very few localities may stem from misidentifications, casting doubt on their reliability regarding their presence in the country. Among these species, some haven't been officially accepted and are thus labeled with an asterisk (*) indicating their doubtful status in Algeria. A critical step would be to review the collections to ascertain their reliability. For recent reports like *Brachymenium commutatum* and *Hydrogonium arcuatum*, this should be feasible, as they are expected to be preserved in an herbarium. For older reports, locating specimens is highly improbable or even impossible, as they may be challenging to find or possibly destroyed. Consequently, these reports can only be reconsidered for inclusion in the Algerian flora if new collections are discovered. That is the

TABLE 2. — Dominant families and genera of bryophytes in Algeria.

Liverworts	Number of taxa (% of hornworts and liverworts' taxa)	Mosses	Number of taxa (% of mosses' taxa)
Families		Number of families	
Number of families	32	Pottiaceae	46
Ricciaceae	31 (25.6%)	Brachytheciaceae	107 (28.4%)
Riellaceae	8 (6.6%)	Bryaceae	39 (10.3)
Fossombroniaceae	7 (5.8%)	Grimmiaceae	27 (7.2%)
Lophocoleaceae	6 (5.0%)	Orthotrichaceae	26 (6.9)
Scapaniaceae	6 (5.0%)	Fissidentaceae	24 (6.4%)
Cephaloziellaceae	5 (4.1%)	Mniaceae	20 (5.3%)
Porellaceae	5 (4.1%)	Funariaceae	16 (4.2%)
		Bartramiaceae	15 (4.0%)
Subtotal	68 (56.2%)	Subtotal	10 (2.7%)
Other families (25)	50 (43.8%)	Other families (37)	288 (74.4%)
			93 (24.7%)
Genera		Number of genera	
Number of genera	55	<i>Tortula</i>	135
<i>Riccia</i>	30 (24.8%)	<i>Fissidens</i>	22 (5.8%)
<i>Riella</i>	8 (6.6%)	<i>Ptychostomum</i>	20 (5.3%)
<i>Fossombronia</i>	7 (5.8%)	<i>Grimmia</i>	17 (4.5%)
<i>Cephaloziella</i>	5 (4.1%)	<i>Orthotrichum</i>	16 (4.2%)
<i>Porella</i>	5 (4.1%)	<i>Syntrichia</i>	13 (3.4%)
		<i>Weissia</i>	12 (3.2%)
Subtotal	55 (45.5%)	<i>Didymodon</i>	11 (2.9%)
Other genera (50)	50 (54.5%)	<i>Entosthodon</i>	10 (2.7%)
		Subtotal	10 (2.7%)
		Other genera (126)	131 (34.7%)
			50 (65.3%)

case of *Physcomitrium pyriforme*, as it is a rare species in the Mediterranean and frequently confused with *Entosthodon fascicularis* (Brugués & Ruiz 2010). Also, the presence of some pleurocarpous mosses seems to be unreliable. That is the case of *Hamatocaulis vernicosus*, reported from Gorges de la Chiffa. Despite being a Circumpolar Boreal-montane species, its ecological preferences for inhabiting mires, flushes, fenny hollows, and springheads in upland areas (Blockeel *et al.* 2014b), do not seem to correspond to the characteristics of the Algerian locality. The presence of three Hylocomiaceae reported from Tizi-Ouzou or the neighboring areas in the Kabylie du Djurdjura, such as *Hylocomiadelphus triquetrus*, *Hylocomium splendens*, and *Loeskeobryum brevirostre*, is also improbable in localities close to the Mediterranean coast. It can be hypothesized that because they share a similar habitus, they could even belong to a unique species. Five Plagiotheciaceae have been reported in the Kabylie du Djurdjura, a very uncommon family in the Mediterranean Region. Two of their species, *Isopterygiopsis pulchella* and *Orthothecium intricatum*, are likely to be found in Mediterranean areas (Guerra *et al.* 2018a, b), and therefore they have been accepted but are reported in the same locality (Djurdjura, Ifri n'Ouadnèfel). Since they are often confused (Blockeel *et al.* 2014b; Guerra *et al.* 2018a), their reliability is uncertain. Also, the presence of *Platygyrium repens* and *Pylaisia polyantha* is doubtful. Both are Circumpolar Temperate species (Blockeel *et al.* 2014b), and their identification is difficult to establish without doubt, even to distinguish them from some Hypnaceae species.

From the collection data, it is observed that the most sampled areas are the wettest and richest in bryophytes, mainly

the northern regions of Kabylie and Kroumerie, primarily in the Tell Atlas. Among the better-studied mountain ranges are the Tlemcen Mountains, the Blida Atlas, the Djurdjura Massif, the Constantine Mountains, and the Aurès Massif. To a lesser extent, samples come from the Hauts Plateaux and from locations already included in the Saharan region. However, the Hoggar and Tassili n'Ajjer massifs have also attracted attention and have been the subject of interesting collections and findings, such as *Brachymenium exile*, *Fabronia leikipiae* var. *ahaggarensis*, *Funaria altissima*, *Riccia frostii*, *Vesicularia reimersiana*, and *Weissia armata*.

CONCLUSIONS

The Algerian bryophyte flora, at present consisting of 498 taxa, was made mainly by French botanists in the 19th and first half of the 20th centuries. It cannot be considered well known. The presence of great mountain systems, which include a great diversity of forests in the northern coastal region of Algeria, as well as steppe areas with many temporary lagoons and even desertic areas in the Saharan region, portend a higher diversity of bryophytes than has been reported until now, mainly of well-adapted species, as in many other well-known European Mediterranean countries. More intensive exploration of the country is necessary to accurately assess the true abundance of species, in addition to completing the species diversity. This includes confirmation of the presence of certain dubious taxa, some of which have only been reported once and whose citations cannot be reviewed because herbarium

TABLE 3. — Comparison in species richness in the Maghreb countries (in the restricted sense) and three European Mediterranean countries.

	Maghreb			Europe		
	Algeria	Morocco	Tunisia	Greece	Italy	Spain
Bryophyte taxa number	498	526	305	743	1240	1182
Liverworts and hornworts taxa number (%)	121 (24.3)	111 (21.1)	91 (29.8)	594 (20.1)	305 (24.6)	286 (24.2)
Mosses taxa number (%)	377 (75.7)	415 (78.9)	214 (70.2)	149 (79.9)	935 (75.4)	896 (75.8)
Surface of the country (km ²)	2381741	446550	163610	110496	251408	492899
Bryophyte taxa/km ²	0.20 × 10 ⁻³	1.18 × 10 ⁻³	1.86 × 10 ⁻³	6.72 × 10 ⁻³	4.93 × 10 ⁻³	2.40 × 10 ⁻³

collections are difficult or impossible to find due to the great dispersion of samples in different herbaria and the disappearance of a large part of the Jelenc herbarium. Only with new sampling could the complete catalogue of bryophytes be established and advance the knowledge and protection of these plants in Algeria.

Acknowledgements

The authors thank J. Muñoz for his invaluable help in relation to the finding of some problematic location names and providing literature. The students of the University of Murcia, Sonia Giménez Carreño and Pablo Egea Benavente are thanked for helping with the analysis of the data and the preparation of the manuscript. Also, we thank Nick Hodgetts and two anonymous reviewers for reviewing an earlier version of the manuscript. This research was partially supported by grant PID2019-106091GB-I00 funded by MCIN/AEI/10.13039/501100011033.

REFERENCES

- AHAYOUN K., OUAZZANI TOUHAMI A., FENNANE M. & DOUIRA A. 2007. — Inventaire des bryophytes de l'herbier "RAB" de l'Institut scientifique (Rabat, Maroc). *Documents de l'Institut scientifique, Rabat* 21: 71-89. https://bibdigital.rjb.csic.es/medias/20/b2/71/e7/20b271e7-622e-4c4f-97c5-95e90670533b/files/Ahayoun_Inv_Bryophytes_Herb_Nat_Doc_Inst_Sci_Rabat_21_71-89_2007.pdf
- ALEFFI M., TACCHI R. & POPONESSI S. 2020. — New Checklist of the Bryophytes of Italy. *Cryptogamie, Bryologie* 41 (13): 147-195. <https://doi.org/10.5252/cryptogamie-bryologie2020v41a13>
- ALLORGE P. 1932. — Die Gattung *Riella* Mont. *Die Pflanzenareale* 3 (5): 45-47.
- ALLORGE V. 1955. — Catalogue préliminaire des Muscinées du Pays basque français et espagnol. *Revue bryologique et lichénologique* 24: 96-333.
- ANDREÁNSZKY G. 1934. — Plantae in Africa boreali lectae. 1. *Index Horti Botanici Universitatis Budapestinensis* 2: 80-82.
- BARKMAN J. J. 1963. — A contribution to the taxonomy of the *Tortula laevipila*-*T. pagorum* complex. *Revue bryologique et lichénologique* 32: 183-192.
- BATTANDIER J. & TRABUT L. 1886. — *Atlas de la flore d'Alger: iconographie avec diagnoses d'espèces nouvelles, inédites ou critiques de la flore atlantique*. Fascicle 1. Adolphe Jourdan, Alger, 80 p.
- BATTANDIER J., MAIRE R. & TRABUT L. 1914. — Rapport sur les herborisations faites par la Société pendant la session d'Alger. *Bulletin de la Société botanique de France* 61: 37-104.
- BEDNAREK-UCHYRA H. 2006. — *A taxonomic monograph of the moss genus Codriophorus P.Beauv (Grimmiaceae)*. W.Szafer Institute of Botany, Polish Academy of Sciences, Kraków, 276 p.
- BELL D., LONG D. G. & HOLLINGSWORTH P. 2013. — *The use of DNA barcoding to address major taxonomic problems for rare British bryophytes*. Unpublished report. Royal Botanic Garden, Edinburgh, 69 p.
- BEN OSMAN I., HUGONNOT V., MULLER S. D. & DAOUD-BOUATTOUR A. 2019. — A contribution to the study of hornworts and liverworts in Tunisia: a checklist and ecology of Kroumirian species. *Cryptogamie, Bryologie* 40 (21): 271-287. <http://cryptogamie.com/bryologie/40/21>
- BESCHERELLE E. 1882. — *Catalogue des mousses observées en Algérie*. Adolphe Jourdan, Libraire-éditeur, Alger, 41 p.
- BISCHLER H. 1970. — Les espèces du genre *Calypogeia* sur le continent africain et les îles africaines. *Revue bryologique et lichénologique* 37: 63-134.
- BISCHLER H. 1978. — *Plagiochasma* Lehm. et Lindenb. II. Les taxa européens et africains. *Revue bryologique et lichénologique* 44: 323-300.
- BISCHLER H. 2004. — Liverworts of the Mediterranean. Ecology, diversity and distribution. *Bryophytorum Bibliotheca* 61: 1-252.
- BIZOT G. & LAURIOL J. 1950. — Bryophyta, in MAIRE R. & MONOD T. (eds), *Études sur la flore et la végétation du Tibesti. Mémoires de l'Institut d'Afrique noire* 8: 22-23.
- BIZOT M. 1973. — Mouses africaines récoltées par M. Dénes Balázs. *Acta Botanica Academiae Scientiarum Hungaricae* 18: 7-28.
- BIZOT M. & POTIER DE LA VARDE R. 1952. — Sur l'existence du genre *Vesicularia* en Afrique du Nord. *Revue bryologique et lichénologique* 21: 226-228.
- BLOCKEEL T. L., BEDNAREK-UCHYRA H., CZERNYADJEVA I. V., DRAPER I., FUDALI E., KUČERA J., LONG D. G., ROS R. M., UCHYRA R., SMITH V. R., SOLLIMAN P., SOTIAUX A., THINGSGAARD K. & ZMRHALOVÁ M. 2003. — New National and regional bryophyte records, 8. *Journal of Bryology* 25 (3): 217-221. <https://doi.org/10.1179/037366803235001715>
- BLOCKEEL T. L., BOSANQUET S. D. S., HILL M. O. & PRESTON C. D. 2014a. — *Atlas of British & Irish Bryophytes*. Vol. 1. Pisces Publications, Newbury, 549 p.
- BLOCKEEL T. L., BOSANQUET S. D. S., HILL M. O. & PRESTON C. D. 2014b. — *Atlas of British & Irish Bryophytes*. Vol. 2. Pisces Publications, Newbury, 652 p.
- BLOM H. H. 1996. — A revision of the *Schistidium apocarpum* complex in Norway and Sweden. *Bryophytorum Bibliotheca* 49: 1-133.
- BONNOT E.-J. 1963. — *Fissidens ovatifolius* Ruth. Étude systématique et bryogéographique. *Bulletin de la Société linnéenne de Lyon* 7: 196-207.
- BORY DE SAINT-VINCENT J. B. G. M. & MONTAGNE C. 1843. — Nouveau genre de la famille des hépatiques. *Comptes rendus hebdomadaires des séances de l'Académie des sciences* 16: 1112-1117.
- BOUKHATEM A., BENSLAMA M. & ABED-BELOUAHEM D. 2017. — Biodiversity and Ecology of Mosses in Northeastern Algeria: Case of the Watershed Tonga. *Revue des Sciences et de la Technologie* 35: 59-68.
- BRASSARD G. R. 1984. — The moss genus *Timmia*. 3. Sect. *Timmia*. *Lindbergia* 10: 33-40.
- BRAUN-BLANQUET J. 1954. — Contribution à la flore bryologique du Maroc. *Revue bryologique et lichénologique* 23: 100-104.

- BRAUN-BLANQUET J. & MAIRE R. 1924. — Études sur la végétation et la flore marocaines. *Mémoires de la Société des Sciences naturelles du Maroc* 8 (1): 5-244.
- BREMER B. 1980. — A taxonomic revision of *Schistidium* (Grimmiaceae, Bryophyta) 2. *Lindbergia* 6: 89-117.
- BRONGNIART M. C. 1882. — Excursion dans l'Atlas (1). *Comptes rendus de l'Association française pour l'avancement des Sciences* 10: 1084-1091.
- BROTHERUS V. F. 1909. — Musci (Laubmoose). II. Spezieller Teil, in ENGLER H. G. A. & PRANTL K. A. E. (eds), *Die natürlichen Pflanzenfamilien*. I. Teil. Abt. 3. I. Hälfte. W. Engelmann, Leipzig: 277-700.
- BROTHERUS V. F. 1924. — Musci (Laubmoose). II. Spezieller Teil, in ENGLER A. (ed.), *Die natürlichen Pflanzenfamilien*. Edition 2. Bd 10. W. Engelmann, Leipzig: 143-478.
- BRUGGEMAN-NANNENGA M. A. 1978. — Notes on *Fissidens*. I and II. *Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen, Series C: Biological and Medical Sciences* 81: 387-402.
- BRUGGEMAN-NANNENGA M. A. 1982. — The section *Pachylomidium* (genus *Fissidens*) III. The *F. crassipes* subcomplex. *Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen, Series C: Biological and Medical Sciences* 85: 59-104.
- BRUGGEMAN-NANNENGA M. A. 1987. — An annotated list of *Fissidens* species from the Yemen Arab Republic and Sultanate of Oman, with *F. laxetexturatus* nov. spec. *Nova Hedwigia* 45: 113-117.
- BRUGUÉS M. & RUIZ E. 2010. — *Physcomitrium*, in GUERRA J., BRUGUÉS M., CANO M. J. & CROS R. M. (eds), *Flora Briofítica Ibérica*. Vol. 4: *Funariales, Splachnales, Schistostegales, Bryales, Timmiales*. Universidad de Murcia, Sociedad Española de Briología, Murcia: 43-44.
- BRUGUÉS M. 1998. — The identity of *Entosthodon duriei* and *E. pallescens*. *The Bryologist* 101: 133-136. <https://doi.org/10.2307/3244085>
- BRUGUÉS M., ROS R. M., SÁEZ L. & CANO M. J. 2010. — *Entosthodon commutatus* Durieu et Mont. (Funariaceae, Bryopsida), new to Europe and Morocco. *Cryptogamie, Bryologie* 31 (3): 271-276.
- CAMUS F. 1906. — Muscinées récoltées en Algérie pendant la session de la Société botanique de France et déterminées. *Bulletin de la Société botanique de France* 53: 216-217. <https://doi.org/10.1080/00378941.1906.10831145>
- CANO M. J. 1992. — *El género Crossidium (Pottiaceae, Musci) en la región mediterránea y áreas limítrofes*. Tesis de Licenciatura. Universidad de Murcia, Murcia, 96 p.
- CANO M. J., GUERRA J. & ROS R. M. 1993. — A revision of the moss genus *Crossidium* (Pottiaceae) with the description of the new genus *Microcrossidium*. *Plant Systematics and Evolution* 188 (3): 213-235. <https://doi.org/10.1007/BF00937729>
- CANO M. J., ROS R. M. & GUERRA J. 2000. — Identity of North African endemic bryophytes, 1. *Journal of Bryology* 22: 269-272. <https://doi.org/10.1179/jbr.2000.22.4.269>
- CARDOT J. 1884. — Notes sphagnologiques. Descriptions de quelques variétés nouvelles. *Revue bryologique* 11: 54-56.
- CARDOT J. 1904. — Énumération des mousses récoltées par M. Hochreutiner en Algérie. *Annuaire du Conservatoire et du Jardin botaniques de Genève* 7-8: 239-241.
- CASARES-GIL M. 1919. — *Flora Ibérica. Briófitas* (Primera parte). *Hepáticas*. Museo Nacional de Ciencias Naturales, Madrid, 775 p.
- CHARCO GARCÍA J. 1999. — *El bosque mediterráneo en el norte de África*. Agencia Española de Cooperación Internacional, Madrid, 370 p.
- CHEVASSUT G. 1956. — Les groupements végétaux du marais de la Rassauta. *Annales de l'Institut agricole et des Services de Recherches et d'Experimentation agricoles de l'Algérie* 10: 1-96.
- CHEVASSUT G. & QUÉZEL P. 1956. — Contribution à l'étude des groupements végétaux de mares temporaires à *Isoetes velata* et de dépressions humides à *Isoetes hystrix* en Afrique du Nord. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 47: 59-73.
- CHEVASSUT G. & QUÉZEL P. 1958. — L'association à *Damasonium polyspermum* et *Ranunculus batrachioides*. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 49: 204-210.
- COLLENOT A., DUBUIS A. & FAUREL L. 1960. — Note sur la flore du Tassili N'Aijer. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 51: 233-254.
- COPPEY M. A. 1911. — Mousses du Sahara. *Bulletin de la Société botanique de France* 58: 500-504. <https://doi.org/10.1080/00378941.1911.10832341>
- CORBIÈRE L. 1889. — Mousses et hépatiques des environs de Blida (Algérie). *Revue bryologique* 16: 149-155.
- CORBIÈRE L. 1904. — Contribution à la flore bryologique de l'Algérie. *Revue bryologique* 31: 31-42.
- CORBIÈRE L. 1905. — Muscinées des environs de Constantine. *Comptes rendus de l'Association française pour l'avancement des Sciences*, séance du 9 août: 475-487.
- COSSON E. 1853. — Rapport sur un voyage botanique en Algérie, D'Oran au Chott-el-Chergui. *Annales des Sciences naturelles, Botanique*, série 3, 19: 83-140.
- CRUNDWELL A. C. & NYHOLM E. 1964. — The European species of the *Bryum erythrocarpum* Complex. *Transactions of the British Bryological Society* 4: 597-637. <https://doi.org/10.1179/006813864804812128>
- CRUNDWELL A. C. & NYHOLM E. 1974. — *Funaria mühlenbergii* and related European species. *Lindbergia* 2: 222-229.
- DELGADILLO C. 1975. — Taxonomic revision of *Aloina*, *Aloinella* and *Crossidium* (Musci). *The Bryologist* 78: 245-303. <https://doi.org/10.2307/3241887>
- DESFONTAINES R. 1799. — *Flora Atlantica, sive historia plantarum, quae in Atlante, agro Tunetano et Algeriensi crescunt*. Vol. 2. L. G. Desgranges, Paris, 458 p.
- DIERSSEN K. 2001. — Distribution, ecological amplitude and phytosociological characterization of European bryophytes. *Bryophytorum Bibliotheca* 56: 1-289.
- DIRKSE G. M. & BOUMAN A. C. 1995. — A revision of *Rhynchostegiella* (Musci, Brachytheciaceae) in the Canary Islands. *Lindbergia* 20: 109-121.
- DISMIER G. 1930. — *Orthotrichum shawii* Wils. nouveau pour l'Italie et *Cololejeunea rossettiana* (Massal.) Schiffn. pour l'Algérie. *Revue bryologique* 2 (3-4): 207-208.
- DIXON H. N. 1904. — Note on *Rhynchostegium litoreum* Bott. *Revue bryologique* 31 (2): 21-23.
- DIXON H. N. 1931. — Two mosses from the Central Sahara. *Journal of Botany* 69: 285-287.
- DOIGNON P. 1953. — Les *Stereodon* exotiques. *Revue byologique et lichénologique* 22: 34-51.
- DOUIN C. I. 1904. — *Pyramidula algeriensis* R. Chadeau & Douin sp. nov. Chartres.
- DOUIN C. & TRABUT L. 1919. — Deux hépatiques peu connues. *Revue générale de Botanique* 31: 321-330.
- DRAPER I., LARA F., ALBERTOS B., GARILLETI R. & MAZIMPAKA V. 2003. — The epiphytic bryoflora of the Jbel Bouhalla (Rif, Morocco) including a new variety of moss, *Orthotrichum speciosum* var. *brevisetum*. *Journal of Bryology* 25: 271-280. <https://doi.org/10.1179/037366803225013146>
- DUBUIS A. & FAUREL L. 1945. — Note sur quelques espèces nouvelles ou intéressantes pour la Flore du Djurdjura. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 36: 12-22.
- DÜLL R. 1986. — Revision of *Rhynchostegiella* and closely related taxa in Macaronesia with reference to their occurrence in Europe. *Bryologische Beiträge* 6: 91-105.
- DURIEU DE MAISONNEUVE M. C. 1846. — *Exploration scientifique de l'Algérie pendant les années 1840, 1841, 1842 publiée par ordre du gouvernement et avec le concours d'une commission académique. Sciences physiques. Botanique par MM Bory de St-Vincent et Durieu de Maisonneuve membres de la Commission scientifique d'Algérie*. Atlas. Livraison 4. Imprimerie royale, Paris.
- DURIEU DE MAISONNEUVE M. C. 1849. — *Exploration scientifique de l'Algérie pendant les années 1840, 1841, 1842 publiée par ordre du gouvernement et avec le concours d'une commission académique. Sciences physiques. Botanique par MM Bory de St-Vincent et Durieu de Maisonneuve membres de la Commission scientifique d'Algérie*. Atlas. Livraison 15. Imprimerie royale, Paris.

- DURIEU DE MAISONNEUVE M. C. 1868. — *Exploration Scientifique de l'Algérie*. Vol. 2. Livraison 18/19. Imprimerie royale, Paris.
- EDDY A. 1985. — A revision of African Sphagnales. *Bulletin of the British Museum (Natural History) Botany* 12: 77-162.
- ELLIS L. T., AH-PENG C., ALEFFI M., BARÁTH K., BRUGUÉS M., RUIZ A., BUCK W. R., CZERNYADJEVA I. V., ERZBERGER P., FANTECELLE L. B., PEÑALOZA-BOJACÁ G. F., ARAÚJO C. A. T., OLIVEIRA B. A., MACIEL-SILVA A. S., GREMMEN N. J. M., GUO S.-L., HEDDERSON T. A., FEBRUARY E., WILDING N., HUGONNOT V., KIRMACI M., KÜRSCHNER H., LEBOUVIER M., MESTERHÁZY A., OCHYRA R., PHILIPPE M., PLÁŠEK V., SKOUPÁ Z., POPONESSI S., GIGANTE D., VENANZONI R., RAWAT K. K., SAHU V., ASTHANA A. K., SABOVLEVIĆ M. S., SABOVLEVIĆ A. D., SCHÄFER-VERWIMP A. & WIERZCHOLSKA S. 2017. — New national and regional bryophyte records, 50. *Journal of Bryology* 39 (1): 99-114. <https://doi.org/10.1080/03736687.2016.1259931>
- ENROTH J., OLSSON S., HUTTUNEN S. & QUANDT D. 2022. — *Neckera*, *Forststroemia* and *Alleniella* (Neckeraceae, Bryophyta) redefined based on phylogenetic analyses. *The Bryologist* 125 (2): 311-327. <https://doi.org/10.1639/0007-2745-125.2.311>
- FEDOSOV V. E. 2011. — On *Entosthodon fascicularis* and *Weissia armata* comb. nov. (= *W. papillosissima* Laz.) in Russia. *Arctoa* 20: 191-196. <https://doi.org/10.15298/arctoa.20.14>
- FEDOSOV V. E. 2012. — *Encalypta* sect. *Rhabdotheca* in Russia. *Arctoa* 21: 101-112. <https://doi.org/10.15298/arctoa.21.10>
- FEDOSOV V. E., FEDOROVA A. V., FEDOSOV A. E. & IGNATOV M. S. 2016. — Phylogenetic inference and peristome evolution in haplolepidous mosses, focusing on Pseudoditrichaceae and Ditrichaceae s.l. *Botanical Journal of the Linnean Society* 181: 139-155. <https://doi.org/10.1111/boj.12408>
- FEDOSOV V., FEDOROVA A., IGNATOVA E. & KUČERA J. 2023. — New Taxonomic Arrangement of *Dicranella* s.l. and *Aongstroemia* s.l. (Dicranidae, Bryophyta). *Plants* 12: 1360. <https://doi.org/10.3390/plants12061360>
- FELDMANN J. 1945. — Le genre *Sematophyllum* (Bryophytes-Hypnobryales) en Algérie. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 36: 71-81.
- FELDMANN J. 1947. — Contribution à l'étude bryologique de l'Algérie. *Revue bryologique et lichénologique* 16: 60-66.
- FRAHM J.-P. 1978. — Zur Mossflora der Sahara. *Nova Hedwigia* 30: 527-548. <https://doi.org/10.1127/nova.hedwigia/30/1979/527>
- FRAHM J.-P. 1985. — Afrikanische Campylopus-Arten. *Bryophytorum Bibliotheca* 31: 1-216.
- FRAHM J.-P. 2010. — Mosses and Liverworts of the Mediterranean: an illustrated field guide. Books on Demand GmbH, Norderstedt, 138 p.
- GALLEGO M. T. 2005. — A taxonomic study of the genus *Syntrichia* Brid. (Pottiaceae, Musci) in the Mediterranean region and Macaronesia. *Journal of the Hattori Botanical Laboratory* 98: 47-122. https://doi.org/10.18968/jhbl.98.0_47
- GALLEGO M. T., CANO M. J., ROS R. M. & GUERRA J. 1999. — The genus *Aloina* (Pottiaceae, Musci) in the Mediterranean region and neighboring areas. *Nova Hedwigia* 69 (1-2): 173-194. <https://doi.org/10.1127/nova.hedwigia/69/1999/173>
- GANDOGHER M. 1883. — *Catalogue des plantes récoltées pendant mon séjour en Algérie de 1877 à 1880*. F. Savy, Paris, 39 p.
- GARCÍA-ZAMORA P., ROS R. M. & GUERRA J. 1998. — Bryophyte flora of the Sierras de Filabres, Cabrera, Alhamilla and Cabo de Gata (Almería, SE Spain). *Journal of Bryology* 20: 461-493.
- GARILLETI R., LARA F. & MAZIMPAKA V. 2007. — Typification of twenty-six varieties of *Orthotrichum* (Orthotrichaceae, Bryopsida) published by G. Venturi. *Nova Hedwigia* 84 (3-4): 503-512. <https://doi.org/10.1127/0029-5035/2007/0084-0503>
- GAUTHIER R. 1987. — Note sur trois mousses du Sahara algérien. *Cryptogamie, Bryologie et Lichénologie* 8: 27-29.
- GAUTHIER-LIÈVRE L. 1931. — *Recherches sur la flore des eaux continentales de l'Afrique du Nord*. Société d'Histoire naturelle de l'Afrique du Nord, Alger, 299 p.
- GEHEEB M. A. 1879. — Une nouvelle espèce de mousses d'Europe et sa relation avec une espèce d'Afrique. *Revue bryologique* 6: 33-36.
- GEOGRAPHY OF GREECE. 2022. — Available from https://en.wikipedia.org/wiki/Geography_of_Greece (accessed on 13 December 2022).
- GOFFINET B., SHAW A. J., COX C. J., WICKETT N. J. & BOLES S. 2004. — Phylogenetic inferences in the Orthotrichoideae (Orthotrichaceae: Bryophyta) based on variation in four loci from all genomes. *Monographs in Systematic Botany from the Missouri Botanical Garden* 98: 270-289.
- GRADSTEIN S. R. & SIPMAN H. J. M. 1978. — Taxonomy and world distribution of *Campylopus introflexus* and *C. pilifer* (= *C. polyttrichoides*): a new synthesis. *The Bryologist* 81: 114-121. <https://doi.org/10.2307/3242275>
- GREVEN H. C. 1995. — *Grimmia* Hedw. (Grimmiaceae, Musci) in Europe. Backhuys Publishers, Leiden, 160 p.
- GROLLE R. 1976. — Verzeichnis der Lebermoose Europas und benachbarter Gebiete. *Feddes Repertorium* 87: 171-279.
- GUERRA J. 2016. — Notes on the genus *Eurhynchiastrum* (Bryophyta, Brachytheciaceae) in the Iberian Peninsula. *Nova Hedwigia* 102: 359-365. https://doi.org/10.1127/nova_hedwigia/2015/0313
- GUERRA J., JIMÉNEZ M. N., ROS R. M. & CARRIÓN J. S. 1991. — El género Phascum (Pottiaceae) en la península Ibérica. *Cryptogamie, Bryologie et Lichénologie* 12: 379-423.
- GUERRA J., CANO M. J. & BRUGUÉS M. 2018a. — *Flora Briofítica Ibérica*. Vol. 6: *Fabroniaceae, Leskeaceae, Pterigynandraceae, Thuidiaceae, Calliergonaceae, Amblystegiaceae, Brachytheciaceae, Lembophyllaceae, Entodontaceae, Sematophyllaceae, Plagiotheciaceae, Hypnaceae, Hylocomiaceae, Pylaisiadelphaceae, Rhytidiaceae*. Universidad de Murcia, Murcia and Sociedad Española de Briología, Vitoria, 320 p.
- GUERRA J., GALLEGO M. T., JIMÉNEZ J. A., CANO M. J., CASIMIRO-SORIGUER SOLANAS F., PÉREZ LATORRE A. V. & CABEZUDO B. 2018b. — *Flora briofítica del espacio natural Sierra de las Nieves y su entorno (Málaga, España)*. Universidad de Murcia, Murcia, 27 p.
- HALLINGBÄCK T. 2019. — *Conocephalum salebrosum* (Europe assessment). The IUCN Red List of Threatened Species 2019: e.T87532502A87834538. Accessed on 14 February 2024.
- HARIOT P. 1913. — Quelques cryptogames du Sahara et des régions voisines. *Bulletin du Muséum d'Histoire naturelle* 19: 113-115.
- HEDENÄS L., HEINRICHS J. & GALLEGO M. T. 2019. — The Scandinavian *Syntrichia ruralis* complex (Musci, Pottiaceae): a chaos of diversification. *Plant Systematics and Evolution* 305: 639-661. <https://doi.org/10.1007/s00606-019-01596-0>
- HODGETTS N. G., SÖDERSTRÖM L., BLOCKEEL T. L., CASPARI S., IGNATOV M. S., KONSTANTINOVA N. A., LOCKHART N., PAPP B., SCHRÖCK C., SIM-SIM M., BELL D., BELL, N. E., BLOM H. H., BRUGGEMAN-NANNENGA M. A., BRUGUÉS M., ENROTH J., FLATBERG K. I., GARILLETI R., HEDENÄS L., HOLYOAK D. T., HUGONNOT V., KARIYAWASAM I., KÖCKINGER H., KUČERA J., LARA F. & PORLEY R. D. 2020. — An annotated checklist of bryophytes of Europe, Macaronesia and Cyprus. *Journal of Bryology* 42 (1): 1-116. <https://doi.org/10.1080/03736687.2019.1694329>
- HOFMANN H. 1998. — A monograph of the genus *Homalothecium* (Brachytheciaceae, Musci). *Lindbergia* 23: 119-159.
- HOLYOAK D. T. 2021. — *European Bryaceae. A guide to the species of the moss family Bryaceae in Western & Central Europe and Macaronesia*. Pisces Publications, Berkshire, 344 p.
- HUARTE IRURZUN B. 2001. — *Estudio de la flora muscinal (clase Musci, subclase Bryidae) de Navarra actualización, profundización, catálogo y análisis*. PhD Thesis. Universidad de Navarra, Pamplona, 548 p.
- IBERIA.NATURE. 2022. — Physical geography and geology of Spain. Available from <http://www.iberianature.com/material/spaingeoology.html> (accessed on 13 December 2022).
- INFANTE M., LUCEÑO M., QUIRÓS-DE-LA-PEÑA B., MÍGUEZ M., MUÑOZ J. & HERAS P. 2024. — *Sphaerocarpos ibericus* sp. nov. (Sphaerocarpaceae), a new European liverwort species that includes *S. stipitatus* auct. eur. non Lindenb. *Journal of Bryology* 46 (2): 122-132. <https://doi.org/10.1080/03736687.2024.2365046>

- IGNATOV M. S., IGNATOVA E. A., KUZNETSOVA O. I. & FEDOSOV V. E. 2019. — On moss genera *Hylocomiadelphus* Ochyra & Stebel and *Rhytidiadelphus* (Limpr.) Warnst. *Acta Musei Silesiae, Scientiae Naturales* 68: 123-134. <https://doi.org/10.2478/cszma-2019-0012>
- IGNATOVA E. A., KUZNETSOVA O. I., FEDOSOV V. E. & IGNATOV M. S. 2016. — On the genus *Hedwigia* (Hedwigiaceae, Bryophyta) in Russia. *Arctoa* 25: 241-277. <https://doi.org/10.15298/arctoa.25.20>
- JELENC F. 1948. — Sur l'extension dans le bassin méditerranéen de certaines muscinées de la Péninsule ibérique. *Revue bryologique et lichénologique* 17: 73-74.
- JELENC F. 1949. — Contributions à l'étude de la Flore et de la Végétation bryologiques nord-africaines (1^{er} fascicule). *Bulletin de la Société botanique d'Histoire naturelle de l'Afrique du Nord* 40: 198-207.
- JELENC F. 1950. — Le *Grimmia mairei* Card. et Copp. *Bulletin de la Société botanique de France* 97: 90-91. <https://doi.org/10.1080/00378941.1950.10834773>
- JELENC F. 1951. — Contributions à l'étude de la Flore et de la Végétation bryologiques nord-africaines (2^{ème} fascicule). *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 42: 18-27.
- JELENC F. 1953. — Contributions à l'étude de la Flore et de la Végétation bryologiques nord-africaines (3^{ème} fascicule). *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 44: 51-69.
- JELENC F. 1954a. — Les Bryophytes nord-africains II. Précisions sur le *Tortula Saharae* Trab. *Revue bryologique et lichénologique* 23: 105-106.
- JELENC F. 1954b. — Contributions à l'étude de la Flore et de la Végétation bryologiques nord-africaines (4^{ème} fascicule). *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 45: 68-77.
- JELENC F. 1955a. — Muscinées de l'Afrique du Nord (Algérie, Tunisie, Maroc, Sahara). *Société de Géographie et d'Archéologie de la Province d'Oran* 72, 73, 74, 75, 76: 1-152.
- JELENC F. 1955b. — Contributions à l'étude de la Flore et de la Végétation bryologiques nord-africaines (5^{ème} fascicule). *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 46: 107-119.
- JELENC F. 1956. — Contributions à l'étude de la Flore et de la Végétation bryologiques nord-africaines (6^{ème} fascicule). *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 47: 92-106.
- JELENC F. 1957. — Les Bryophytes nord-africains. IV. Le genre *Riella* en Afrique méditerranéenne et au Sahara. *Revue bryologique et lichénologique* 26: 20-50.
- JELENC F. 1959. — Les Bryophytes Nord-Africains. V. Les Neckeraceae. *Revue bryologique et lichénologique* 28: 308-316.
- JELENC F. 1966. — Contributions à l'étude de la Flore et de la Végétation bryologiques nord-africaines (7^{ème} fascicule). *Revue bryologique et lichénologique* 34: 711-714.
- JELENC F. 1967. — Muscinées de l'Afrique du nord (Supplément). *Revue bryologique et lichénologique* 35: 186-215.
- JIMÉNEZ J. A. 2006. — Taxonomic revision of the genus *Didymodon* Hedw. (Pottiaceae, Bryophyta) in Europe, North Africa and Southwest and Central Asia. *Journal of the Hattori Botanical Laboratory* 100: 211-292. https://doi.org/10.18968/jhbl.100.0_211
- JIMÉNEZ J. A., ROS R. M., CANO M. J. & GUERRA J. 2003. — *Didymodon nicholsonii* Culm. (Pottiaceae, Musci) new taxonomical, chorological and ecological data. *Cryptogamie, Bryologie* 24: 277-281.
- JIMÉNEZ J. A., ROS R. M., CANO M. J. & GUERRA J. 2004. — New distribution data on *Didymodon anserinocapitatus* (X.J.Li) R.H.Zander, *D. maschalogenae* (Renauld & Cardot) Broth. and *D. sicculus* M.J.Cano et al. (Bryophyta, Pottiaceae). *Cryptogamie, Bryologie* 25 (1): 91-97.
- JIMÉNEZ J. A., ROS R. M., CANO M. J. & GUERRA J. 2005a. — A new evaluation of the genus *Trichostomopsis* (Pottiaceae, Bryophyta). *Botanical Journal of the Linnean Society* 147: 117-127. <https://doi.org/10.1111/j.1095-8339.2005.00359.x>
- JIMÉNEZ J. A., ROS R. M., CANO M. J. & GUERRA J. 2005b. — A revision of *Didymodon* section *Fallaces* (Musci, Pottiaceae) in Europe, North Africa, Macaronesia, and southwest and central Asia. *Annals of the Missouri Botanical Garden* 92: 225-247. <https://www.jstor.org/stable/3298515>
- JONES E. W. 1956. — Notes on plants contributed. *Transactions of the British Bryological Society* 3: 164-167.
- JOVET-AST S. & BISCHLER H. 1968. — Les Hépatiques de Libye. Énumération, notes écologiques et biogéographiques. *Revue bryologique et lichénologique* 36: 245-291.
- JOVET-AST S. & BISCHLER H. 1971. — Les Hépatiques de Tunisie. Énumération, notes écologiques et biogéographiques. *Revue bryologique et lichénologique* 38: 1-125.
- JOVET-AST S. 1955. — *Riccia atromarginata* Lev. et sa variété *glabra* Lev. au Maroc. *Revue bryologique et lichénologique* 24: 240-247.
- JOVET-AST S. 1956. — Hépatiques Marocaines II. *Bulletin de la Société des Sciences naturelles et physiques du Maroc* 36: 43-60.
- JOVET-AST S. 1957. — *Riccia frostii* Aust. au Sahara et en Turquie. *Revue bryologique et lichénologique* 26: 67-68.
- JOVET-AST S. 1986. — Les *Riccia* de la région Méditerranéenne. *Cryptogamie, Bryologie et Lichénologie* 7: 287-431.
- JULIEN A. 1894. — *Flore de la Région de Constantine*. Société d'Agriculture du Département, Constantine, 332 p.
- KIGUCHI H. & SAWADA M. 2020. — *Funaria flavicans* Michx. newly found in Japan. *Bryological Research* 12 (5): 127-129. https://doi.org/10.24474/bryologicalresearch.12.5_127
- KÖCKINGER H. & HEDENÄS L. 2023. — The supposedly well-known carbonate indicator *Tortella tortuosa* (Pottiaceae, Bryophyta) split into eight species in Europe. *Lindbergia*: e24903. <https://doi.org/10.25227/linbg.24903>
- KRAMER W. 1980. — *Totula* Hedw. sect. Rurales De Not. (Pottiaceae, Musci) in der östlichen Holarktis. *Bryophytorum Bibliotheca* 21: 1-165.
- KUČERA J., BLOCKEEL T. L., ERZBERGER P., PAPP B., SOLDÁN Z., VELLAK K., WERNER O. & ROS R. M. 2018. — The *Didymodon tophaceus* complex (Pottiaceae, Bryophyta) revisited: new data support the subspecific rank of currently recognized species. *Cryptogamie, Bryologie* 39: 241-257. <https://doi.org/10.7872/cryb/v39.iss2.2018.241>
- KUČERA J., KOŠNAR J. & WERNER O. 2013. — Partial generic revision of *Barbula* (Musci: Pottiaceae): re-establishment of *Hydrogonium* and *Streblotrichum*, and the new genus *Gymnobarbula*. *Taxon* 62: 21-39. <https://doi.org/10.1002/tax.621004>
- LAMARCK M. 1813. — *Encyclopédie méthodique. Botanique. Supplément*. Vol. 3. H. Agasse, Paris, 780 p.
- LAOUZAZNI H., DAHMANI J., ZAZA J. & BELAHBIB N. 2020. — Contribution to the elaboration of the brikcha sibe bryoflora inventory in the Central western Rif of Morocco. *Plant Archives* 20 (supplement 1): 2027-2032.
- LAPIE G. 1908. — Sur la phytécologie de la région orientale de la Kabylie du Djurdjura. *Comptes rendus hebdomadaires des séances de l'Académie des Sciences* 146 (12): 649-652.
- LAPIE G. 1909. — *Étude phytogéographique de la Kabylie du Djurdjura*. Thèse doctoral. Faculté des Sciences de l'Université de Paris. Librairie Ch. Delagrave, Paris, 155 p.
- LARA F., GARILLETI R., GOFFINET B., DRAPER I., MEDINA R., VIGALONDO B. & MAZIMPAKA V. 2016. — *Lewinskya*, a new genus to accommodate the phaneroporous and monoicous taxa of *Orthotrichum* (Bryophyta, Orthotrichaceae). *Cryptogamie, Bryologie* 37 (4): 361-382. <https://doi.org/10.7872/cryb/v37.iss4.2016.361>
- LÉREDE C. 1954. — Plantes nouvelles ou intéressantes du Sahara Central. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 45: 27-34.
- LEWINSKY J. 1993. — Notes on some species of *Orthotrichum* Hedw. (Musci) from Europe, Caucasus and North Africa. *Bryobrothera* 2: 71-76.
- LITSCHAUER V. 1904. — Beitrag zur Kenntnis der Mossflora Algiers. *Botanische Zeitschrift* 54: 144-146.
- MACVICAR M. 1911. — *Fossombronina echinata* nov. sp. *Revue bryologique* 38: 73-75.
- MAIER E. 2002. — *Grimmia dissimulata* E. Maier sp. nova, and the taxonomic position of *Grimmia trichophylla* var. *meridionalis* Müll. Hal. (Musci, Grimmiaceae). *Candollea* 56: 281-300. <https://doi.org/10.5169/seals-879371>

- MAIRE R. 1916. — La végétation des montagnes du Sud Oranais. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 7: 210-292.
- MAIRE R. 1936. — Florule des Iles Habibas. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 26: 61-75.
- MAIRE R. 1937. — Contributions à l'étude de la Flore de l'Afrique du Nord. Fascicule 25. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 28: 332-338.
- MAIRE R. 1939. — Contributions à l'étude de la Flore de l'Afrique du Nord. Fascicule 28. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 30: 327-370.
- MAIRE R. 1940. — Contributions à l'étude de la Flore de l'Afrique du Nord. Fascicule 30. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 31: 99-114.
- MAIRE R. & SEVENET G. 1928. — La flore murale du Tombeau de la Chrétienne. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 19 (1): 23-28.
- MAZARI A. & BOULAACHEB N. 2023. — Contribution to the knowledge of the mosses of Megriss Mountain (Algeria). *Biosystems Diversity* 31 (4): 542-547. <https://doi.org/10.15421/012364>
- MAZARI A., BOULAACHEB N. & ROS R. M. 2024. — New moss record for Algeria: *Orthotrichum macrocephalum* F. Lara, Garileti & Mazimpaka (Orthotrichaceae). *Egyptian Journal of Botany* 64 (2): 547-554. <https://doi.org/10.21608/ejbo.2023.199586.2279>
- MEYLAN C. 1931. — Liste des cryptogames récoltés au Maroc de 1923 à 1928 par MM. E. Wilczek et D. Dutoit. *Bulletin de la Société des Sciences naturelles du Maroc* 11: 115-116.
- MEYLAN C. 1936. — Note sur un nouveau *Tortula*. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 26: 75-78.
- MILLER D. H. & MILLER H. A. 2007. — *Funaria*, in Flora of North America Editorial Committee (eds), *Flora of North America North of Mexico*. Vol. 27: Bryophytes: Mosses. Part 1. Oxford University Press, Oxford: 188-194.
- MONJAUZE A. 1954. — Autour du Pin Maritime de la Forêt de Guetarnia (Oran). *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 45: 39-54.
- MONTAGNE C. 1838. — Cryptogames algériennes, ou plantes cellulaires recueillies par M. Roussel aux environs d'Alger, et publiées. Suite et fin. *Annales des Sciences naturelles*, série 2, Botanique 10: 334-345.
- MONTAGNE C. 1849. — Sixième centurie de plantes cellulaires nouvelles, tant indigènes qu'exotiques. *Annales des Sciences naturelles*, série 3, 12: 285-320.
- MONTAGNE J. F. C. 1856. — *Sylloge generum specierumque cryptogamarum*. J.-B. Baillière, Paris, 498 p.
- MÜLLER K. 1941. — Beiträge zur Systematik der Lebermoose. II. *Hedwigia* 80: 90-118.
- MÜLLER K. 1957. — Die Lebermoose Europas, in RABENHORST L. (ed.), *Kryptogamenflora von Deutschland, Österreich und der Schweiz*. VI. Band 2. Abteilung 3. Auflage. Akademische Verlagsgesellschaft, Leipzig: 757-1365.
- MULLER S. D., DAOUD-BOUATTOUT A., BELOUAHEM-ABED D., BEN HAJ JILANI I., BEN SAAD-LIMAM S., BENSLAMA M., FERCHICHI-BEN JAMAA H., RHAZI L. & GHRABI-GAMMAR Z. 2010. — Peat mosses (*Sphagnum*) and related plant communities of North Africa. I. The Numidian-Kroumirian range (Algeria-Tunisia). *Flora Mediterranea* 20: 159-178.
- MÜLLER F. 2014. — *Bartramia aprica* – the correct name for the Mediterranean and western North American species historically recognized as "*Bartramia stricta*". *Herzogia* 27 (1): 211-214. <https://doi.org/10.13158/heia.27.1.2014.211>
- MUÑOZ J. 2023. — *Guía de campo Briófitos de los bosques ibéricos*. Consejo Superior de Investigaciones Científicas, Madrid, 259 p.
- MUÑOZ J. & PANDO F. 2000. — A world synopsis of the genus *Grimmia*. *Monographs in Systematic Botany from the Missouri Botanical Garden* 83: 1-133.
- O'SHEA B. 2006. — Checklist of the mosses of sub-Saharan Africa (version 5, 12/06). *Tropical Bryology Research Reports* 6: 1-252.
- OCHI H. 1972. — A revision of African Bryoideae, Musci (First Part). *The Journal of the Faculty of Education Tottori University, Natural Science* 23: 7-126.
- OCHI H. 1973. — A revision of African Bryoideae, Musci (Second Part). *The Journal of the Faculty of Education Tottori University, Natural Science* 24: 23-50.
- OCHYRA R. & STEBEL A. 2008. — *Hylocomiadelphus*, a new genus of pleurocarpous mosses, in STEBEL A. & OCHYRA R. (eds), *Bryophytes of the Polish Carpathians*. Poznań, Sorus: 303-308.
- OFICINA DE INFORMACIÓN DIPLOMÁTICA DEL MINISTERIO DE ASUNTOS EXTERIORES, UNIÓN EUROPEA Y COOPERACIÓN. 2016. — Ficha País. Argelia, República Argelina Democrática y Popular. Available from http://www.exteriores.gob.es/documentos/fichaspais/argelia_ficha%20pais.pdf (accessed on 19 July 2023).
- ORGAZ J. D., CANO M. J. & GUERRA J. 2011. — *Sciuro-hypnum* (Brachytheciaceae) in the Mediterranean region. *The Bryologist* 114 (3): 595-610. <https://www.jstor.org/stable/41289816>
- ORGAZ J. D., CANO M. J. & GUERRA J. 2012. — A taxonomic study of genus *Brachythecium* (Brachytheciaceae, Bryophyta) in the Mediterranean region. *Nova Hedwigia* 95 (3-4): 295-318. <https://doi.org/10.1127/0029-5035/2012/0062>
- ORGAZ J. D., CANO M. J. & GUERRA J. 2013. — Taxonomic revision of *Brachytheciastrum* (Brachytheciaceae, Bryophyta) from the Mediterranean Region. *Systematic Botany* 38 (2): 283-294. <https://doi.org/10.1600/036364413X6666697>
- OZENDA P. 1977. — *Flore du Sahara*. Seconde édition (revue et complétée). Éditions du Centre national de la Recherche scientifique, Paris, 622 p.
- PARIS E. G. 1894-1898. — *Index Bryologicus. Ex Actis Societatis Linnaeanae Burdigalensis*. Paul Klincksieck, Paris, 1380 p.
- PATIÑO J., HEDENÄS L., DIRKSE G. M., IGNATOV M. S., PAPP B., MÜLLER F., GONZÁLEZ-MANCEBO J. M. & VANDERPOORTEN A. 2017. — Species delimitation in the recalcitrant moss genus *Rhynchostegiella* (Brachytheciaceae). *Taxon* 66: 293-308. <https://doi.org/10.12705/662.1>
- PHILIBERT H. 1880a. — Notes sur quelques espèces rares ou critiques (Suite). *Revue bryologique* 7: 43-45.
- PHILIBERT H. 1880b. — Une espèce nouvelle de *Neckera* voisine du *Neckera Menziesii* Hooker et du *Neckera turgida* Juratzka. *Revue bryologique* 7 (5): 81-84.
- PHILIBERT H. 1882. — Sur quelques hépatiques observées à Cannes. *Revue bryologique* 9 (4): 49-54.
- PHILIBERT H. 1889. — *Orthothecium Duriaei* (Mont.) Besch. *Revue bryologique* 16 (4): 51-52.
- PIERROT R. B. 2000. — Contribution au catalogue des bryophytes de l'Afrique septentrionale. *Bulletin de la Société botanique du Centre-Ouest, nouvelle série* 31: 475-476.
- PILKINGTON S. 2022. — *Microbryum davallianum* (Sm.) R.H. Zander in Britain and Ireland. *Field Bryology* 127: 2-7.
- PLÁSEK V., SAWICKI J., OCHYRA R., SZCZECIŃSKA M. & KULIK T. 2015. — New taxonomical arrangement of the traditionally conceived genera *Orthotrichum* and *Ulotia* (Orthotrichaceae, Bryophyta). *Acta Musei Silesiae, Scientiae Naturales* 64: 169-174. <https://doi.org/10.1515/cszma-2015-0024>
- POTIER DE LA VARDE R. 1922. — Sur quelques espèces du genre *Fissidens*. *Revue bryologique* 49 (1): 1-5.
- PUCHE F. & BOISSET F. 2009. — On the occurrence of *Riella affinis* M. Howe et Underwood (Marchantiophyta, Sphaerocarpaceae) in the Sahara Desert (Africa). *Cryptogamie, Bryologie* 30: 217-226.
- PURSELL R. A. 1997. — A comparison of *Fissidens obrusifolius* and *F. sublimbatus*. *Journal of the Hattori Botanical Laboratory* 82: 203-212.
- RAMS S., WERNER O. & ROS R. M. 2014. — Updated checklist of the bryophytes from the Sierra Nevada Mountains (S of Spain). *Cryptogamie, Bryologie* 35: 261-311. <https://doi.org/10.7872/cryb.v35.iss3.2014.261>
- ROS R. M. & GUERRA J. 1987a. — Vegetación briofítica terrícola de la región de Murcia (sureste de España). *Phytocoenologia* 15: 505-567.

- ROS R. M. & GUERRA J. 1987b. — Catálogo de briófitos terrícolas de la Región de Murcia (SE de España). *Candollea* 42: 577-599.
- ROS R. M., JIMÉNEZ M. N. & GUERRA J. 1990. — On the chorology, synecology and syntaxonomy of some terricolous bryophytic communities from northern Africa. *Nova Hedwigia* 50: 65-79. <https://doi.org/10.1127/nova.hedwigia/50/1990/65>
- ROS R. M., GUERRA J., CARRIÓN J. S. & CANO M. J. 1996. — A new point of view on the taxonomic treatment of *Pottia starckiana* agg. (Musci, Pottiaceae). *Plant Systematics and Evolution* 199 (3-4): 153-166.
- ROS R. M., CANO M. J. & GUERRA J. 1999. — Bryophyte checklist of Northern Africa. *Journal of Bryology* 21: 207-244. <https://doi.org/10.1179/jbr.1999.21.3.207>
- ROS R. M., WERNER O. & RAMS S. 2005. — New taxonomical data on the genus *Microbryum* Schimp. (Pottiaceae, Musci). *Cryptogamie, Bryologie* 26: 167-172.
- ROS R. M., MAZIMPAKA V., ABOU-SALAMA U., ALEFFI M., BLOCKEEL T. L., BRUGUÉS M., CANO M. J., CROS R. M., DIA M. G., DIRKSE G. M., EL SAADAWI W., ERDAĞ A., GANEVA A., GONZÁLEZ-MANCEBO J. M., HERRNSTADT I., KHALIL K., KÜRSCHNER H., LANFRANCO E., LOSADA-LIMA A., REFAI M. S., RODRÍGUEZ-NÚÑEZ S., SABOVLJEVIĆ M., SÉRGIO C., SHABBARA H., SIM-SIM M. & SÖDERSTRÖM L. 2007a. — Hepatics and Anthocerotales of the Mediterranean, an annotated checklist. *Cryptogamie, Bryologie* 28 (4): 351-437.
- ROS R. M., RAMS S., HOLYOAK D. T., BRUGUÉS M. & CROS R. M. 2007b. — Revision of the records of *Brachymenium commutatum* (Bryophyta, Bryaceae) in Europe. *Nova Hedwigia* 84 (1-2): 241-247. <https://doi.org/10.1127/0029-5035/2007/0084-0241>
- ROS R. M. & CANO M. J. 2008. — Identity of North African endemic bryophytes, 2. *Cryptogamie, Bryologie* 29 (2): 135-141.
- ROS R. M., MAZIMPAKA V., ABOU-SALAMA U., ALEFFI M., BLOCKEEL T. L., BRUGUÉS M., CROS R. M., DIA M. G., DIRKSE G. M., DRAPER I., EL-SAADAWI W., ERDAĞ A., GANEVA A., GABRIEL R., GONZÁLEZ-MANCEBO J. M., GRANGER C., HERRNSTADT I., HUGONNOT V., KHALIL K., KÜRSCHNER H., LOSADA-LIMA A., LUÍS L., MIFSUD S., PRIVITERA M., PUGLISI M., SABOVLJEVIĆ M., SÉRGIO C., SHABBARA H. M., SIM-SIM M., SOTIAUX A., TACCHI R., VANDERPOORTEN A. & WERNER O. 2013. — Mosses of the Mediterranean, an annotated checklist. *Cryptogamie, Bryologie* 34 (2): 99-283. <https://doi.org/10.7872/cryb.v34.iss2.2013.99>
- ROS R. M., WERNER O. & PORLEY R. D. 2022. — Herzog vindicated: Integrative taxonomy reveals that *Trichostomum brachydontium* (Pottiaceae, Bryophyta) comprises several species. *Taxonomy* 2: 57-88. <https://doi.org/10.3390/taxonomy2010005>
- ROS R. M., MUÑOZ J. & WERNER O. 2023. — Identity of north African endemic bryophytes, 3, with special emphasis in *Funaria altissima*. *Mediterranean Botany* 44: e84615. <https://doi.org/10.5209/mbot.84615>
- RUBASINGHE S. C. K., MILNE R., FORREST L. L. & LONG D. G. 2011. — Realignment of the genera of Cleveaceae (Marchantiopsida, Marchantiidae). *The Bryologist* 114 (1): 116-127. <https://doi.org/10.1639/0007-2745-114.1.116>
- SAADI K., DAHMANI J., ZIDANE L. & BELAHBIB M. 2020. — Contribution to the bryoflora inventory of Jbel Tazekka (Middle Eastern Atlas, Morocco): new data on the presence of new, rare or abundant species. *Plant Archives* 20 (2): 4639-4647.
- SABOVLJEVIĆ M. 2019. — *Physcomitrium pyriforme* (Europe assessment). The IUCN Red List of Threatened Species 2019: e.T85841778A87779209. Accessed on 27 March 2024.
- SARDEGNA. 2022. — Available from <https://it.wikipedia.org/wiki/Sardegna> (accessed on 13 December 2022).
- SCHIMPER W. P. 1876. — *Fontinalis duriaei*. *Revue bryologique* 3 (1): 1-2.
- SCHLESAS S., HEDENÄS L., NEBEL M. & QUANDT D. 2018. — Cleaning a taxonomic dustbin: placing the European *Hypnum* species in a phylogenetic context! *Bryophyte Diversity and Evolution* 40: 37-54. <https://doi.org/10.11646/bde.40.2.3>
- SCHUMACKER R., VÁÑA J. & BOUMAN A. C. 2005. — *Identification Keys to the Liverworts and Hornworts of Europe and Macaronesia*. Edition 2. Sorus Publishing, Poznań, 211 p.
- SEGARRA-MORAGUES J. G., PUCHE F., SABOVLJEVIĆ M., INFANTE M. & HERAS P. 2014. — Taxonomic revision of *Riella* subgenus *Trabutiella* (Riellaceae, Sphaerocarpaceae). *Phytotaxa* 159 (3): 131-174. <https://doi.org/10.11646/phytotaxa.159.3.1>
- SEGARRA-MORAGUES J. G., PUCHE F., SABOVLJEVIĆ M., INFANTE M. & HERAS P. 2022. — Integrative taxonomy of the model liverwort *Riella helicophylla* (Riellaceae, Sphaerocarpaceae) reveals its extreme rarity and an overlooked widespread new species, *R. macrocarpa*. *Taxon* 71 (3): 506-530. <https://doi.org/10.1002/tax.12682>
- SÉRGIO C. & HÉBRARD J.-P. 1982. — *Orthothecium duriaei* (Mont.) Besch., étude systématique, écologique et phytogéographique. *Collectanea Botanica* 13: 247-255.
- SÉRGIO C. & CARVALHO S. 2003. — Annotated Catalogue of Portuguese Bryophytes. *Portugaliae Acta Biologica* 21: 5-230.
- SHABBARA H. M. 2006. — Rare but interesting moss records from Egypt. *Taeckholmia* 26: 121-129.
- SICILIA. 2022. — Available from <https://it.wikipedia.org/wiki/Sicilia> (accessed on 13 December 2022).
- SNIDER J. A. 1975. — A revision of the genus *Archidium* (Musci). *Journal of the Hattori Botanical Laboratory* 39: 105-201.
- SÖDERSTRÖM L., URMI E. & VÁÑA J. 2002. — Distribution of Hepaticae and Anthocerotae in Europe and Macaronesia. *Lindbergia* 27: 3-47. <https://doi.org/10.2307/20150088>
- SÖDERSTRÖM L., HAGBORG A., VON KONRAT M., BARTHOLOMEW-BEGAN S., BELL D., BRISCOE L., BROWN E., CARGILL D. C., COSTA D. P., CRANDALL-STOTLER B. J., COOPER E. D., DAUPHIN G., ENGEL J. J., FELDBERG K., GLENNY D., GRADSTEIN S. R., HE X., HEINRICH J., HENTSCHEL J., ILKIU-BORGES A. L., KATAGIRI T., KONSTANTINOVA N. A., LARRAÍN J., LONG D. G., NEBEL M., PÓCS T., PUCHE F., REINER-DREHWALD E., RENNER M. A., SASS-GYARMATI A., SCHÄFER-VERWIMP A., SEGARRA MORAGUES J. G., STOTLER R. E., SUKKHARAK P., THIERS B. M., URIBE J., VÁÑA J., VILLARREAL J. C., WIGGINTON M., ZHANG L. & ZHU R. L. 2016. — World checklist of hornworts and liverworts. *PhytoKeys* 59: 1-828. <https://doi.org/10.3897/phytokeys.59.6261>
- STEPHANI F. 1885. — Neue und kritische Arten der Gattung *Riccia*. *Hedwigia* 24 (1): 2-7.
- STEPHANI F. 1889a. — *Dichiton perpusillum* Montagne. *Revue bryologique* 16 (4): 49-51.
- STEPHANI F. 1889b. — Deux nouvelles espèces du genre *Riccia*. *Revue bryologique* 16 (5): 65-67.
- STEPHANI F. 1917. — *Species Hepaticarum* 6. George & Cie, Genève & Bale, 128 p. <https://doi.org/10.5962/bhl.title.95494>
- SYED H. 1973. — A taxonomic study of *Bryum capillare* Hedw. and related species. *Journal of Bryology* 7: 265-326.
- SZEPESFALVI J. 1932. — Additions à la Flore bryologique de l'Afrique septentrionale. Mousses recueillis par Mr le Baron Dr. G. de Andreánszky. *Magyar Botanikai Lapok* 31: 143-146.
- SZWEYKOWSKI J., BUCZKOWSKA K. & ODRZYKOSKI J. 2005. — *Conocephalum salebrosum* (Marchantiopsida, Conocephalaceae) – a new Holarctic liverwort species. *Plant Systematics and Evolution* 253: 133-158. <http://www.jstor.org/stable/23655129>
- THÉRIOT I. & TRABUT L. 1930. — Mousses inédites de l'Afrique du Nord. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 21: 28-31.
- THÉRIOT I. 1931. — Mousse du Sahara récoltées par la Mission du Hoggar. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 22: 158-168.
- THÉRIOT I. 1933. — Musci, in MAIRE R. (ed.), Études sur la Flore et la Végétation du Sahara central. *Mémoires de la Société d'Histoire naturelle de l'Afrique du Nord* 3: 36-47.
- TRABUT L. 1886. — *Riella Battandieri* sp. nov. *Revue bryologique* 13: 35.

- TRABUT L. 1887a. — D'Oran à Mécheria. Notes botaniques et catalogue des plantes remarquables. Adolpe Jourdan, Alger, 36 p.
- TRABUT L. 1887b. — Mousses et hépatiques nouvelles d'Algérie. *Revue bryologique* 14: 12-13.
- TRABUT L. 1888. — Les zones botaniques de l'Algérie. *Comptes rendus de l'Association française pour l'avancement des Sciences* 17: 286-294.
- TRABUT L. 1908. — Un nouveau *Riella* d'Algérie (*Riella bialata*). *Revue bryologique* 35 (4): 96.
- TRABUT L. 1913. — Le *Bryum tophaceum* DR. et Mont. *Revue bryologique* 40 (3): 45-46.
- TRABUT L. 1914. — Énumération de quelques bryophytes remarquables trouvés en Kabylie. *Bulletin de la Société botanique de France* 61: 103-104.
- TRABUT L. 1916. — Observations sur deux Ricciacées de la flore d'Algérie. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 7 (3): 87.
- TRABUT L. 1922. — Deux Funariacées nouvelles. *Revue bryologique* 49: 64-65.
- TRABUT L. 1927. — Quelques Mousses désertiques. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 18: 12-13.
- TRABUT L. 1933. — Hepaticae, in MAIRE R. (ed.), Études sur la flore et la végétation du Sahara central. *Mémoires de la Société d'Histoire naturelle de l'Afrique du Nord* 3: 36-37.
- TRABUT L. 1934. — Hépatiques nord-africaines inédites. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 25 (9): 391-393.
- TRABUT L. 1941. — Flore des hépatiques de l'Afrique du Nord. Laboratoire de Cryptogamie Muséum national d'Histoire naturelle, Paris, 43 p.
- UNITED NATIONS. 2017. — *Statistical Yearbook 2017 edition* (Sixtieth issue). Available from <https://unstats.un.org/unsd/publications/statistical-yearbook/files/syb60/syb60.pdf> (accessed on 13 December 2022).
- VÁNA J. 1974. — Studien über die Jungermannioideae (Hepaticae) 5. Jungermannia Subg. Plectocolea und Subg. Solenostoma: Afrikanischen Arten. *Folia Geobotanica et Phytotaxonomica* 9: 277-312.
- VIGALONDO B., GARILLETI R., VANDERPOORTEN A., PATIÑO J., DRAPER I., CALLEJA J. A., MAZIMPAKA V. & LARA F. 2019. — Do mosses really exhibit so large distribution ranges? Insights from the integrative taxonomic study of the *Lewinskya affinis* complex (Orthotrichaceae, Bryopsida). *Molecular Phylogenetics and Evolution* 140: 106598. <https://doi.org/10.1016/j.ympev.2019.106598>
- VITT D. H. 1973. — A revision of the genus *Orthotrichum* in North America, north of Mexico. *Bryophytorum Bibliotheca* 1: 1-165.
- WARNSTORF C. 1916. — *Pottia*-Studien als Vorarbeiten zur einer Monographie des Genus "*Pottia* Ehrh." sens. str. *Hedwigia* 58: 35-152.
- WELCH W. H. 1960. — *A monograph of the Fontinalaceae*. Martinus Nijhoff, The Hague, 357 p.
- WHITEHOUSE H. L. K. & CRUNDWELL A. C. 1992. — *Gymnostomum calcareum* Nees & Hornsch. and *G. viridulum* Brid. in Europe, North Africa and the Middle East. *Bulletin of the British Bryological Society* 59: 35-50.
- WIJK R. VAN DER, MARGADANT D. & FLORSCHÜTZ P. A. 1962. — *Index muscorum*. Vol. 2. D-Hypno. Regnum Vegetabile 26. International Bureau for Plant Taxonomy and nomenclature of the International Association for Plant Taxonomy, Utrecht, 535 p.
- YADAV S., BHAGAT C. & ASTHANA G. 2019. — Two species of *Fabronia* new to India. *Arctoa* 28 (2): 218-221. <https://doi.org/10.15298/arctoa.28.19>
- ZANDER R. H. 1993. — Genera of the Pottiaceae: mosses of harsh environments. *Bulletin of the Buffalo Society of Natural Sciences* 32: 1-378.
- ZANDER R. H. 2023. — *Fractal Evolution, Complexity and Systematics: An Edge-of-Chaos Study of Evolutionary Adaptations Leading to Survival of Periodic Environmental Catastrophes Using Bryophytes as Model Organisms*. Zetetic Publications, St. Louis, 151 p.
- ZANDER R. H. & ECKEL P. M. 2019. — *Pseudosymblepharis* and *Oxystegus* species (Pottiaceae) new to northwestern North America, and refutation of molecular Chionoloma. *The Bryologist* 122 (4): 568-577. <https://doi.org/10.1639/0007-2745-122.4.568>
- ŻARNOWIEC J. 2001. — *A taxonomic monograph of the Drepanocladus aduncus group (Bryopsida: Amblystegiaceae)*. Bielsko-Biała, Łódź Technical University, Bielsko-Biała Branch, 248 p.
- ZAZA J., DAHMANI J. & BELAHBIB N. 2018. — Contribution à l'inventaire de la flore bryophytique d'Akchour dans la région de Chefchaouen, nord du Maroc. *American Journal of Innovative Research & Applied Sciences* 7 (4): 234-238. <https://american-jiras.com/Zaza-ManuscriptRef.10-ajira091018.pdf>

Submitted on 4 October 2023;
accepted on 29 April 2024;
published on 10 October 2024.