

AN ANNOTATED CHECKLIST OF BRYOPHYTES OF IRAN, WITH NOTES ON PHYTOGEOGRAPHY

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Abstract

The climate of Iran is mainly arid or semi-arid, except for the area in the south of the Caspian Sea on the northern slope of the Alborz Mountains and some regions of western Iran in the Zagros Mountains. These ecoregions are much lushier than the surrounding desert, semi-desert, and steppe ecoregions. As a result, most of the Iranian bryophyte diversity is found in these Mountains. This checklist is compiled from previous studies of Iran's vast territory up to the end of December 2025. However, there is still much remaining ambiguity in the taxonomy of bryophytes in Iran, even at the family level, and these problems have, so far, been mostly ignored in Iranian research. The early surveys, which focused on morphology, started in 1860. Over the 165 years since then, along with changes at different levels in taxa, the number of moss species known in Iran has reached 554 species and 40 subspecies (594 taxa). Of these, 72 are hepatics (Marchantiophyta), 480 are mosses (Bryophyta), and 2 are hornworts (Anthocerotophyta). Besides the checklist itself, the distributions of the species in the geographical and chorological elements of Iran are indicated.

Keywords: Anthocerotophyta; Bryophyta; Geographical distribution; Marchantiophyta; Middle East.

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چک لیست برفیوفیت‌های ایران (همراه با اطلاعات کورولوژیکی گونه‌ها)

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چکیده: آب و هوای ایران عمدتاً خشک یا نیمه‌خشک است، به جز مناطق واقع در دامنه‌های شمالی کوه‌های البرز و برخی مناطق زاگرس در غرب ایران که عمدتاً با پوشش گیاهی انبوه خود از مناطق اکولوژیکی بیابانی، نیمه‌بیابانی و استپی اطراف مجزا هستند، بیشتر تنوع خزه‌های ایران در این مناطق دید می‌شود. این چک لیست با در نظر داشتن مطالعات قبلی از قلمرو وسیع ایران تا آذرماه ۱۴۰۴ (دسامبر ۲۰۲۵) گردآوری شده است. با این حال، هنوز ابهامات زیادی در طبقه‌بندی خزه‌ها در ایران، حتی در سطح خانواده، وجود دارد و این مشکلات تاکنون عمدتاً در تحقیقات ایران نادیده گرفته شده‌اند. بررسی‌های اولیه که بر مورفولوژی متمرکز بودند، از سال ۱۸۶۰ آغاز شد. در طول ۱۶۵ سالی که از آن زمان می‌گذرد، همراه با تغییرات در سطوح مختلف تاکسونومیک، تعداد گونه‌های خزه شناخته شده در ایران به ۵۵۴ گونه و ۴۰ زیرگونه (۵۹۴ آرایه) رسیده است. از این تعداد، ۷۲ گونه متعلق به شاخه جگرواش ها (Marchantiophyta)، ۴۸۰ گونه متعلق به شاخه خزه ها (Bryophyta) و ۲ گونه متعلق به شاخه شاخ و اش ها (Anthocerotophyta) هستند. در این مجموعه علاوه بر فهرست گونه‌ها، پراکنش جغرافیایی و تعلق کورولوژیک گونه‌ها در رابطه با مناطق جغرافیایی و کورولوژیکی ایران نیز نشان داده شده است.

INTRODUCTION

Iran is the second-largest country in the Middle East and the 18th-largest in the world. It is located in Southwest Asia between 25° 3' to 39° 47' N and 44° 5' to 63° 18' E and has an area of approximately 1,648,195 km². It is predominantly mountainous and consists of rugged, mountainous rims surrounding high-elevation interior basins. According to Takhtajan & al. (1986), most of Iran belongs to the Irano-Turanian region, with small areas in the Sudano-Zambesian and Saharo-Arabian regions (Fig. 1). The Irano-Turanian region, with its wide variation in topography and climatic conditions, can be subdivided into four biogeographical provinces: (1) the Hyrcanian province, (2) the Armeno-Iranian province, (3) the Mesopotamian province, and (4) the Northern Baluchistan province (Takhtajan & al. 1986). The Hyrcanian province is the floristically richest and most distinct biogeographical zone, covered by different types of forests. The bryoflora in this mesophytic region is richer than in the other zones (Tohidifar & al. 2016; Zare & al. 2017; Zare & al. 2021), and this is due to a combination of abundant precipitation and a dense forest cover. In the Armeno-Iranian province, especially in the western part of Iran along the Zagros Mountains chain, the conditions are more favorable for xerophytic bryophytes. In the central part of Iran, in the Mesopotamian and Northern Baluchistan provinces, the climate is extremely continental, characterized by a hot and dry summer season and a cold winter season, especially in inland areas, making the conditions for plants very harsh. For this reason, xerophytic bryophytes such as the Pottiaceae family are abundant in these harsh environments (Ghahreman & Attar 1999). The bryoflora of Iran, particularly of the Hyrcanian zone, was studied and followed by many bryologists and important publications during approximately 165 years, like Buhse 1860; Bornmüller (1911 & 1915); Juratzka & Milde (1870); Schiffner (1908); Tregubov & Tregubov (1969/1970); the collections by Rechner

(Baumgartner 1939; Fröhlich 1950); and Frey & Kürschner (1981). Over the past nearly four decades, bryo-floristic studies have been conducted by native and foreign botanists, especially on mosses. With new records in these studies, the Iranian bryophyte flora has reached 483 taxa (Akhani & Kürschner 2004; Kürschner & Frey 2011; Kürschner & Erdag 2020-2021). The bryological exploration has then continued, by Shirzadian, Zare, and other Iranian researchers during 2011-2025.

MATERIALS AND METHODS

This study provides an updated and critically revised checklist of bryophyte taxa recorded from Iran, incorporating their current taxonomic status, geographic distribution patterns, and recent changes in frequency. The preparation of an updated checklist is fundamental for advancing bryophyte biodiversity assessments and supporting conservation planning in Iran. To compile the dataset, information derived from published literature, herbarium records, and the authors' personal field observations was systematically integrated into a curated database. The database includes accepted taxon names, major synonyms, familial and generic placement, provincial distribution within Iran, chorological assignments, and supporting bibliographic references. The checklist encompasses only those provinces from which bryophytes have been reliably reported—either through specimen-based evidence or credible literature records. The objective of this work is to present the most current systematic and nomenclatural framework for all included taxa. The main checklist is organized alphabetically by subclass, order, family, and genus to facilitate taxonomic reference. Geographic and chorological information for each taxon is presented in Table 1. Taxonomic concepts were evaluated in comparison with the treatments of Kürschner & Frey (2011), while the higher-level classification system adheres to the phylogenetic framework proposed by Cole & al. (2019). Bioclimatic

zonation used for the analysis of geographical distribution follows the subdivision illustrated in Fig. 1, with corresponding taxon occurrences summarized in Table 1. Since a universally accepted phytogeographical division of Iran does not yet exist, most specialists recognize four major floristic zones, which can be further subdivided into smaller local units. This approach reflects the country's tectonic and bioclimatic variability, including the predominance of

arid and semi-arid conditions across over 80% of the Iranian plateau and the isolated, relict Hyrcanian forests separated by the Alborz Mountains. To better interpret taxon distributions in relation to climatic and ecological conditions, four Iranian floristic regions, along with their corresponding sub-provinces, are included in the checklist based on previous studies (Asadi & al., 1988), providing supplementary context for understanding ecological patterns across Iran's plateau.

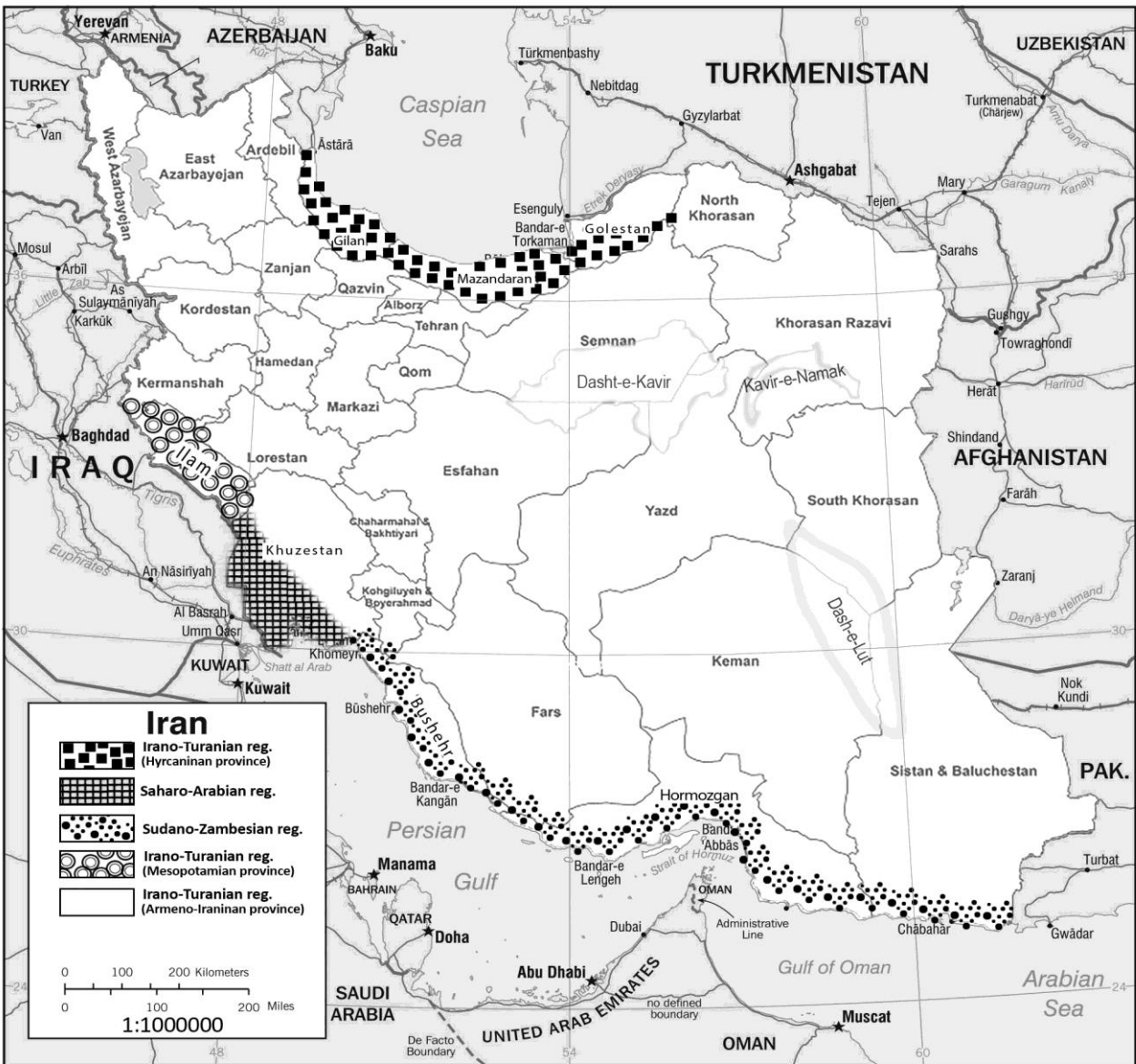


Fig. 1. Map of Iran and its chorological divisions, according to Thakhtajan & al. (1986)

Table 1. Abbreviations of provinces and phytogeographical regions used in the checklist (Thakhtajan & al. 1986). Ir-Tu: Irano-Turanian region, Sah-Ara: Saharo-Arabian region, Sud-Zam: Sudano-Zambesian region, Arm-Ira: Armeno-Iranian province.

Provincial Abbreviation	Province	Phytogeographical Zonation
AZE	East Azarbaijan (Incl. Ardabil)	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)]
AZW	West Azarbaijan	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)]
BUS	Bushehr	Sud-Zam (Khalijo-Omanian)
CHA	Chaharmahal Bakhtiari	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
ISF	Isfahan	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
FAR	Fars (a, b, c) a: North East b: Another region except a and b c: South	a: Ir-Tu reg. [Arm-Ira prov. (Zagrossian)] b: Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] c: Sud-Zam reg. (Khalijo-Omanian)
GIL	Gilan	Ir-Tu reg. [Hyrcanian]
GOL	Golestan	Ir-Tu reg. [Hyrcanian]
HAM	Hamadan	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
HOR	Hormozgan (a, b) a: Northern parts b: Southern parts	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)] Sud-Zam reg. (Khalijo-Omanian)
ILA	Ilam	Sah-Ara (West parts) and Ir-Tu reg. [Arm-Ira prov. (Zagrossian)] (East parts)
KER	Kerman	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
KHO	Khorassan (a, b) a: a small part of North West b: Other parts	a: Ir-Tu reg (Hyrcanian) b: Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
KHU	Khuzestan (a, b, c) a: West parts b: Central and Northern parts c: Southern parts	a: Sah-Ara reg. b: Ir-Tu reg. [Mes. reg.] c: Sud -Zam reg. (Khalijo-Omanian)
KES	Kermanshah	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
KOH	Kohkiluyeh-o Boyerahmad	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
KOR	Kordestan	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
LOR	Lorestan (a, b) a: a small part of West b: Other parts	a: Sah-Ara reg. b: Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
MAR	Markazi (a, b) a: West parts b: Other parts	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)] Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
MAZ	Mazandaran	Ir-Tu reg. [Hyrcanian]
QAZ	Qazvin	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
SEM	Semnan (a, b) a: Northern parts b: Other parts	Ir-Tu reg. [Hyrcanian] Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
THE	Tehran	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
YAZ	Yazd	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
ZAN	Zanjan	Ir-Tu reg. [Arm-Ira reg. (Irano-Turanian)]

RESULTS

The first checklist of the bryoflora of Iran was included in a checklist of several Middle East countries (Frey & Kürschner 1991); the second and the latest comprehensive checklist of the Iranian Bryoflora added many species (Akhani & Kürschner 2004). Kürschner & Frey (2011) suggested many changes in the genus and family positions of Iranian species compared to the previous checklists and eliminated many doubtful names. Kürschner and Frey (2011) also mentioned eleven endemic taxa from Iran (Table 2). The bryological exploration has then continued, by Shirzadian (2011), Akhoondi Darzikolaei and Shirzadian (2011), Zare & al. (2011, 2021), Hedenäs & Zare (2019), Salimpour & al. (2012), Shirzadian (2006, 2012), Kürschner (2013), Akhoondi Darzikolaei & al. (2014), Salimpour & al. (2014), Sharifnia & al. (2012), Shirzadian & al. (2014), Shirzadian & al. (2015), Kürschner & al. (2015), Taghavizad (2016), Shirzadian & Akhoondi Darzikolaei (2016a), Shirzadian & Akhoondi Darzikolaei (2016b), Shirzadian & Akhoondi Darzikolaei (2018), and Shirzadian (2019). Ghahremaninejad & al. (2016) reviewed the Iranian bryological literature, and Ghaffari & al. (2020) studied the chromosome numbers of selected mosses in Iran. Eventually, during the last years, over 50 species were added to the Bryoflora of Iran (Ghahremaninejad & al. 2016; Shirzadian 2019; Ghaffari & al. 2020, Seyed Mousavi & al. 2024; Ahmadi & al. 2024).

Based on the present checklist, the total number of bryophyte taxa in Iran is 571. The Iranian hornworts are represented by one family, two genera, and two species, without any varieties or subspecies. The liverworts are represented by 26 families, 36 genera, 76 species, and three varieties and subspecies. The mosses are represented by 38 families, 152 genera, 446 species, and 49 varieties and subspecies. Fifty taxa, including five liverworts and 45 mosses, were added to those included by Kürschner & Frey (2011).

Eighty-nine percent of the Iranian liverworts belong to the subdivisions Marchantiidae and Jungermanniidae, with 11 and 36 species, respectively. The Ricciaceae is the largest family, with 13 species.

Sixty-four percent of the Iranian mosses belong to the orders Hypnales, Pottiales, and Bryales, with 167, 129, and 79 species, respectively. The Pottiaceae, Brachytheciaceae, Bryaceae, Grimmiaceae, and Amblystegiaceae are the largest families with 128, 50, 50, 34, and 15 species, respectively.

Chorologically, the Hyrcanian region includes some of the most species-rich Iranian provinces, Mazandaran, Golestan, Gilan, and Tehran, with 301, 152, 100, and 85 reported bryophyte taxa, respectively. In the other end of the scale, fewer than five bryophyte taxa are known from Isfahan, Zanjan, Sistan, Baluchistan, Bushehr, Kermanshah, Yazd, and Kuhgiluyeh-va Boyerahmad.

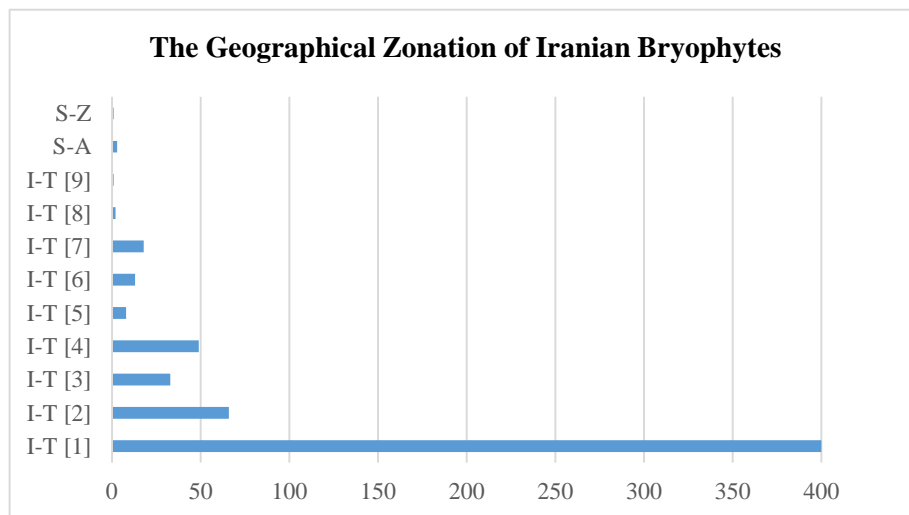


Fig. 2. Records of bryophytes in Iranian phytogeographical regions as subdivisions of the Irano-Turanian [Hyrcanian Province] in some cases. I-T [1] (Ir-Tu reg. [Hyrcanian Prov.]), I-T [2] (Ir-Tu reg. [Arm-Ira Prov. (Irano-Turanian)]), I-T [3] (Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]), I-T [4] (Ir-Tu reg. [Arm-Ira Prov. (Zagrossian)]), I-T [5] (Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Zagrossian)]), I-T [6] (Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Zagrossian & Irano-Turanian)]), I-T [7] (Ir-Tu reg. [Arm-Ira Prov. (Irano-Turanian & Zagrossian)]), S-Z (Sud-Zam reg. [Khalijjo-Omanian]), I-T [8] (Ir-Tu reg. [Mes. Prov.]), S-A (Sah-Ara reg.), I-T [9] (Ir-Tu reg. [Hyrcanian Prov., Sud-Zam (Khalijjo-Omanian)]).

The geographical distributions of Iranian bryophytes also reflect the phytogeographical zonation. Thus, the most species-rich Iranian chorotypes (Irano-Turanian region), I-T [1], I-T [2], I-T [4], and I-T [3] have 400, 66, 49 and 33 reported bryophyte taxa, respectively (Fig. 2). These regions covered several political provinces of Iran (Table 1). Iran's geographical location and its four-season climate have given rise to a relatively significant bryophyte diversity. For research and conservation purposes, it is essential to have an updated checklist, as approximately 5 years have passed since the last Iranian checklist was published; therefore, it is now due for a new one. In addition to the species listed, the phytogeographical zone(s) where the species have been found are indicated. The checklist itself is presented in the following pages.

DISCUSSION

The updated checklist presented here demonstrates that Iran hosts a considerably diverse bryoflora, with 594 confirmed taxa despite its predominantly arid climate. This richness reflects the country's pronounced topographic and climatic heterogeneity, particularly the contrast between the humid Hyrcanian province and the extensive xeric regions of the Irano-Turanian domain (Ejtehad & al. 2004). The Hyrcanian forests, characterized by high precipitation and stable mesic microhabitats, continue to harbor the highest bryophyte diversity (e.g., Mazandaran, Golestan, and Gilan), confirming earlier observations on the exceptional bryological significance of this region (Tohidifar & al. 2016; Zare & al. 2017, 2021). The addition of 50 taxa since the last comprehensive treatment (Kürschner & Frey 2011) highlights both the incompleteness of previous checklists and the increased impact of recent

fieldwork and taxonomic studies (e.g., Shirzadian 2011; Ghaffari & al. 2020; Seyed Mousavi & al. 2024). Many newly recorded species belong to xerophytic groups, especially within Pottiaceae, supporting the idea that the Irano-Turanian region serves as a center of diversity for drought-adapted bryophytes (Ghahreman & Attar 1999). Chorological analysis further emphasizes the dominant role of Irano-Turanian elements in shaping Iran's bryophyte flora. The most species-rich chorotypes (I-T [1], I-T [4], I-T [2]) correspond

to regions with broad altitudinal gradients and substantial ecological variability. The presence of 11 endemic taxa (Kürschner & Frey 2011), many restricted to montane habitats of the Alborz and Zagros, underscores Iran's importance as an area of regional bryophyte endemism. Despite these advances, major gaps remain. Several provinces—particularly those in central and southeastern Iran—are still poorly sampled, and the absence of precise locality data for numerous taxa complicates detailed biogeographical interpretation. Additionally, the taxonomic placement of many groups, especially within morphologically variable families such as Pottiaceae and Brachytheciaceae, requires revision using modern molecular approaches, as recommended by recent phylogenetic frameworks (Cole & al. 2019). Overall, the present checklist provides an essential baseline for bryophyte systematics and conservation in Iran. Given the sensitivity of bryophytes to microclimatic change, continued exploration, combined with molecular systematics and long-term monitoring in environmentally vulnerable regions such as the Hyrcanian and Zagros zones, will be crucial for refining our understanding of the Iranian bryoflora

Liverwort

Marchantiophyta

Marchantiopsida

Marchantiidae

Marchantiales

Aytoniaceae

1. *Asterella gracilis* (F.Weber) Underw. Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
2. *Asterella persica* (Steph.) Howe Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
3. *Mannia androgyna* (L.) A. Evans Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)]
4. *Plagiochasma rupestre* (Forst) Steph. Sud-Zam reg. (Khalijo- Omani)
5. *Reboulia hemisphaerica* (L.) Raddi Ir-Tu reg. [Hyrcanian prov.]

Conocephalaceae

6. *Conocephalum conicum* (L.) Dumort. Ir-Tu reg. [Hyrcanian prov.]

Dumortieraceae

7. *Dumortiera hirsuta* (Sw.) Nees Ir-Tu reg. [Hyrcanian prov.]

Lunulariaceae

8. *Lunularia cruciata* (L.) Dumort. ex Lindb. Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]

Marchantiaceae

9. *Marchantia paleacea* Bertol. Ir-Tu reg. [Hyrcanian prov.]
10. *Marchantia polymorpha* L. Ir-Tu reg. [Hyrcanian prov.]
11. *Marchantia polymorpha* subsp. *montivagans* Bischl. & Boissel.-Dub. Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]

Ricciales

Ricciaceae

12. *Riccia atromarginata* Levier Sud-Zam reg. (Khalijo-Omani)
13. *Riccia bifurca* Hoffm. Sud-Zam reg. (Khalijo-Omani)
14. *Riccia caverosa* Hoffm. Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
15. *Riccia crinita* Taylor Sud-Zam reg. (Khalijo-Omani)
16. *Riccia crozalsii* Levier Sud-Zam reg. (Khalijo-Omani)
17. *Riccia fluitans* L. Ir-Tu reg. [Hyrcanian prov.]
18. *Riccia frostii* Austin Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
19. *Riccia glauca* L. Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
20. *Riccia gougetiana* Durieu & Mont. Ir-Tu reg. [Hyrcanian prov.]
21. *Riccia lamellosa* Raddi Sud-Zam reg. (Khalijo-Omani)
22. *Riccia huebeneriana* Lindenb. Ir-Tu reg. [Hyrcanian prov.]
23. *Riccia sorocarpa* Bisch. Ir-Tu reg. [Hyrcanian prov.]

24. *Riccia subbifurca* Warnst. ex Croz. Ir-Tu reg. [Hyrcanian prov.]
 25. *Ricciocarpos natans* (L.) Corda Ir-Tu reg. [Hyrcanian prov.]

Targioniaceae

26. *Targionia hypophylla* L. Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
 27. *Targionia lorbeeriana* Müller. Frib. Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]

Fossombroniopsida

Fossombroniales

Fossombroniaceae

28. *Fossombronia caespitiformis* De Not. ex Rabenh. Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]

Pelliopsida

Pelliales

Pelliaceae

29. *Pellia endiviifolia* (Dicks.) Dumort. Ir-Tu reg. [Hyrcanian prov.]
 30. *Pellia epiphylla* (L.) Corda Ir-Tu reg. [Hyrcanian prov.]

Jungermanniopsida

Jungermanniidae

Arnelliaceae

31. *Southbya nigrella* (De Not.) Henriques Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]

Calypogeiaceae

32. *Calypogeia arguta* Nees & Mont. Ir-Tu reg. [Hyrcanian prov.]
 33. *Calypogeia fissa* (L.) Raddi Ir-Tu reg. [Hyrcanian prov.]

Cephaloziaceae

34. *Cephalozia bicuspidata* (L.) Dumort. Ir-Tu reg. [Hyrcanian prov.]

Cephaloziellaceae

35. *Cephaloziella rubella* var. *sullivantii* (Austin) Müll.Frib Ir-Tu reg. [Hyrcanian prov.]

Frullaniaceae

36. *Frullania cesatiana* De Not. Ir-Tu reg. [Hyrcanian prov.]
 37. *Frullania dilatata* (L.) Dumort. Ir-Tu reg. [Hyrcanian prov.]
 38. *Frullania tamarisci* (L.) Dumort. Ir-Tu reg. [Hyrcanian prov.]

Geocalyceae

39. *Chiloscyphus polyanthos* (L.) Corda Ir-Tu reg. [Hyrcanian prov.]
 40. *Chiloscyphus pallescens* (Hoffm.) Dumort Ir-Tu reg. [Hyrcanian prov.]
 41. *Lophocolea bidentata* (L.) Dumort. Ir-Tu reg. [Hyrcanian prov.]
 42. *Lophocolea heterophylla* (Schrad.) Dumort Ir-Tu reg. [Hyrcanian prov.]
 43. *Lophocolea minor* Nees Ir-Tu reg. [Hyrcanian prov.]

Jubulaceae

44. *Jubula hutchinsiae* subsp. *caucasica* Konstant. & Vilnet Ir-Tu reg. [Hyrcanian prov.]

Jungermanniaceae

45. *Jungermannia caucasica* Vána Ir-Tu reg. [Hyrcanian prov.]
46. *Jungermannia gracillima* Sm. Ir-Tu reg. [Hyrcanian prov.]
47. *Jungermannia hyalina* Lyell Ir-Tu reg. [Hyrcanian prov.]
48. *Jungermannia leiantha* Grolle Ir-Tu reg. [Hyrcanian prov.]
49. *Jungermannia subulata* A.Evans Ir-Tu reg. [Hyrcanian prov.]

Lejeuneaceae

50. *Cololejeunea rossettiana* (Massal.) Schiffn Ir-Tu reg. [Hyrcanian prov.]
51. *Lejeunea cavifolia* (Ehrh.) Lindb. Ir-Tu reg. [Hyrcanian prov.]
52. *Lejeunea lamacerina* (Steph.) Schiffn Ir-Tu reg. [Hyrcanian prov.]

Lophoziaceae

53. *Barbilophozia barbata* (Schreb.) Loeske Ir-Tu reg. [Hyrcanian prov.]
54. *Leiocolea badensis* (Gottsche) Joerg Ir-Tu reg. [Hyrcanian prov.]
55. *Leiocolea turbinata* (Raddi) H.Buch Ir-Tu reg. [Hyrcanian prov.]
56. *Tritomaria exsecta* (Schmidel) Loeske Ir-Tu reg. [Hyrcanian prov.]

Plagiochilaceae

57. *Pedinophyllum interruptum* (Nees) Kaal. Ir-Tu reg. [Hyrcanian prov.]
58. *Plagiochila asplenioides* (L.) Dumort. Ir-Tu reg. [Hyrcanian prov.]
59. *Plagiochila porelloides* (Torr. ex Nees) Lindenb. Ir-Tu reg. [Hyrcanian prov.]

Porellaceae

60. *Porella arboris-vitae* (With.) Grolle Ir-Tu reg. [Hyrcanian prov.]
61. *Porella cordaeana* (Huebener) Moore Ir-Tu reg. [Hyrcanian prov.]
62. *Porella platyphylla* (L.) Pfeiff. Ir-Tu reg. [Hyrcanian prov.]
63. *Porella platyphylloidea* (Schwein.) Lindb. Ir-Tu reg. [Hyrcanian prov.]

Radulaceae

64. *Radula complanata* (L.) Dumort. Ir-Tu reg. [Hyrcanian prov.]
65. *Radula lindenbergiana* Gottsche ex C. Hartm. Ir-Tu reg. [Hyrcanian prov.]

Scapaniaceae

66. *Scapania aspera* M. Bernet & Bernet Ir-Tu reg. [Hyrcanian prov.]
67. *Scapania nemorea* (L.) Grolle Ir-Tu reg. [Hyrcanian prov.]

Metzgeriidae

Aneuraceae

68. *Aneura pinguis* (L.) Dumort. Ir-Tu reg. [Hyrcanian prov.]

69. *Riccardia multifida* (L.) Gray Ir-Tu reg. [Hyrcanian prov.]
 70. *Riccardia palmata* (Hedw.) Carruth. Ir-Tu reg. [Hyrcanian prov.]

Metzgeriaceae

71. *Metzgeria conjugata* Lindb. Ir-Tu reg. [Hyrcanian prov.]
 72. *Metzgeria furcata* (L.) Corda Ir-Tu reg. [Hyrcanian prov.]

Bryophyta

Sphagnopsida

Sphagnales

Sphagnaceae

1. *Sphagnum girgensohnii* Russow Ir-Tu reg. [Hyrcanian prov.]

Tetraphidopsida

Tetraphidales

Tetraphidaceae

2. *Tetraphis pellucida* Hedw. Ir-Tu reg. [Hyrcanian prov.]

Polytrichopsida

Polytrichales

Polytrichaceae

3. *Atrichum angustatum* (Brid.) Bruch & Schimp. Ir-Tu reg. [Hyrcanian prov.]
 4. *Atrichum flavisetum* Mitt. Ir-Tu reg. [Hyrcanian prov.]
 5. *Atrichum undulatum* (Hedw.) P. Beauv. Ir-Tu reg. [Hyrcanian prov.]
 6. *Pogonatum aloides* (Hedw.) P. Beauv. Ir-Tu reg. [Hyrcanian prov.]
 7. *Pogonatum urnigerum* (Hedw.) P. Beauv. Ir-Tu reg. [Hyrcanian prov.]
 8. *Polytrichum commune* Hedw. Ir-Tu reg. [Hyrcanian prov.]

Bryopsida

Dicranidae

Bartramiales

Bartramiaceae

9. *Bartramia halleriana* Hedw. Ir-Tu reg. [Hyrcanian prov.]
 10. *Bartramia pomiformis* Hedw. Ir-Tu reg. [Hyrcanian prov.]
 11. *Philonotis caespitosa* Jur. Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
 12. *Philonotis calcarea* (Bruch & Schimp.) Schimp. Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Zagrossian & Irano-Turanian)]
 13. *Philonotis calcarea* var. *seriatifolia* Schiffn Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
 14. *Philonotis capillaris* Lindb. Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
 15. *Philonotis falcata* (Hook.)Mitt Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
 16. *Philonotis fontana* (Hedw.) Brid. Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]

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| 17. | <i>Philonotis fontana</i> var. <i>minor</i> Paris | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)] |
| 18. | <i>Philonotis hastata</i> (Duby) Wijk & Margad. | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |
| 19. | <i>Philonotis marchica</i> (Hedw.) Brid. | Ir-Tu reg. [Hyrcanian prov.] |
| 20. | <i>Philonotis rigida</i> Brid. | Ir-Tu reg. [Hyrcanian prov.] |
| 21. | <i>Philonotis rigida</i> var. <i>gracilis</i> Schimp. | Ir-Tu reg. [Hyrcanian prov.] |
| 22. | <i>Philonotis seriata</i> Mitt. | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |
| 23. | <i>Philonotis tomentella</i> Molendo | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)] |
| 24. | <i>Philonotis uncinata</i> (Schwägr.) Brid. | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |
| 25. | <i>Plagiopus oederianus</i> (Sw.) H.A. Crum & L.E. Anderson | Ir-Tu reg. [Hyrcanian prov.] |

Dicranales

Aongstroemiaceae

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| 26. | <i>Dichodontium pellucidum</i> (Hedw.) Schimp. | Ir-Tu reg. [Hyrcanian prov.] |
| 27. | <i>Dichodontium flavescense</i> (Dickson ex Withering) Lindberg | Ir-Tu reg. [Hyrcanian prov.] |

Dicranellaceae

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| 28. | <i>Dicranella howei</i> Renaud & Cardot | Ir-Tu reg. [Hyrcanian prov.] |
| 29. | <i>Dicranella varia</i> (Hedw.) Schimp. | Ir-Tu reg. [Hyrcanian prov.] |

Rhabdoweisiaceae

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| 30. | <i>Cynodontium tenellum</i> (Schimp.) Limpr. | Ir-Tu reg. [Hyrcanian prov.] |
| 31. | <i>Oreas martiana</i> (Hoppe & Hornsch.) Brid. | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |

Dicranaceae

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| 32. | <i>Dicranum brevifolium</i> (Lindb.) Lindb | Ir-Tu reg. [Hyrcanian prov.] |
| 33. | <i>Dicranum dispersum</i> Engelmark | Ir-Tu reg. [Hyrcanian prov.] |
| 34. | <i>Dicranum flexicaule</i> Brid. | Ir-Tu reg. [Hyrcanian prov.] |
| 35. | <i>Dicranum muehlenbeckii</i> Bruch & Schimp. | Ir-Tu reg. [Hyrcanian prov.] |
| 36. | <i>Dicranum scoparium</i> Hedw. | Ir-Tu reg. [Hyrcanian prov.] |
| 37. | <i>Dicranum viride</i> (Sull. & Lesq.) Lindb. | Ir-Tu reg. [Hyrcanian prov.] |

Ditrichaceae

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| 38. | <i>Ceratodon purpurens</i> (Hedw.) Brid. | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |
| 39. | <i>Cheilothela chloropus</i> (Brid.) Broth. | Ir-Tu reg. [Mes. Prov.] |
| 40. | <i>Distichium capillaceum</i> (Hedw.) Bruch & Schimp. | Ir-Tu reg. [Hyrcanian prov.] |
| 41. | <i>Distichium inclinatum</i> (Hedw.) Bruch & Schimp. | Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)] |
| 42. | <i>Ditrichum flexicaule</i> (Schwägr.) Hampe | Ir-Tu reg. [Hyrcanian, Arm-Ira. (Irano-Turanian)] |
| 43. | <i>Ditrichum gracile</i> (Mitt.) Kuntze | Ir-Tu reg. [Hyrcanian prov.] |
| 44. | <i>Garckea comosa</i> (Dozy & Molk.) Wijk & Margad. | Ir-Tu reg. [Hyrcanian prov.] |

Fissidentaceae

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| 45. <i>Fissidens arnoldii</i> R. Ruthe | Ir-Tu reg. [Arm-Ira prov. (Zagrossian)] |
| 46. <i>Fissidens adianthoides</i> Hedw. | Ir-Tu reg. [Hyrcanian prov.] |
| 47. <i>Fissidens bambergi</i> Schimp. | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)] |
| 48. <i>Fissidens bryoides</i> Hedw. | Ir-Tu reg. [Hyrcanian prov.] |
| 49. <i>Fissidens crassipes</i> Wilson ex Bruch & Schimp. | Ir-Tu reg. [Hyrcanian prov.] |
| 50. <i>Fissidens crispus</i> Mont. | Ir-Tu reg. [Hyrcanian prov.] |
| 51. <i>Fissidens curvatus</i> Hornsch. | Ir-Tu reg. [Hyrcanian prov.] |
| 52. <i>Fissidens dubius</i> P. Beauv. | Ir-Tu reg. [Hyrcanian prov.] |
| 53. <i>Fissidens exiguus</i> Sull. | Ir-Tu reg. [Hyrcanian prov.] |
| 54. <i>Fissidens exilis</i> Hedw. | Ir-Tu reg. [Hyrcanian prov.] |
| 55. <i>Fissidens osmundoides</i> Hedw. | Ir-Tu reg. [Hyrcanian prov.] |
| 56. <i>Fissidens persicus</i> R. Ruthe | Ir-Tu reg. [Hyrcanian prov.] |
| 57. <i>Fissidens pusillus</i> (Wilson) Milde | Ir-Tu reg. [Hyrcanian prov.] |
| 58. <i>Fissidens rivularis</i> (Spruce) Schimp. | Ir-Tu reg. [Hyrcanian prov.] |
| 59. <i>Fissidens taxifolius</i> Hedw. | Ir-Tu reg. [Hyrcanian prov.] |
| 60. <i>Fissidens taxifolius</i> subsp. <i>pallidicaulis</i> (Mitt.) Corb. | Ir-Tu reg. [Hyrcanian prov.] |
| 61. <i>Fissidens viridulus</i> (Sw.) Wahlenb. | Ir-Tu reg. [Hyrcanian prov.] |

Hedwigiales

Hedwigiaceae

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| 62. <i>Hedwigia ciliata</i> (Hedw.) P. Beauv. | Ir-Tu reg. [Hyrcanian prov.] |
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Grimmiales

Grimmiaceae

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| 63. <i>Coscinodon cribrosus</i> (Hedw.) Spruce | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |
| 64. <i>Grimmia alpestris</i> (F. Weber & D. Mohr) Schleich. | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |
| 65. <i>Grimmia anodon</i> Bruch & Schimp. | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |
| 66. <i>Grimmia crassifolia</i> Lindb. ex Broth. | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |
| 67. <i>Grimmia crassifolia</i> var. <i>cucullata</i> Baumgartner | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |
| 68. <i>Grimmia crinita</i> Brid. | Ir-Tu reg. [Hyrcanian prov.] |
| 69. <i>Grimmia dissimulata</i> E. Maier | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |
| 70. <i>Grimmia elatior</i> Bruch ex Bals.-Criv. & De Not. | Ir-Tu reg. [Hyrcanian prov.] |
| 71. <i>Grimmia hartmanii</i> Schimp. | Ir-Tu reg. [Hyrcanian prov.] |
| 72. <i>Grimmia laevigata</i> (Brid.) Brid. | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |
| 73. <i>Grimmia lisae</i> De Not. | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)] |
| 74. <i>Grimmia longirostris</i> Hook. | Ir-Tu reg. [Hyrcanian prov.] |
| 75. <i>Grimmia montana</i> Bruch. & Schimp. | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |

76. <i>Grimmia orbicularis</i> Bruch	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Zagrossian & Irano-Turanian)]
77. <i>Grimmia ovalis</i> (Hedw.) Lindb.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Zagrossian & Irano-Turanian)]
78. <i>Grimmia plagiopodia</i> Hedw.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
79. <i>Grimmia pulvinata</i> (Hedw.) Sm.	Ir-Tu reg. [Hyrcanian prov.]
80. <i>Grimmia sessitana</i> De Not.	Ir-Tu reg. [Hyrcanian prov.]
81. <i>Grimmia trichophylla</i> Grev.	Ir-Tu reg. [Hyrcanian prov.]
82. <i>Grimmia tergestina</i> Tomm. ex Bruch & Schimp.	Ir-Tu reg. [Hyrcanian prov.]
83. <i>Grimmia Unicolor</i> Hook	Ir-Tu reg. [Hyrcanian prov.]
84. <i>Niphotrichum elongatum</i> (Ehrh. ex Frisvoll) Bednarek-Ochyra & Ochyra	Ir-Tu reg. [Hyrcanian prov.]
85. <i>Schistidium agassizii</i> Sull. & Lesq.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
86. <i>Schistidium apocarpum</i> (Hedw.) Bruch & Schimp.	Ir-Tu reg. [Hyrcanian prov., Arm-Ira prov. (Zagrossian)]
87. <i>Schistidium atrofusum</i> (Schimp.) Limpr.	Sah-Ara reg.
88. <i>Schistidium brunnescens</i> Limpr.	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
89. <i>Schistidium confertum</i> (Funck) Bruch & Schimp.	Ir-Tu reg. [Hyrcanian prov.]
90. <i>Schistidium crassipilum</i> H.H. Blom	Ir-Tu reg. [Hyrcanian prov.]
91. <i>Schistidium elegantulum</i> H.H. Blom	Ir-Tu reg. [Hyrcanian prov.]
92. <i>Schistidium flaccidum</i> (De Not.) Ochyra	Ir-Tu reg. [Hyrcanian prov.] [Arm-Ira prov. (Irano-Turanian)]
93. <i>Schistidium helveticum</i> (Schkuhr) Deguchi	Ir-Tu reg. [Hyrcanian prov.]
94. <i>Schistidium lancifolium</i> (Kindb.) H.H. Blom	Ir-Tu reg. [Hyrcanian prov.]
95. <i>Schistidium pruinosum</i> (Wilson) G. Roth	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
96. <i>Schistidium rivulare</i> (Brid.) Podp.	Ir-Tu reg. [Hyrcanian prov.]
97. <i>Schistidium strictum</i> (Turner) Loeske ex Martensson	Ir-Tu reg. [Hyrcanian prov.]
98. <i>Schistidium trichodon</i> (Brid.) Poelt.	Ir-Tu reg. [Hyrcanian prov.]
Ptychomitriaceae	
99. <i>Campylostelium pitardii</i> (Corb.) E. Maier	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
Seligeriaceae	
100. <i>Seligeria pusilla</i> (Hedw.) Bruch & Schimp.	Ir-Tu reg. [Hyrcanian prov.]
Pottiales	
Ephemeraceae	
101. <i>Ephemerum stellatum</i> H. Philib.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
Pottiaceae	
102. <i>Acaulon muticum</i> (Schreb. ex Hedw.) Müll. Hal.	Ir-Tu reg. [Hyrcanian prov.]
103. <i>Aloina aloides</i> (Koch ex Schultz) Kindb.	Ir-Tu reg. [Hyrcanian prov.]
104. <i>Aloina ambigua</i> (Bruch & Schimp.) Limpr.	Ir-Tu reg. [Hyrcanian prov.] [Arm-Ira prov. (Zagrossian)]
105. <i>Aloina bifrons</i> (De Not) Delgad.	Ir-Tu reg. [Hyrcanian prov.]

106.	<i>Aloina rigida</i> (Hedw.) Limpr.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
107.	<i>Anoetangium handelii</i> Schiffn.	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
108.	<i>Barbula bolleana</i> (Müll. Hal.) Broth.	Ir-Tu reg. [Hyrcanian prov.]
109.	<i>Barbula convoluta</i> Hedw.	Ir-Tu reg. [Hyrcanian prov.]
110.	<i>Barbula unguiculata</i> Hedw.	Ir-Tu reg. [Hyrcanian prov.]
111.	<i>Bryoerythrophyllum recurvirostrum</i> (Hedw.) P.C. Chen	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
112.	<i>Cinclidotus fontinaloides</i> (Hedw.) P. Beauv.	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
113.	<i>Cinclidotus riparius</i> (Host ex Brid.) Arn.	Ir-Tu reg. [Hyrcanian prov.]
114.	<i>Crossidium crassinerve</i> (De Not.) Jur.	Ir-Tu reg. [Hyrcanian prov.]
115.	<i>Crossidium laxefilamentosum</i> Frey & Kürschner	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
116.	<i>Crossidium squamiferum</i> (Viv.) Jur.	Ir-Tu reg. [Hyrcanian prov.]
117.	<i>Crossidium squamiferum</i> var. <i>pottioideum</i> (De Not.) Mönk.	Ir-Tu reg. [Hyrcanian prov.]
118.	<i>Dialytrichia mucronata</i> (Brid.) Broth.	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
119.	<i>Didymodon acutus</i> (Brid.) K. Saito	Ir-Tu reg. [Hyrcanian prov.]
120.	<i>Didymodon australasiae</i> (Hook. & Grev.) R.H. Zander	Ir-Tu reg. [Hyrcanian prov.]
121.	<i>Didymodon cordatus</i> Jur.	Ir-Tu reg. [Hyrcanian prov.]
122.	<i>Didymodon fallax</i> (Hedw.) R. H. Zander	Ir-Tu reg. [Hyrcanian prov.]
123.	<i>Didymodon ferrugineus</i> (Schimp. Ex Besch.) M.O. Hill	Ir-Tu reg. [Hyrcanian prov.]
124.	<i>Didymodon icmadophila</i> (Schimp. ex Müll. Hal.) K. Saito	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
125.	<i>Didymodon insulanus</i> (De Not.) M.O. Hill	Ir-Tu reg. [Hyrcanian prov.]
126.	<i>Didymodon luridus</i> Hornsch.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
127.	<i>Didymodon maschalongenus</i> (Renauld & Cardot) Broth.	Ir-Tu reg. [Hyrcanian prov.]
128.	<i>Didymodon rigidulus</i> Hedw.	Ir-Tu reg. [Hyrcanian prov.]
129.	<i>Didymodon sinuosus</i> (Mitt.) Delogne	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)]
130.	<i>Didymodon spadiceus</i> (Mitt.) Limpr.	Ir-Tu reg. [Hyrcanian prov.]
131.	<i>Didymodon tophaceus</i> (Brid.) Lisa	Ir-Tu reg. [Hyrcanian prov.]
132.	<i>Didymodon vinealis</i> (Brid.) R. H. Zander	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov], Sud-Zam reg. (Khaliyo-Omanian)]
133.	<i>Eucladium verticillatum</i> (Hedw.) Bruch & Schimp.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Zagrossian & Irano-Turanian)]
134.	<i>Gyroweisia tenuis</i> (Schrad. ex Hedw.) Schimp.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
135.	<i>Gymnostomum aeruginosum</i> Sm.	Ir-Tu reg. [Hyrcanian prov.]
136.	<i>Gymnostomum calcareum</i> Nees & Hornsch.	Ir-Tu reg. [Hyrcanian prov.]
137.	<i>Gymnostomum mosis</i> (Lorentz) Jur. & Milde	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
138.	<i>Gymnostomum viridulum</i> Brid.	Ir-Tu reg. [Hyrcanian prov.]
139.	<i>Henediella heimii</i> (Hedw.) R.H.Zander	Ir-Tu reg. [Hyrcanian prov.]
140.	<i>Hydrogonium ehrenbergii</i> (Lorentz) A. Jaeger	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]

141. <i>Hymenostylium recurvirostrum</i> (Hedw.) Dixon	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
142. <i>Hymenostylium recurvirostrum</i> var. <i>latifolium</i> (J. E. Zetterst.) Wijk & Margad.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
143. <i>Hymenostylium recurvirostrum</i> var. <i>scabrum</i> (Lindb.) Podp.	Ir-Tu reg. [Hyrcanian prov.]
144. <i>Leptobarbula berica</i> (De Not.) Schimp.	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
145. <i>Microbryum davallianum</i> (Sm.) R.H. Zander	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
146. <i>Microbryum davallianum</i> var. <i>conicum</i> (Schleich. ex Schwägr.) R.H. Zander	Ir-Tu reg. [Hyrcanian prov.]
147. <i>Microbryum floerkeanum</i> (F.Weber & D.Mohr) Schimp	Ir-Tu reg. [Hyrcanian prov.]
148. <i>Microbryum rectum</i> (With.) R.H. Zander	Ir-Tu reg. [Hyrcanian prov.]
149. <i>Microbryum starckeanum</i> (Hedw.) R.H. Zander	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
150. <i>Microbryum starckeanum</i> var. <i>brachyodus</i> (Bruch & Schimp.) R.H. Zander	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
151. <i>Microbryum rectum</i> (With.) R.H.Zander	Ir-Tu reg. [Hyrcanian prov.]
152. <i>Oxystegus tenuirostris</i> (Hook. & Taylor) A.J.E. Sm.	Ir-Tu reg. [Hyrcanian prov.]
153. <i>Pottia crinita</i> Wilson ex Bruch & Schimp.	Sud-Zam reg. (Khalijo-Omanian)
154. <i>Pottia lanceolata</i> (Hedw.) Müll. Hal.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
155. <i>Phascum cuspidatum</i> Hedw.	Ir-Tu reg. [Hyrcanian prov.]
156. <i>Phascum schreberianum</i> Dicks.	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
157. <i>Pleurochaete squarrosa</i> (Brid.) Lindb.	Ir-Tu reg. [Hyrcanian prov.]
158. <i>Protobryum bryoides</i> (Dicks) J.Guerra & M.J.Cano	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
159. <i>Pseudocrossidium revolutum</i> (Brid.) R.H. Zander	Ir-Tu reg. [Hyrcanian prov., Arm-Ira prov. (Zagrossian)]
160. <i>Pterygoneurum medium</i> (E.S. Salmon) Broth.	Ir-Tu reg. [Hyrcanian prov.]
161. <i>Pterygoneurum ovatum</i> (Hedw.) Dixon	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
162. <i>Stegonia latifolia</i> (Schwägr.) Venturi ex Broth.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
163. <i>Syntrichia calcicola</i> J.J. Amann	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
164. <i>Syntrichia caninervis</i> Mitt.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Zagrossian & Irano-Turanian)]
165. <i>Syntrichia caninervis</i> var. <i>gypsophila</i> (J.J. Amann ex G. Roth) Ochyra	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
166. <i>Syntrichia caninervis</i> var. <i>pseudodesertorum</i> (Vondr.) M. T. Gallego	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Zagrossian & Irano-Turanian)]
167. <i>Syntrichia fragilis</i> (Taylor) Ochyra	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Zagrossian & Irano-Turanian)]
168. <i>Syntrichia handelii</i> (Schiffner) S. Agnew & Vondr.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Zagrossian & Irano-Turanian)]
169. <i>Syntrichia laevipila</i> Brid.	Ir-Tu reg. [Hyrcanian prov.]
170. <i>Syntrichia minor</i> (Bizot) M. T. Gallego, J. Guerra, M.J. Cano, Ros & Sanchez-Moya	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
171. <i>Syntrichia montana</i> Nees	Ir-Tu reg. [Hyrcanian prov., Arm-Ira prov. (Zagrossian)]
172. <i>Syntrichia norvegica</i> F. Web.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
173. <i>Syntrichia papillosissima</i> (Copp.) Loeske	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
174. <i>Syntrichia princeps</i> (De Not.) Mitt.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
175. <i>Syntrichia princeps</i> subsp. <i>parnassica</i> (Schiffn.) Podp.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)]

176.	<i>Syntrichia ruralis</i> (Hedw.) F. Weber & D. Mohr	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Zagrossian & Irano-Turanian)]
177.	<i>Syntrichia ruralis</i> var. <i>ruraliformis</i> (Besch.) Delonge	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
178.	<i>Syntrichia sinensis</i> (Müll. Hal.) Ochyra	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)]
179.	<i>Syntrichia subpapillosissima</i> (R.B. Pierrot ex W.A. Kramer) M. T. Gallego & J. Guerra	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
180.	<i>Syntrichia virescens</i> (De Not.) Ochyra	Ir-Tu reg. [Hyrcanian prov.]
181.	<i>Syntrichia virescens</i> var. <i>iranica</i> (W.A. Kramer) R. H. Zander	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
182.	<i>Timmiella anomala</i> (Bruch & Schimp.) Limpr.	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
183.	<i>Timmiella barbuloides</i> (Brid.) Mönk.	Sah-Ara reg., Sud-Zam (Khalijo-Omanian)
184.	<i>Tortella dolomitica</i> Köckinger & Hedenäs, sp. nov.	Ir-Tu reg. [Hyrcanian prov.]
185.	<i>Tortella inclinata</i> (R.Hedw.) Limpr.	Ir-Tu reg. [Hyrcanian prov.]
186.	<i>Tortella flavovirens</i> (Bruch) Broth.	Ir-Tu reg. [Hyrcanian prov.]
187.	<i>Tortella fragilis</i> (Hook. & Wilson) Limpr.	Ir-Tu reg. [Hyrcanian prov.]
188.	<i>Tortella humilis</i> (Hedw.) Jenn.	Ir-Tu reg. [Hyrcanian prov.]
189.	<i>Tortella inclinata</i> (R. Hedw.) Limpr.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Zagrossian & Irano-Turanian)]
190.	<i>Tortella inflexa</i> (Bruch) Broth.	Ir-Tu reg. [Hyrcanian prov.]
191.	<i>Tortella nitida</i> (Lindb.) Broth.	Ir-Tu reg. [Hyrcanian prov.]
192.	<i>Tortella squarrosa</i> (Brid.) Limpr.	Ir-Tu reg. [Hyrcanian prov.]
193.	<i>Tortella tortuosa</i> (Hedw.) Limpr.	Ir-Tu reg. [Hyrcanian prov.]
194.	<i>Tortula astoma</i> Schiffner	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)]
195.	<i>Tortula acaulon</i> (With.) R.H.Zander	Ir-Tu reg. [Hyrcanian prov.]
196.	<i>Tortula atrovirens</i> (Sm.) Lindb.	Ir-Tu reg. [Hyrcanian prov.]
197.	<i>Tortula brevissima</i> Schiffner	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
198.	<i>Tortula canescens</i> Mont.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
199.	<i>Tortula caucasica</i> Lindb. Ex Broth.	Ir-Tu reg. [Hyrcanian prov.]
200.	<i>Tortula demawendica</i> Schiffner	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)]
201.	<i>Tortula inermis</i> (Brid.) Mont.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)], Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
202.	<i>Tortula hoppeana</i> (Schultz) Ochyra	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
203.	<i>Tortula lindbergii</i> Broth.	Ir-Tu reg. [Hyrcanian prov.]
204.	<i>Tortula leucostoma</i> (R.Br.) Hook. & Grev.	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
205.	<i>Tortula mucronifolia</i> Schwägr.	Ir-Tu reg. [Hyrcanian prov.]
206.	<i>Tortula muralis</i> Hedw.	Ir-Tu reg. [Hyrcanian prov., Arm-Ira prov. (Zagrossian)]
207.	<i>Tortula muralis</i> var. <i>aestiva</i> Brid. ex Hedw.	Ir-Tu reg. [Hyrcanian prov.]
208.	<i>Tortula obtusifolia</i> (Schwägr.) Mathieu	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
209.	<i>Tortula revolvens</i> var. <i>obtusata</i> Reimers	Ir-Tu reg. [Hyrcanian prov.]
210.	<i>Tortula solmsii</i> (Schimp.) Limpr.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]

211.	<i>Tortula subulata</i> Hedw.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
212.	<i>Tortula subulata</i> Hedw. var. <i>graeffi</i> Warnst.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
213.	<i>Tortula subulata</i> Hedw. var. <i>subinermis</i> (Bruch & Schimp.) Wilson	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
214.	<i>Tortula systylia</i> (Schimp.) Lindb.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
215.	<i>Tortula truncata</i> (Hedw.) Mitt.	Ir-Tu reg. [Hyrcanian prov.]
216.	<i>Tortula vahliana</i> (Schultz) Mont.	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
217.	<i>Tortula viridifolia</i> (Mitt.) Blockeel & A.J.E. Sm.	Ir-Tu reg. [Hyrcanian prov.]
218.	<i>Trichostomopsis haussknechtii</i> (Jur. & Milde) S. Agnew & C. C. Towns.	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
219.	<i>Trichostomum brachydontium</i> Bruch	Ir-Tu reg. [Hyrcanian prov.]
220.	<i>Trichostomum crispulum</i> Bruch	Ir-Tu reg. [Hyrcanian prov.]
221.	<i>Trichostomum mildeanum</i> Jur.	Ir-Tu reg. [Hyrcanian prov.]
222.	<i>Tricho-stomum persicum</i> Jur. & Milde	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
223.	<i>Trichostomum triumphans</i> De Not.	Ir-Tu reg. [Hyrcanian prov.]
224.	<i>Weissia brachycarpa</i> (Nees & Hornsch.) Jur.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
225.	<i>Weissia condensa</i> (Voit) Lindb.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
226.	<i>Weissia controversa</i> Hedw.	Ir-Tu reg. [Hyrcanian prov.]
227.	<i>Weissia controversa</i> var. <i>crispata</i> (Nees & Hornsch.) Nyholm	Ir-Tu reg. [Hyrcanian prov.]
228.	<i>Weissia fallax</i> Sehm.	Ir-Tu reg. [Hyrcanian prov.]
229.	<i>Weissia longifolia</i> Mitt.	Ir-Tu reg. [Hyrcanian prov.]
230.	<i>Weissia squarrosa</i> (Nees & Hornsch.) Mull. Hal.	Ir-Tu reg. [Hyrcanian prov.]
231.	<i>Weissia triumphans</i> (De Not.) M. O. Hill	Ir-Tu reg. [Hyrcanian prov.]

Splachnales

Meesiaceae

232.	<i>Amblyodon dealbatus</i> (Hedw.) Bruch & Schimp.	Ir-Tu reg. [Hyrcanian prov.]
233.	<i>Leptobryum pyriforme</i> (Hedw.) Wilson	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)]
234.	<i>Meesia triquetra</i> (L. ex Jolycl.) Ångström	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]

Bryales

Bryaceae

235.	<i>Anomobryum auratum</i> (Mitt.) A. Jaeger	Ir-Tu reg. [Hyrcanian prov.]
236.	<i>Anomobryum lanatum</i> (P. Beauv.) J.R. Spence & H.P. Ramsay	Ir-Tu reg. [Hyrcanian prov.]
237.	<i>Brachymenium exile</i> (Dozy & Molke.) Bosch & Sande Lac.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
238.	<i>Brachymenium nepalense</i> Hook.	Ir-Tu reg. [Hyrcanian prov.]
239.	<i>Bryum amblydon</i> Mull. Hal.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
240.	<i>Bryum argenteum</i> Hedw.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
241.	<i>Bryum archangelicum</i> Bruch & Schimp.	Ir-Tu reg. [Hyrcanian prov.]

242. <i>Bryum caespiticium</i> Hedw.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
243. <i>Bryum caespiticium</i> var. <i>comense</i> (Schimp.) Husn.	Ir-Tu reg. [Hyrcanian prov.]
244. <i>Bryum campylopodoides</i> Müll. Hal.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)]
245. <i>Bryum capillare</i> var. <i>rosulatum</i> Mitt.	Ir-Tu reg. [Hyrcanian prov.]
246. <i>Bryum comense</i> Schimp.	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
247. <i>Bryum dichotomum</i> Hedw.	Ir-Tu reg. [Hyrcanian Prov., Sud-Zam (Khalijo-Omanian)]
248. <i>Bryum elwendicum</i> C. Fehln.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
249. <i>Bryum lanatum</i> (P. Beauv.) Brid.	Ir-Tu reg. [Hyrcanian prov.]
250. <i>Bryum moravicum</i> Podp.	Ir-Tu reg. [Hyrcanian prov.]
251. <i>Bryum nepalense</i> Hook.f. in Schwägr.	Ir-Tu reg. [Hyrcanian prov.]
252. <i>Bryum pallescens</i> Schleich. ex Schwägr.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
253. <i>Bryum pallescens</i> var. <i>contextum</i> (Hornsch.) Huebener.	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
254. <i>Bryum pseudotriquetrum</i> (Hedw.) P. Gaertn., B. Mey. & Scherb.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
255. <i>Bryum pseudotriquetrum</i> var. <i>bornmuelleri</i> Schiffner	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
256. <i>Bryum syriacum</i> Lorentz	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
257. <i>Bryum uliginosum</i> (Brid.) Bruch & Schimp.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
258. <i>Gemmabryum badium</i> (Bruch.) J.R.Spence	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
259. <i>Gemmabryum dichotomum</i> (Hedw.) J.R.Spence & H.P. Ramsay	Ir-Tu reg. [Hyrcanian prov.]
260. <i>Gemmabryum exile</i> (Dozy & Molk.) J.R.Spence & H.P.Ramsay	Ir-Tu reg. [Hyrcanian prov.]
261. <i>Gemmabryum funkii</i> (Schwägr.) J.R.Spence	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
262. <i>Gemmabryum klinggraeffii</i> (Schimp) J.R.Spence & H.P.Ramsay	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)]
263. <i>Gemmabryum muehlenbeckii</i> (Bruch & Schimp) N.Pedersen	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
264. <i>Gemmabryum subapiculatum</i> (Hamp.) J.R.Spence & H.P.Ramsay	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
265. <i>Imbribryum alpinum</i> (Huds. Ex With.) N.Pedersen	Ir-Tu reg. [Hyrcanian prov.]
266. <i>Imbribryum alpinum</i> var. <i>viride</i> Husn.	Ir-Tu reg. [Hyrcanian prov.]
267. <i>Imbribryum mildeanum</i> (Jur.) J.R.Spence	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)]
268. <i>Ptychostomum archangelicum</i> (Bruch & Schimp) J.R.Spence	Ir-Tu reg. [Hyrcanian prov.]
269. <i>Ptychostomum bimum</i> var. <i>pseudotriquetrum</i>	Ir-Tu reg. [Hyrcanian prov.]
270. <i>Ptychostomum cernuum</i> (Brid.) Hornsch.	Ir-Tu reg. [Hyrcanian prov.]
271. <i>Ptychostomum creberrimum</i> (Taylor) J.R.Spence & H.P.Ramsay	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
272. <i>Ptychostomum compactum</i> Hornsch.	Ir-Tu reg. [Arm-Ira (Irano-Turanian & Zagrossian)]
273. <i>Ptychostomum intermedium</i> (Brid.) J.R.Spence	Sud-Zam reg. (Khalijo-Omanian)]
274. <i>Ptychostomum neodamense</i> (Itzigs.) J.R.Spence	Ir-Tu reg. [Hyrcanian prov.]
275. <i>Ptychostomum pallens</i> (Sw. ex anon) J.R.Spence	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
276. <i>Ptychostomum schleicheri</i> (DC.) J.R.Spence	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]

277.	<i>Ptychostomum turbinatum</i> (Hedw.) J.R.Spence	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
278.	<i>Ptychostomum weigelii</i> (Spreng.) J.R.Spence	Sah-Ara reg., Ir-Tu reg. [Mes. Prov.]
279.	<i>Rhodobryum ontariense</i> (Kindb.) Paris.	Ir-Tu reg. [Hyrcanian prov.]
280.	<i>Rhodobryum roseum</i> (Hedw.) Limpr.	Ir-Tu reg. [Hyrcanian prov.]
281.	<i>Rosulabryum capillare</i> (Hedw.) J.R.Spence	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Zagrossian & Irano-Turanian)]
282.	<i>Rosulabryum elegans</i> (Nees ex Brid.) Ochyra	Ir-Tu reg. [Hyrcanian prov.]
283.	<i>Rosulabryum moravicum</i> (Podp.) Ochyra & Stebel	Ir-Tu reg. [Hyrcanian prov.]
284.	<i>Rosulabryum rubens</i> (Mitt.) J.R.Spence	Ir-Tu reg. [Hyrcanian prov.]
285.	<i>Rosulabryum torquescens</i> (Bruch & Schimp.) J.R.Spence	Ir-Tu reg. [Hyrcanian prov.]
Mniaceae		
286.	<i>Epipterygium tozeri</i> (Grev.) Lindb.	Ir-Tu reg. [Hyrcanian prov.]
287.	<i>Mielichhoferia mielichhoferiana</i> (Funck) Loeske	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
288.	<i>Mnium immarginatum</i> Broth.	Ir-Tu reg. [Hyrcanian prov.]
289.	<i>Mnium lycopodioides</i> Schwägr	Ir-Tu reg. [Hyrcanian prov.]
290.	<i>Mnium marginatum</i> (Dicks. ex With.) P. Beauv.	Ir-Tu reg. [Hyrcanian prov.]
291.	<i>Mnium heterophyllum</i> (Hook.) Schwägr.	Ir-Tu reg. [Hyrcanian prov.]
292.	<i>Mnium spinosum</i> (Voit) Schwägr.	Ir-Tu reg. [Hyrcanian prov.]
293.	<i>Mnium stellare</i> Reichard ex Hedw.	Ir-Tu reg. [Hyrcanian prov., [Arm-Ira prov. (Irano-Turanian)]]
294.	<i>Mnium thomsonii</i> Schimp.	Ir-Tu reg. [Hyrcanian prov.]
295.	<i>Pohlia annotina</i> (Hedw.) Lindb.	Ir-Tu reg. [Hyrcanian prov.]
296.	<i>Pohlia cruda</i> (Hedw.) Lindb.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)]
297.	<i>Pohlia elongata</i> Hedw.	Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
298.	<i>Pohlia flexuosa</i> Hook	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
299.	<i>Pohlia ludwigii</i> (Spreng. Ex Schwagr.) Broth.	Ir-Tu reg. [Hyrcanian prov.]
300.	<i>Pohlia nutans</i> (Hedw.) Lindb.	Ir-Tu reg. [Hyrcanian prov.]
301.	<i>Pohlia pentasticha</i> Schiffn.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)]
302.	<i>Pohlia wahlenbergii</i> (F. Weber & D. Mohr) A.L. Andrews	Ir-Tu reg. [Hyrcanian prov.]
303.	<i>Pohlia wahlenbergii</i> var. <i>calcareo</i> (Warnst.) E.F. Warb.	Ir-Tu reg. [Hyrcanian prov.]
304.	<i>Rhizomnium magnifolium</i> (Horik.) T.J. Kop.	Ir-Tu reg. [Hyrcanian prov.]
305.	<i>Rhizomnium punctatum</i> (Hedw.) T.J. Kop.	Ir-Tu reg. [Hyrcanian prov.]
306.	<i>Trachycystis ussuriensis</i> (Maack & Regel) T.J. Kop.	Ir-Tu reg. [Hyrcanian prov.]
Plagiomniaceae		
307.	<i>Plagiomnium affine</i> (Blandow ex Funck) T.J. Kop.	Ir-Tu reg. [Hyrcanian prov.]
308.	<i>Plagiomnium confertidens</i> (Lindb. & Arnell) T.J. Kop.	Ir-Tu reg. [Hyrcanian prov.]
309.	<i>Plagiomnium cuspidatum</i> (Hedw.) T.J. Kop.	Ir-Tu reg. [Hyrcanian prov.]

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| 310. | <i>Plagiomnium elatum</i> (Bruch & Schimp.) T.J. Kop. | Ir-Tu reg. [Hyrcanian prov.] |
| 311. | <i>Plagiomnium ellipticum</i> (Brid.) T.J. Kop. | Ir-Tu reg. [Hyrcanian prov.] |
| 312. | <i>Plagiomnium medium</i> (Bruch & Schimp.) T.J. Kop. | Ir-Tu reg. [Hyrcanian prov.] |
| 313. | <i>Plagiomnium rostratum</i> (Schrad.) T.J. Kop. | Ir-Tu reg. [Hyrcanian prov., Arm-Ira prov. (Zagrossian)] |
| 314. | <i>Plagiomnium undulatum</i> (Hedw.) T.J. Kop. | Ir-Tu reg. [Hyrcanian prov.] |

Funariidae

Funariales

Encalyptaceae

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| 315. | <i>Encalypta alpina</i> Sm. | Ir-Tu reg. [Hyrcanian prov.] |
| 316. | <i>Encalypta ciliata</i> Hedw. | Ir-Tu reg. [Hyrcanian prov.] |
| 317. | <i>Encalypta intermedia</i> Jur. | Ir-Tu reg. [Hyrcanian prov.] |
| 318. | <i>Encalypta raptocarpa</i> Schwaegr. | Ir-Tu reg. [Hyrcanian prov., Arm-Ira. (Irano-Turanian), Ir-Tu reg. [Hyrcanian prov., Arm-Ira prov. (Zagrossian)]] |
| 319. | <i>Encalypta streptocarpa</i> Hedw. | Ir-Tu reg. [Hyrcanian prov.] |
| 320. | <i>Encalypta vulgaris</i> Hedw. | Ir-Tu reg. [Hyrcanian prov.] |

Funariaceae

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| 321. | <i>Entosthodon attenuatus</i> (Dicks.) Bryhn | Ir-Tu reg. [Hyrcanian prov., Arm-Ira prov. (Zagrossian)] |
| 322. | <i>Entosthodon convexus</i> (Spruce) Brugués | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |
| 323. | <i>Entosthodon duriaei</i> Mont. | Ir-Tu reg. [Hyrcanian prov.] |
| 324. | <i>Entosthodon fascicularis</i> (Hedw.) Müll. Hal. | Ir-Tu reg. [Hyrcanian prov.] |
| 325. | <i>Entosthodon handelii</i> (Schiffner) Lazarenko | Ir-Tu reg. [Arm-Ira prov. (Zagrossian)] |
| 326. | <i>Entosthodon muhlenbergii</i> (Turner) Fife | Ir-Tu reg. [Hyrcanian prov.] |
| 327. | <i>Entosthodon obtusus</i> (Hedw.) Lindb. | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |
| 328. | <i>Funaria hygrometrica</i> Hedw. | Ir-Tu reg. [Hyrcanian prov., Arm-Ira prov. (Irano-Turanian)] |
| 329. | <i>Funaria microstoma</i> Bruch ex Schimp. | Ir-Tu reg. [Hyrcanian prov.] |
| 330. | <i>Physcomitrium sphaericum</i> (C.F. Ludw.) Furnr. | Ir-Tu reg. [Hyrcanian prov.] |
| 331. | <i>Physcomitrium pyriforme</i> (Hedw.) Brid. | Ir-Tu reg. [Arm-Ira prov. (Zagrossian)] |

Hypnanae

Orthotrichales

Orthotrichaceae

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| 332. | <i>Nyholmiella obtusifolia</i> (Brid.) Holmen & Warnecke | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |
| 333. | <i>Orthotrichum affine</i> Schrad. ex Brid. | Ir-Tu reg. [Hyrcanian prov.] |
| 334. | <i>Orthotrichum alpestre</i> Hornsch. ex Bruch & Schimp. | Ir-Tu reg. [Hyrcanian prov.] |
| 335. | <i>Orthotrichum anomalum</i> Hedw. | Ir-Tu reg. [Hyrcanian prov.] |
| 336. | <i>Orthotrichum anomalum</i> var. <i>saxatile</i> Milde | Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)] |
| 337. | <i>Orthotrichum cupulatum</i> Hoffm. ex Brid. | Ir-Tu reg. [Hyrcanian prov., Arm-Ira prov. (Irano-Turanian & Zagrossian)] |

338. *Orthotrichum diaphanum* Schard. ex Brid. Ir-Tu reg. [Hyrcanian prov.]
339. *Orthotrichum microcarpum* De Not. Ir-Tu reg. [Hyrcanian prov.]
340. *Orthotrichum pallens* Bruch ex Brid. Ir-Tu reg. [Hyrcanian prov.]
341. *Orthotrichum pumilum* Sw. Ir-Tu reg. [Hyrcanian prov.]
342. *Orthotrichum pumilum* subsp. *fallax* (Bruch ex Brid.) Bertsch Ir-Tu reg. [Hyrcanian prov.]
343. *Orthotrichum rivulare* Turner Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zarossian)]
344. *Orthotrichum rupestre* Schleich. ex Schwägr. Ir-Tu reg. [Hyrcanian prov.]
345. *Orthotrichum speciosum* Nees Ir-Tu reg. [Hyrcanian prov.]
346. *Ulota crispa* (Hedw.) Brid. Ir-Tu reg. [Hyrcanian prov.]
347. *Zygodon rupestris* Schimp. ex Lorentz Ir-Tu reg. [Hyrcanian prov.]

Aulacomniales

Aulacomniaceae

348. *Aulacomnium androgynum* (Hedw.) Schwägr. Ir-Tu reg. [Hyrcanian prov.]
349. *Aulacomnium palustre* (Hedw.) Schwägr. Ir-Tu reg. [Hyrcanian prov.]

Hypnales

Amblystegiaceae

350. *Amblystegium fluviatile* (Hedw.) Schimp. Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
351. *Amblystegium serpens* (Hedw.) Schimp. Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
352. *Campylophyllum calcareum* (A.C. Crundwell & Nyholm) Hedenäs Ir-Tu reg. [Hyrcanian prov.]
353. *Drepanocladus aduncus* (Hedw.) Warnst. Ir-Tu reg. [Hyrcanian prov.]
354. *Drepanocladus aduncus* var. *polycarpus* (Blandow ex Voit) G.Roth Ir-Tu reg. [Hyrcanian prov.]
355. *Hygroamblystegium fluviatile* (Hedw.) Loeske Ir-Tu reg. [Hyrcanian prov.]
356. *Hygroamblystegium humile* (P. Beauv.) Vanderpoorten, Goffinet & Hedenäs Ir-Tu reg. [Hyrcanian prov.]
357. *Hygroamblystegium varium* (Hedw.) Mönk. Ir-Tu reg. [Hyrcanian prov.]
358. *Hygroamblystegium varium* subsp. *varium* var. *humile* Vanderpoorten & Hedenäs Ir-Tu reg. [Hyrcanian prov.]
359. *Hygroamblystegium tenax* (Hedw.) Jenn Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
360. *Hygrohypnum eugyrium* (Schimp.) Loeske Ir-Tu reg. [Hyrcanian prov.]
361. *Hygrohypnum luridum* (Hedw.) Jenn. Ir-Tu reg. [Hyrcanian prov.]
362. *Leptodictyum riparium* (Hedw.) Warnst. Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
363. *Pseudoamblystegium subtile* (Hedw.) Vanderp. & Hedenäs . Ir-Tu reg. [Hyrcanian prov.]
364. *Pseudocampylium radicale* (P. Beauv.) Vanderp. et Hedenäs Ir-Tu reg. [Hyrcanian prov.]
365. *Serpoleskea confervoides* (Brid.) Loeske. Ir-Tu reg. [Hyrcanian prov.]

Anomodontaceae

366. *Anomodon acutifolius* Mitt. Ir-Tu reg. [Hyrcanian prov.]
367. *Anomodon attenuatus* (Hedw.) Huebener Ir-Tu reg. [Hyrcanian prov.]

368. *Anomodon longifolius* (Schleich. ex Brid.) Hartm. Ir-Tu reg. [Hyrcanian prov.]
 369. *Anomodon rostratus* (Hedw.) Schimp. Ir-Tu reg. [Hyrcanian prov.]
 370. *Anomodon rugelii* (Mull. Hal.) Keissl. Ir-Tu reg. [Hyrcanian prov.]
 371. *Anomodon tristis* (Ces.) Sull. & Lesq. Ir-Tu reg. [Hyrcanian prov.]
 372. *Anomodon viticulosus* (Hedw.) Hook. & Taylor Ir-Tu reg. [Hyrcanian prov.]

Brachytheciaceae

373. *Brachytheciastrum collinum* (Schleich. ex Müll. Hal.) Ignatov & Huttunen Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
 374. *Brachytheciastrum olympicum* (Jur.) Vanderp., Ignatov, Huttunen & Goffinet Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
 375. *Brachytheciastrum velutinum* (Hedw.) Ignatov & Huttunen Ir-Tu reg. [Hyrcanian prov., Arm-Ira prov. (Zagrossian)]
 376. *Brachythecium acuminatum* (Hedw.) Austin Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
 377. *Brachythecium albicans* (Hedw.) Schimp. Ir-Tu reg. [Hyrcanian prov.]
 378. *Brachythecium campestre* (Müll. Hal.) Schimp. Ir-Tu reg. [Hyrcanian prov.]
 379. *Brachythecium geheebii* Milde Ir-Tu reg. [Hyrcanian prov.]
 380. *Brachythecium glareosum* (Bruch ex Spruce) Schimp. Ir-Tu reg. [Hyrcanian prov.]
 381. *Brachythecium laetum* (Brid.) Schimp. Ir-Tu reg. [Hyrcanian prov.]
 382. *Brachythecium mildeanum* (Schimp.) Schimp. Ir-Tu reg. [Hyrcanian prov.]
 383. *Brachythecium oxycladon* (Brid.) A. Jaeger Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
 384. *Brachythecium rivulare* Schimp. Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
 385. *Brachythecium rotaeanum* DeNot. Ir-Tu reg. [Hyrcanian prov.]
 386. *Brachythecium rutabulum* (Hedw.) Schimp. Ir-Tu reg. [Hyrcanian prov.]
 387. *Brachythecium salebrosum* (Hoffm. ex F. Weber & D. Mohr) Schimp. Ir-Tu reg. [Hyrcanian prov.]
 388. *Brachythecium umbilicatum* Jur. & Milde. Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
 389. *Bryhnia novae-angliae* (Sull. & Lesq.) Grout Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
 390. *Cirriphyllum crassinervium* (Taylor) Loeske & M. Fleisch. Ir-Tu reg. [Hyrcanian prov.]
 391. *Cirriphyllum piliferum* (Hedw.) Grout Ir-Tu reg. [Hyrcanian prov.]
 392. *Eurhynchium striatum* (Schreb. ex Hedw.) Schimp. Ir-Tu reg. [Hyrcanian prov.]
 393. *Eurhynchiastrum pulchellum* (Hedw.) Ignatov & Huttunen Ir-Tu reg. [Hyrcanian prov.]
 394. *Eurhynchiastrum pulchellum* var. *praecox* (Hedw.) Ochyra & Zarnowiec Ir-Tu reg. [Hyrcanian prov.]
 395. *Homalothecium lutescens* (Hedw.) H. Rob. Ir-Tu reg. [Hyrcanian prov.]
 396. *Homalothecium philippeanum* (Spruce) Schimp. Ir-Tu reg. [Hyrcanian prov.]
 397. *Homalothecium sericeum* (Hedw.) Schimp. Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Zagrossian & Irano-Turanian)]
 398. *Kindbergia praelonga* (Hedw.) Ochyra Ir-Tu reg. [Hyrcanian prov.]
 399. *Microeurhynchium pumilum* (Wilson) Ignatov & Vanderpoorten Ir-Tu reg. [Hyrcanian prov.]
 400. *Oxyrrhynchium hians* (Hedw.) Loeske Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
 401. *Oxyrrhynchium schleicheri* (R. Hedw.) Roll Ir-Tu reg. [Hyrcanian prov.]

402.	<i>Oxyrrhynchium speciosum</i> (Brid.) Warnst.	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
403.	<i>Palamocladium euchloron</i> (Bruch ex Müll. Hal.) Wijk & Margad.	Ir-Tu reg. [Hyrcanian prov.]
404.	<i>Palamocladium leskeiodes</i> (Hook.) E. Britton	Ir-Tu reg. [Hyrcanian prov.]
405.	<i>Plasteurhynchium meridionale</i> (Schimp.) M. Fleisch.	Ir-Tu reg. [Hyrcanian prov.]
406.	<i>Pseudoscleropodium purum</i> (Hedw.) M. Fleisch.	Ir-Tu reg. [Hyrcanian prov.]
407.	<i>Rhynchostegiella litorea</i> (De Not.) Limpr.	Ir-Tu reg. [Hyrcanian prov.]
408.	<i>Rhynchostegiella menadensis</i> (Sande Lac.) E. B. Bartran	Ir-Tu reg. [Hyrcanian prov.]
409.	<i>Rhynchostegiella tenella</i> (Dicks.) Limpr.	Ir-Tu reg. [Hyrcanian prov.]
410.	<i>Rhynchostegiella teneriffae</i> (Mont.) Dirkse & Bouman	Ir-Tu reg. [Hyrcanian prov.]
411.	<i>Rhynchostegiella teneriffae</i> var. <i>persica</i> (Schiffn) Kürschner	Ir-Tu reg. [Hyrcanian prov.]
412.	<i>Rhynchostegium confertum</i> (Dicks.) Schimp.	Ir-Tu reg. [Hyrcanian prov.]
413.	<i>Rhynchostegium megapolitanum</i> (Blandow ex F. Weber & D. Mohr) Schimp.	Ir-Tu reg. [Hyrcanian prov.]
414.	<i>Rhynchostegium murale</i> (Hedw.) Schimp.	Ir-Tu reg. [Hyrcanian prov.]
415.	<i>Rhynchostegium riparioides</i> (Hedw.) Cardot	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Zagrossian & Irano-Turanian)]
416.	<i>Rhynchostegium rotundifolium</i> (Scop. ex Brid.) Schimp.	Ir-Tu reg. [Hyrcanian prov.]
417.	<i>Sciuro-hypnum curtum</i> (Lindb.) Ignatov	Ir-Tu reg. [Hyrcanian prov.]
418.	<i>Sciuro-hypnum flotowianum</i> (Sendtn.) Ignatov & Huttunen	Ir-Tu reg. [Hyrcanian prov.]
419.	<i>Sciuro-hypnum oedipodium</i> (Mitt.) Ignatov & Huttunen	Ir-Tu reg. [Hyrcanian prov.]
420.	<i>Sciuro-hypnum populeum</i> (Hedw.) Ignatov & Huttunen	Ir-Tu reg. [Hyrcanian prov.]
421.	<i>Sciuro-hypnum reflexum</i> (Starke) Ignatov & Huttunen	Ir-Tu reg. [Hyrcanian prov.]
422.	<i>Scorpiurium circinatum</i> (Brid.) M. Fleisch. & Loeske	Ir-Tu reg. [Hyrcanian prov.]
423.	<i>Tomentypnum nitens</i> (Hedw.) Loeske	Ir-Tu reg. [Hyrcanian prov.]
Calliergonaceae		
424.	<i>Warnstorfia sarmentosa</i> (Wahlenb.) Hedenäs	Ir-Tu reg. [Hyrcanian prov.]
425.	<i>Warnstorfia exannulata</i> (Schimp.) Loeske	Ir-Tu reg. [Hyrcanian prov.]
Climaciaceae		
426.	<i>Climacium dendroides</i> (Hedw.) F. Weber & D. Mohr	Ir-Tu reg. [Hyrcanian prov.]
Cratoneuraceae		
427.	<i>Cratoneuron filicinum</i> (Hedw.) Spruce	Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
428.	<i>Palustriella commutata</i> var. <i>fluctuans</i> (Schimp.) Ochyra	Ir-Tu reg. [Hyrcanian prov.]
429.	<i>Palustriella decipiens</i> (De Not.) Ochyra	Ir-Tu reg. [Hyrcanian prov.]
430.	<i>Palustriella decipiens</i> var. <i>napaeiformis</i> (Schiffn.) Ochyra	Ir-Tu reg. [Hyrcanian prov.]
431.	<i>Palustriella falcata</i> (Brid.) Hedenäs	Ir-Tu reg. [Hyrcanian prov.], Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrosian)]
Cryphaeaceae		
432.	<i>Cryphaea heteromalla</i> (Hedw.) D. Mohr	Ir-Tu reg. [Hyrcanian prov.]

Entodontaceae

433. *Entodon cladorrhizans* (Hedw.) Müll. Hal. Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]
434. *Entodon concinnus* (De Not.) Paris Ir-Tu reg. [Hyrcanian prov., Arm-Ira prov. (Irano-Turanian)]
435. *Entodon schleicheri* (Schimp.) Demet. Ir-Tu reg. [Hyrcanian prov.]

Fabroniaceae

436. *Fabronia ciliaris* (Brid.) Brid. Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]
437. *Fabronia pusilla* Raddi Ir-Tu reg. [Arm-Ira prov. (Zagrossian)]

Fontinalaceae

438. *Fontinalis antipyretica* Hedw. Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
439. *Fontinalis hypnoides* Hartm. Ir-Tu reg. [Hyrcanian prov.]

Habrodontaceae

440. *Habrodon perpusillus* (De Not.) Lindb. Ir-Tu reg. [Hyrcanian prov.]

Hypnaceae

441. *Campylophyllum calcareum* (A.C. Crundwell & Nyholm) Hedenäs Ir-Tu reg. [Hyrcanian prov.]
442. *Campylophyllum sommerfeltii* (Myrin) Hedenäs Ir-Tu reg. [Hyrcanian prov.]
443. *Ectropothecium cyperoides* (Hook. ex Harv.) A. Jaeger Ir-Tu reg. [Hyrcanian prov.]
444. *Hypnum andoi* A.J.E. Sm. Ir-Tu reg. [Hyrcanian prov.]
445. *Hypnum cupressiforme* Hedw. Ir-Tu reg. [Hyrcanian prov.]
446. *Hypnum cupressiforme* var. *filiforme* Brid. Ir-Tu reg. [Hyrcanian prov.]
447. *Hypnum cupressiforme* var. *lacunosum* Brid. Ir-Tu reg. [Hyrcanian prov.]
448. *Hypnum cupressiforme* var. *resupinatum* (Taylor) Schimp. Ir-Tu reg. [Hyrcanian prov.]
449. *Hypnum fertile* Sendtn. Ir-Tu reg. [Hyrcanian prov.]
450. *Hypnum imponens* Hedw. Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
451. *Hypnum jutlandicum* Holmen & E. Warnke Ir-Tu reg. [Hyrcanian prov.]
452. *Hypnum macrogynum* Besch. Ir-Tu reg. [Hyrcanian prov.]
453. *Hypnum pallescens* (Hedw.) P. Beauv. Ir-Tu reg. [Hyrcanian prov.]
454. *Hypnum revolutum* (Mitt.) Lindb. Ir-Tu reg. [Hyrcanian prov.]
455. *Hypnum uncinulatum* Jur. Ir-Tu reg. [Hyrcanian prov.]
456. *Hypnum vaucheri* Lesq. Ir-Tu reg. [Hyrcanian prov.]
457. *Schwetschkeopsis fabronia* (Schwägr.) Broth. Ir-Tu reg. [Hyrcanian prov.]
458. *Taxiphyllum wissgrillii* (Garov.) Wijk & Margad. Ir-Tu reg. [Hyrcanian prov.]

Hylocomiaceae

459. *Ctenidium molluscum* (Hedw.) Mitt. Ir-Tu reg. [Hyrcanian prov.]
460. *Hylocomium splendens* (Hedw.) Schimp. Ir-Tu reg. [Hyrcanian prov.]
461. *Hylocomiadelphus triquetrus* (Hedw.) Ochyra & Stebel Ir-Tu reg. [Hyrcanian prov.]

462.	<i>Loeskeobryum brevirostre</i> (Brid.) M. Fleisch	Ir-Tu reg. [Hyrcanian prov.]
463.	<i>Pleurozium schreberi</i> (Willd. ex Brid.) Mitt.	Ir-Tu reg. [Hyrcanian prov.]
464.	<i>Rhytiadelphus loreus</i> (Hedw.) Warnst.	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian & Zagrossian)]
465.	<i>Rhytiadelphus squarrosus</i> (Hedw.) Warnst.	Ir-Tu reg. [Hyrcanian prov.]
Lembophyllaceae		
466.	<i>Isothecium alopecuroides</i> (Lam. ex Dubois) Isov.	Ir-Tu reg. [Hyrcanian prov.]
467.	<i>Isothecium myosuroides</i> Brid.	Ir-Tu reg. [Hyrcanian prov.]
Leskeaceae		
468.	<i>Leskea perstrica</i> Dixon	Ir-Tu reg. [Hyrcanian prov.]
469.	<i>Leskea polycarpa</i> Ehrh. ex Hedw.	Ir-Tu reg. [Hyrcanian prov.]
470.	<i>Lescuraea mutabilis</i> (Brid.) Lindb. ex I. Hagen	Ir-Tu reg. [Hyrcanian prov.]
471.	<i>Pseudoleskea incurvata</i> (Hedw.) Loeske	Ir-Tu reg. [Hyrcanian prov.]
472.	<i>Pseudoleskea patens</i> (Lindb.) Kindb.	Ir-Tu reg. [Hyrcanian prov.]
473.	<i>Pseudoleskea saviana</i> (De Not.) Latzel	Ir-Tu reg. [Hyrcanian prov.]
474.	<i>Pseudoleskeella catenulata</i> (Brid. ex Schrad.) Kindb.	Ir-Tu reg. [Hyrcanian prov.]
475.	<i>Pseudoleskeella laxiramea</i> (Schiffn.) Broth.	Ir-Tu reg. [Hyrcanian prov.]
476.	<i>Pseudoleskeella nervosa</i> (Brid.) Nyholm	Ir-Tu reg. [Hyrcanian prov.]
477.	<i>Pseudoleskeella tectorum</i> (Funck ex Brid.) Kindb. ex Broth.	Ir-Tu reg. [Hyrcanian prov.]
478.	<i>Ptychodium plicatum</i> (Schleich. ex F. Weber & D. Mohr) Schimp.	Ir-Tu reg. [Hyrcanian prov.]
Leucodontaceae		
479.	<i>Forsstroemia remotifolia</i> (Lindb. ex Broth.) Hedenäs & Zare	Ir-Tu reg. [Hyrcanian prov.]
480.	<i>Leucodon immerses</i> Lindb.	Ir-Tu reg. [Hyrcanian prov.]
481.	<i>Leucodon sciuroides</i> (Hedw.) Schwagr.	Ir-Tu reg. [Hyrcanian prov.]
Neckeraceae		
482.	<i>Alleniella besseri</i> (Lobarz.) S.Olsson, Enroth & D.Quandt	Ir-Tu reg. [Hyrcanian prov.]
483.	<i>Alleniella complanata</i> (Hedw.) S.Olsson, Enroth & D.Quandt	Ir-Tu reg. [Hyrcanian prov.]
484.	<i>Exsertotheca crispa</i> (Hedw.) S.Olsson, Enroth & D.Quandt	Ir-Tu reg. [Hyrcanian prov.]
485.	<i>Homalia trichomanoides</i> (Hedw.) Schimp.	Ir-Tu reg. [Hyrcanian prov.]
486.	<i>Neckera complanata</i> (Hedw.) Huebener	Ir-Tu reg. [Hyrcanian prov.]
487.	<i>Neckera complanata</i> var. <i>tenella</i> Schimp.	Ir-Tu reg. [Hyrcanian prov.]
488.	<i>Neckera pennata</i> Hedw.	Ir-Tu reg. [Hyrcanian prov.]
489.	<i>Thammobryum alopecurum</i> (Hedw.) Gangulee	Ir-Tu reg. [Hyrcanian prov.]
490.	<i>Thammium alopecurum</i> var. <i>corticola</i> Schiffn.	Ir-Tu reg. [Hyrcanian prov.]
Plagiotheciaceae		
491.	<i>Herzogiella seligeri</i> (Brid.) Z. Iwats.	Ir-Tu reg. [Hyrcanian prov.]

492.	<i>Isopterygiopsis muelleriana</i> (Schimp.) Z. Iwats.	Ir-Tu reg. [Hyrcanian prov.]
493.	<i>Isopterygiopsis pulchella</i> (Hedw.) Z. Iwats.	Ir-Tu reg. [Hyrcanian prov.]
494.	<i>Plagiothecium cavifolium</i> (Brid.) Z. Iwats.	Ir-Tu reg. [Hyrcanian prov.]
495.	<i>Plagiothecium denticulatum</i> (Hedw.) Schimp.	Ir-Tu reg. [Hyrcanian prov.]
496.	<i>Plagiothecium denticulatum</i> var. <i>obtusifolium</i> (Turner) Moore	Ir-Tu reg. [Hyrcanian prov.]
497.	<i>Plagiothecium laetum</i> Schimp.	Ir-Tu reg. [Hyrcanian prov.]
498.	<i>Plagiothecium nemorale</i> (Mitt.) A. Jaeger	Ir-Tu reg. [Hyrcanian prov.]
499.	<i>Plagiothecium platyphyllum</i> Mönk.	Ir-Tu reg. [Hyrcanian prov.]
500.	<i>Plagiothecium succulentum</i> (Wilson) Lindb.	Ir-Tu reg. [Hyrcanian prov.]
501.	<i>Plagiothecium undulatum</i> (Hedw.) Schimp.	Ir-Tu reg. [Hyrcanian prov.]
Pylaisiaceae		
502.	<i>Calliergonella cuspidata</i> (Hedw.) Loeske	Ir-Tu reg. [Hyrcanian prov., Arm-Ira prov. (Zagrossian)]
503.	<i>Calliergonella cuspidata</i> var. <i>pungens</i> (Schimp.) Latzel	Ir-Tu reg. [Hyrcanian prov.]
504.	<i>Homomallium incurvatum</i> (Schrad. ex Brid.) Loeske	Ir-Tu reg. [Hyrcanian prov.]
505.	<i>Pylaisia polyantha</i> (Hedw.) Schimp.	Ir-Tu reg. [Hyrcanian prov.]
Pylaisiadelphaceae		
506.	<i>Platygyrium repens</i> (Brid.) Schimp.	Ir-Tu reg. [Hyrcanian prov.]
Rhytidiaceae		
507.	<i>Rhytidium rugosum</i> (Hedw.) Kindb.	Ir-Tu reg. [Hyrcanian prov.]
Sematophyllaceae		
508.	<i>Brotherella harveyana</i> (Mitt.) Dixon	Ir-Tu reg. [Hyrcanian prov.]
509.	<i>Clastobryum capillaceum</i> (Griff.) Broth.	Ir-Tu reg. [Hyrcanian prov.]
Scorpidiaceae		
510.	<i>Hamatocaulis vernicosus</i> (Mitt.) Hedenäs	Ir-Tu reg. [Arm-Ira prov. (Irano-Turanian)]
511.	<i>Sanionia uncinata</i> (Hedw.) Loeske	Ir-Tu reg. [Hyrcanian prov.]
512.	<i>Sanionia orthothecioides</i> (Lindb.) Loeske	Ir-Tu reg. [Hyrcanian prov.]
Stereophyllaceae		
513.	<i>Stereophyllum wightii</i> (Mitt.) A. Jaeger	Ir-Tu reg. [Hyrcanian prov.]
Thuidiaceae		
514.	<i>Abietinella abietina</i> (Hedw.) M. Fleisch.	Ir-Tu reg. [Hyrcanian prov.]
515.	<i>Helodium blandowii</i> (F. Weber & D. Mohr) Warnst.	Ir-Tu reg. [Hyrcanian prov.]
516.	<i>Thuidium assimile</i> (Mitt.) A. Jaeger	Ir-Tu reg. [Hyrcanian prov.]
517.	<i>Thuidium delicatulum</i> (Hedw.) Schimp.	Ir-Tu reg. [Hyrcanian prov.]
518.	<i>Thuidium recognitum</i> (Hedw.) Lindb.	Ir-Tu reg. [Hyrcanian prov.]

Timmiidae

Timmiales

Timmiaceae

519. *Timmia bavarica* Hessel.

Ir-Tu reg. [Hyrcanian Prov., Arm-Ira prov. (Irano-Turanian)]

520. *Timmia norvegica* J.E. Zetterst.

Ir-Tu reg. [Hyrcanian prov.]

Hornwort

Anthocerotophyta

Anthocerotopsida

Anthocerotales

Anthocerotaceae

1. *Anthoceros caucasicus* Steph.

Ir-Tu reg. [Hyrcanian prov.]

Notothyladaceae

2. *Phaeoceros laevis* (L.) Prosk.

Ir-Tu reg. [Hyrcanian prov.]

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