

An updated checklist of lichens of Xinjiang Province, China

Anwar TUMUR, Reyim MAMUT & Mark R. D. SEAWARD*

Abstract: TUMUR, A., MAMUT, R. & SEAWARD, M. R. D. 2021. An updated checklist of lichens of Xinjiang Province, China. – *Herzogia* 34: 62–92.

The earliest list of 67 species, 19 varieties and 17 forms of lichens for Xinjiang Province in northwestern China by Wei in 1991 was extended by Abbas in 2002 to 278 species, 3 subspecies, 15 varieties and 17 forms, and by Xahidin in 2005 to c. 398 species. The present study of the largest province in China, based on a comprehensive literature survey supported by a study of herbarium material, lists 596 taxa composed of 580 species, 4 subspecies and 12 varieties; of the 160 lichen genera, *Cladonia* has the highest number of species with 40, followed by *Acarospora* (30), *Aspicilia* (24) and *Peltigera* (24).

Zusammenfassung: TUMUR, A., MAMUT, R. & SEAWARD, M. R. D. 2021. Eine aktualisierte Checkliste der Flechten der Provinz Xinjiang, China. – *Herzogia* 34: 62–92.

Die erste Liste von 67 Arten, 19 Varietäten und 17 Formen von Flechten für die Provinz Xinjiang in Nordwestchina von Wei aus dem Jahre 1991 wurde erweitert durch Abbas im Jahre 2002 auf 278 Arten, 3 Unterarten, 15 Varietäten und 17 Formen, und durch Xahidin im Jahre 2005 auf ca. 398 Arten. Die jetzige Studie über die größte Provinz Chinas, beruhend auf einer umfangreichen Literatursauswertung, ergänzt durch Studium von Herbariummaterial, listed 596 Taxa, darunter 580 Arten, 4 Unterarten und 12 Varietäten; von den 160 Flechtengattungen hat *Cladonia* mit 40 die höchste Artenzahl, gefolgt von *Acarospora* (30), *Aspicilia* (24) und *Peltigera* (24).

Key words: Lichenicolous fungi, tundra lichens, Tianshan, arid zone, Northwest China.

Introduction

Xinjiang, also known as Xinjiang Uygur Autonomous Region, with an area of over 1.6 million km² (0.64 million square miles), is the largest province in China. It is located in northwestern China and borders eight countries: Russia, Kazakhstan, Kirghizstan, Tajikistan, Pakistan, Mongolia, India and Afghanistan. Since it is remote from the ocean and enclosed by high mountains, Xinjiang is cut off from marine climatic influences. It has a continental, dry climate, and a varied topography, the Tian Shan Mountains separating the dry south from the slightly less arid north; its northern slopes are therefore more humid than those of the south. Xinjiang's lowest point is the Turfan Depression (155 m below sea level) and its highest point is Qigir (or K2) Peak (8611 m above sea level), on the border with Kashmir. Most of Xinjiang is geologically young, having been formed from the collision of the Indian plate with the Eurasian plate, forming the Tianshan, Kunlun Shan and Pamir mountain ranges. The average winter temperature is -20 to -15° in northern Xinjiang and -10 to -5° in the southern part, whereas the July temperature is 22 to 26°. The annual average rainfall is 150 mm, with a much higher precipitation in the mountains and only c. 10 mm around Qarqan and Qarkilik in the

* corresponding author

southern part of the Taklimakan desert. Xinjiang's landscape diversity ranges from forest to steppes and desert, all of which provide suitable habitats for a variety of lichens; those lichens found in the desert of Gurbantunggut are naturally very different from those in the arid environment of Alashankou or the harsh cold habitats of the high altitude tundra region of Tian Shan, Altay and Kunlun mountains.

Historical Review

China is undoubtedly a lichen-rich country, but currently only 3014 species have been documented (CHEN 1995, WEI 2018). The earliest lichen records from Xinjiang were listed by ELENKIN (1901a, 1901b) and VAINIO (1905) who studied the deserts and steppes in the western part of the Tian Shan Mountains. Between 1929 and 1934 additional research by LIU (1934) in the eastern part of these mountains extended the list of genera, while ZHU (1935), collecting in the same area, recorded 8 genera and 10 species. MAGNUSSON (1940) reported 13 genera and 27 species collected between 1928 and 1930 by H. Hummel from the Tianshan and Bugda Mountains. MOREAU & MOREAU (1951) and ZHAO (1964), also collecting in the eastern area, increased the number of reported species to 40 (including three new to science). In the 1980s, Dr Wei Jiang Chun (Chinese Academy of Sciences), Prof. Wu Ji Nong (Nanjing University) and Wang Xian Ye (Chinese Academy of Sciences) began to conduct a series of studies of Xinjiang lichens. WEI (1984, 1986, 1991) recorded about 67 species and 19 varieties from Xinjiang and WU (1985) reported 13 lichen species collected from Yultuz Basin and Sayram Lake in northern Xinjiang. WANG (1985) recorded 28 genera and 67 species from Tomur Peak in the Tian Shan Mountains; of these, 23 species and 3 varieties were new to China, and 28 species and 5 varieties were new for the Xinjiang Province.

In the 1990s, Prof. Abdulla Abbas (Xinjiang University) initiated a systematic research project on the lichens of Xinjiang, collecting more than 10,000 specimens, mainly from the Tian Shan, Kunlun, Altay and Altun Mountains, and Junggar Basin. His extensive studies resulted in numerous published papers (ABBAS 1996, ABBAS et al. 1996, 2001, 2002, ABBAS & WU 1998, TUMUR & ABBAS 2017, ABBAS & TUMUR 2018). TUMUR and ABBAS (2017), for example, reported 150 species and 9 varieties based on 1800 specimens collected from 35 sites in Tomur Peak National Nature Reserve.

The important contribution of foreign lichenologists in recent years to our knowledge of the Xinjiang lichen flora (e.g. AHTI et al. 2016, DAVYDOV et al. 2012, PAUKOV & DAVYDOV 2020, PAUKOV et al. 2019, VONDRÁK et al. 2019, YAKOVCHENKO et al. 2017, YAKOVCHENKO & DAVYDOV 2018) should be recognized; their field and laboratory work has significantly increased the number of taxa recorded from the province. Of particular significance is the fieldwork of Mikhail Andreev (with Yuri Kotlov and Alexander Titov) in 1998, Teuvo Ahti in 2000, Clifford Wetmore in 2000, Jan Vondrák in 2014 and Evgeny Davydov in 2005 and 2007, many of their discoveries (mostly substantiated by herbarium material) are as yet unpublished, as in the case of fieldwork undertaken by Ahti, Andreev and Vondrák, which has been duly credited in the Checklist below.

The number of taxa (excluding forms) in the first checklist for Xinjiang province by ABBAS et al. (2001) was 287, composed of 269 species, 2 subspecies and 16 varieties, and the list prepared by ABBAS et al. (2002) also contains basic phytogeographical and ecological information on lichens, including substrate preferences. XAHIDIN et al. (2005) noted that there were c. 398 lichen species (including imperfect lichens) in Xinjiang representing c. 2% of world species and c. 20% of lichens recorded from China. The actual number of lichen species is very much

higher, as little research has been undertaken in this remote province of China. However, the present Checklist has increased the number of taxa to 596 (in 160 genera, composed of 580 species, 4 subspecies and 12 varieties), representing a 50% increase in the number of taxa over the past 15 years. Lichenological studies of Xinjiang are important to interpret the lichen flora of China as a whole and to ensure effective protection of the locally rare species. Documenting and researching lichen diversity in deserts and arid land will also help in developing management strategies for more effective control of desertification in the province of Xinjiang. In this respect it should be noted that a large proportion of taxa in the Checklist below are terricolous (e.g. *Cladonia* and *Peltigera*) or saxicolous (e.g. *Aspicilia* s. lat. and *Caloplaca* s. lat.) species indicative of an arid landscape; even so, it should be noted that certain terricolous genera such as *Placidium*, *Heteroplacidium*, *Heppia* and *Gloeoheppia* are currently under-recorded. Furthermore, the relatively low number of corticolous species from, for example, the mountain forests, do not truly reflect the panoply of the province's habitats.

The purpose of this compilation is to present an up-to-date survey of all published information, which is now scattered over the literature, often difficult to obtain by an international readership, to facilitate further study of the Xinjiang lichen flora. It is also clear that the lichens of this very large phytogeographic region have been under-recorded. Therefore, it is hoped that the Checklist below will stimulate those who have visited, or know of others that have visited, this province and recorded/collected lichens in recent years will research and publish their findings for it is known, for example, that a considerable number of lichens exist in Chinese and foreign herbaria.

Checklist

The following Checklist enumerates 596 lichen taxa, not identified to the forma level (although some have been included as synonyms), and some varieties have not been included in the calculations since their status requires clarification following incomplete taxonomic revisions. Previously published synonyms and misspelled names have been omitted, but misidentified taxa and erroneously cited genera are indicated as #. There are also inconsistencies in the transcription of the names of Chinese authors, as well as the use of the surname or the forename in citing authors and collectors; therefore in a few cases it has proved necessary to indicate an alternative name in squared brackets [] in the list of References. Unpublished field records made by Teuvo Ahti in 2000 (often supported by herbarium material) are indicated as: Ahti (2000 in litt.), and unpublished records of herbarium material collected by Mikhail Andreev (with Yuri Kotlov and Alexander Titov) and Jan Vondrák are indicated as: Andreev et al. (1998 in litt.) and Vondrák (2014 in litt.) respectively. A few previously published species considered to be doubtful (e.g. *Cladonia beaumontii*, *C. diversa*, *C. fenestralis*, *C. peziziformis* & *C. sarmentosa*) and a few unpublished species awaiting verification (e.g. *Micarea incrasata* & *Tremolecia atrata*) that have been omitted from the Checklist.

Acarospora A.Massal.

A. aeginaica H.Magn. – ABBAS & NURTAI (2018: 956)

A. americana H.Magn. – SAHEDAT et al. (2015: 292)

A. bohlinii H.Magn. – ABBAS et al. (1993: 74, 2001: 360, 2002: 182), ABBAS & WU (1998: 36)

A. brevilobata H.Magn. – ABBAS et al. (1993: 74, 2001: 360, 2002: 182), ABBAS & WU (1998: 36), YANG et al. (2008: 87)

- A. bullata* Anzi – WEN et al. (2019: 23)
- A. dispersa* H.Magn. – MEMET et al. (2015: 2556)
- A. fulva* N.S.Golubk. – NURTAI et al. (2019: 683)
- A. glaucocarpa* (Ach.) Arnold – LI et al. (2007: 190)
- A. glypholecioides* H.Magn. – ABBAS & WU (1998: 37), ABBAS et al. (2001: 360, 2002: 182)
- A. gobiensis* H.Magn. – WANG, X. (1985: 345), ABBAS et al. (1993: 75, 2001: 360, 2002: 182), ABBAS & WU (1998: 37), NURTAI et al. (2014: 1703)
- A. gyrocarpa* (H.Magn.) K.Knudsen & M.Westb. – ABBAS et al. (1993: 81, 2001: 368), ABBAS & WU (1998: 40)
- A. interrupta* (Ehrenb. ex Nyl.) Vain. – NURTAI et al. (2017: 384)
- A. invadens* H.Magn. – ABBAS et al. (1993: 75, 2001: 360, 2002: 182), ABBAS & WU (1994: 119, 1998: 37), YANG et al. (2008: 87)
- A. jenisejensis* H.Magn. – ABBAS et al. (1993: 75, 2001: 360, 2002: 182), ABBAS & WU (1998: 38)
- A. macrospora* (Hepp) A.Massal. ex Bagl. – ABBAS et al. (2001: 360)
- A. molybdina* (Wahlenb.) Trevis. – NURTAI et al. (2014: 1703)
- A. obnubila* H.Magn. – MEMET et al. (2015: 2556)
- A. obpallens* (Nyl. ex Hasse) Zahlbr. – ABBAS & NURTAI (2018: 957)
- A. peliscypha* (Wahlenb.) Th.Fr. – LI et al. (2007: 191)
- A. pulvinata* H.Magn. – ABBAS et al. (1993: 75, 2001: 360, 2002: 182), ABBAS & WU (1998: 38)
- A. rosulata* (Th.Fr.) H.Magn. – ABBAS & NURTAI (2018: 957)
- A. schleicheri* (Ach.) A.Massal. – WANG, X. (1985: 345), ABBAS et al. (1993: 75, 2001: 360), ABBAS & WU (1998: 38)
- A. stapfiana* (Müll.Arg.) Hue – NURTAI et al. (2019: 688)
- A. strigata* (Nyl.) Jatta – NURTAI et al. (2017: 383)
- A. superans* H.Magn. – ABBAS & WU (1998: 38), ABBAS et al. (2001: 360, 2002: 182)
- A. tianshanica* A.Abbas, L.Nurtai & K.Knudsen – NURTAI et al. (2017: 385)
- A. tominiana* H.Magn. – ABBAS et al. (1993: 75, 2001: 360, 2002: 182), ABBAS & WU (1998: 39)
- A. umbrina* H.Magn. – ABBAS et al. (2001: 360, 2002: 182)
- A. veronensis* A.Massal. – LI et al. (2007: 191)
- A. verruculosa* H.Magn. – ABBAS et al. (1993: 75, 2001: 360), ABBAS & WU (1998: 39), NURTAI et al. (2014: 1703)
- Allantoparmelia* (Vain.) Essl.
- A. almquistii* (Vain.) Essl. – ABBAS & WU (1998: 89), ABBAS et al. (2001: 360, 2002: 182), CHEN (2016: 261)
- Allocetraria* Kurok. & M.J.Lai
- A. madreporiformis* (Ach.) Kärnefelt & Thell – MAGNUSSON (1940: 129), ELENKIN (1901a: 12), MOREAU & MOREAU (1951: 191), WANG, X. (1985: 348), WU (1985: 75), WANG, R. et al. (2015b: 589), TUMUR et al. (2017: 69)
- A. stracheyi* (Bab.) Kurok. & M.J.Lai – WANG, R. et al. (2015b: 589)
- Amandinea* Choisy ex Scheid. & M.Mayrhofer
- A. punctata* (Hoffm.) Coppins & Scheid. – ABBAS et al. (1993: 76, 2001: 360, 2002: 182), ABBAS & WU (1998: 105)
- Anamylopsora* Timdal
- A. altaica* Ahat et al. – AHAT et al. (2019: 150)

Anaptychia Körb.

A. ciliaris (L.) Körb. ex A.Massal. (incl. f. *melanosticta* & f. *nigrescens*) – MOREAU & MOREAU (1951: 196), ZHAO, J. et al. (1982: 123), ABBAS et al. (1993: 75, 2001: 360, 2002: 182), ABBAS & WU (1998: 106), CHEN & WANG (1999: 336)

A. setifera (Mereschk.) Räsänen – CHEN & WANG (1999: 338)

A. ulothricoides (Vain.) Vain. – ZHAO, J. et al. (1982: 124), WANG, X. (1985: 352), ABBAS et al. (1993: 75, 2001: 360, 2002: 182), ABBAS & WU (1994: 19, 1998: 106), Andreev et al. (1998 in litt.), CHEN & WANG (1999: 339), YANG et al. (2008: 86)

Arctoparmelia Hale

A. subcentrifuga (Oxner) Hale – Ahti (2000 in litt.)

Aspicilia A.Massal.

A. annulata (Lyngé) J.W.Thomson – TUMUR et al. (2009: 105)

A. anseris (Lyngé) J.W.Thomson – TUMUR et al. (2009: 105)

A. aquatica (Fr.) Körb. – TUMUR et al. (2009: 105)

A. asiatica (H.Magn.) Oxner var. *asiatica* (incl. f. *asiatica* & f. *irregularis*) – ABBAS et al. (1993: 75, 1998: 67, 2001: 360, 2002: 183), ABBAS & WU (1994: 20)

var. *subfarinosa* (H.Magn.) N.S.Golubk. (incl. f. *microcarpa*) – ABBAS et al. (1993: 75, 2001: 360), ABBAS & WU (1994: 20, 1998: 68)

A. bohlinii (H.Magn.) J.C.Weï – ABBAS et al. (1993: 75, 2001: 360, 2002: 183) ABBAS & WU (1994: 20, 1998: 68)

A. boykinii Owe-Larss. & A.Nordin – SHAVKAT et al. (2019: 187)

A. cinerea (L.) Körb. – TUMUR et al. (2009: 105)

A. concinna (J.W.Thomson) J.W.Thomson – TUMUR et al. (2009: 105)

A. desertorum (Kremp.) Mereschk. – ABBAS & WU (1998: 68), ABBAS et al. (2001: 360, 2002: 183)

A. epiglypta (Norrl. ex Nyl.) Hue – TUMUR et al. (2009: 105)

A. exuberans (H.Magn.) J.C.Weï – ABBAS et al. (1993: 75, 2001: 360, 2002: 182), ABBAS & WU (1998: 69)

A. fumosa Owe-Larss. & A.Nordin – SHAVKAT et al. (2019: 187)

A. hartliana (J.Steiner) Hue – ABBAS et al. (1993: 75, 2001: 360, 2002: 183), ABBAS & WU (1994: 20, 1998: 69)

A. humboldtii (Lyngé) J.W.Thomson – TUMUR et al. (2009: 105)

A. lesleyana Darbish. – TUMUR et al. (2009: 105)

A. oleifera (H.Magn.) J.C.Weï – ABBAS et al. (1993: 75, 2001: 361, 2002: 183), ABBAS & WU (1998: 72)

A. persica (Müll.Arg.) Sohrabi – LI, S. X. et al. (2013: 91)

A. plicigera (Zahlbr.) Räsänen – TUMUR et al. (2009: 105)

A. sipeana (H.Magn.) Owe-Larss. & A. Nordin – SHAVKAT et al. (2019: 188)

A. stalagmitica Paukov & Davydov – PAUKOV & DAVYDOV (2020: 9)

A. subalbicans (H.Magn.) J.C.Weï – ABBAS & WU (1994: 20, 1998: 72), ABBAS et al. (2001: 361, 2002: 183)

A. subcaesia (H.Magn.) J.C.Weï – ABBAS et al. (1993: 75, 2001: 361), ABBAS & WU (1998: 72)

A. sublaqueata (H.Magn.) J.C.Weï – ABBAS et al. (1993: 75, 2001: 361, 2002: 183), ABBAS & WU (1998: 72)

A. verrucigera Hue – LI, S.X. et al. (2013: 93)

Aspiciliella M.Choisy

A. cupreoglauca (B.de Lesd.) Zakeri, Divakar & Otte – TUMUR et al. (2009: 105)

Athallia Arup, Frödén & Søchting

- A. cerinelloides* (Erichsen) Arup, Frödén & Søchting – Vondrák (2014 in litt.)
A. holocarpa (Hoffm.) Arup, Frödén & Søchting – Ahti (2000 in litt.), VONDRÁK et al. (2019: 61)
A. pyracea (Ach.) Arup, Frödén & Søchting – Vondrák (2014 in litt.), VONDRÁK et al. (2019: 61)
A. saxifragarum (Poelt) Arup, Frödén & Søchting – Vondrák (2014 in litt.)

Bacidia De Not.

- B. bagliettoana* (A.Massal. & De Not.) Jatta – MAGNUSSON (1940: 67 as *B. muscorum* var. *terrestris*),
 ABBAS et al. (1993: 76, 2001: 361, 2002: 183), ABBAS & WU (1998: 42)

Biatora Fr.

- B. sphaeroides* (Dicks.) Hornem. – ABBAS et al. (1993: 76, 2001: 361, 2002: 183), ABBAS & WU (1998: 42)
B. vernalis (L.) Fr. – ABBAS & WU (1998: 43), ABBAS et al. (2001: 361, 2002: 183)

Bilimbia De Not.

- B. sabuletorum* (Schreb.) Arnold – ABBAS et al. (1993: 76, 2001: 365), ABBAS & WU (1998: 122)

Blastenia A. Massal.

- B. ammiospila* (Ach.) Arup – Vondrák (2014 in litt.), VONDRÁK et al. (2019: 16)

Brodoa Goward

- B. oroarctica* (Krog) Goward – WEI & JIANG (1999: 446)

Bryocaulon Kärnefelt

- B. divergens* (Ach.) Kärnefelt – ABBAS & WU (1998: 89), ABBAS et al. (2001: 361)

Bryoplaca Søchting, Frödén & Arup

- B. tetraspora* (Nyl.) Søchting, Frödén & Arup – VONDRÁK et al. (2019: 16)

Bryoria Brodo & D.Hawksw.

- B. chalybeiformis* (L.) Brodo & D.Hawksw. – WEN et al. (2009: 418)
B. confusa (D.D.Awasthi) Brodo & D.Hawksw. – ABBAS & WU (1998: 90), ABBAS et al. (2001: 361,
 2002: 183)
B. furcellata (Fr.) Brodo & D.Hawksw. – ABBAS & WU (1998: 90), ABBAS et al. (2001: 361, 2002: 183)
B. fuscescens (Gyeln.) Brodo & D.Hawksw. – Ahti (2000 in litt.), WEN et al. (2009: 418)
B. lanestris (Ach.) Brodo & D.Hawksw. – WEN et al. (2009: 418)
B. nadvornikiana (Gyeln.) Brodo & D.Hawksw. – WEN et al. (2009: 418)
B. nitidula (Th.Fr.) Brodo & D.Hawksw. – WEN et al. (2009: 418)
B. pseudofuscescens (Gyeln.) Brodo & D.Hawksw. – WEN et al. (2009: 418)
B. simplicior (Vain.) Brodo & D.Hawksw. – WEN et al. (2009: 418)
B. trichodes subsp. *trichodes* (Michx.) Brodo & D.Hawksw. – WEN et al. (2009: 418)

Buellia De Not.

- B. vernicoma* (Tuck.) Tuck. – ABBAS et al. (1993: 76, 2001: 361, 2002: 183), ABBAS & WU (1998: 32)

Calicium Pers.

- C. abietinum* Pers. – ABBAS et al. (1993: 76, 2001: 361), ABBAS & WU (1998: 32)
C. notarisi (Tul.) M.Prieto & Wedin – WU et al. (1997: 13) ABBAS et al. (2002: 183)

Calogaya Arup, Frödén & Søchting

- C. altyinis* Shahidin – VONDRÁK et al. (2018: 906)

- C. arnoldii* (Wedd.) Arup, Frödén & Söchting – Vondrák (2014 in litt.)
- C. decipiens* (Arnold) Blomb. & Forssell – ABBAS & WU (1998: 145), ABBAS et al. (2001: 361, 2002: 183)
- C. ferrugineoides* (H.Magn.) Arup, Frödén & Söchting – ABBAS & WU (1994: 20, 1998: 151), ABBAS et al. (2001: 361, 2002: 183), YANG et al. (2008: 86), Vondrák (2014 in litt.)
- C. haloxylonis* Moniri, Shahidin & Vondrák – Vondrák (2014 in litt.), VONDRÁK et al. (2018: 910)
- C. lobulata* (Flörke) Arup, Frödén & Söchting – ABBAS et al. (1993: 76, 2001: 369), ABBAS & WU (1998: 151)
- C. orientalis* Moniri, Shahidin, Halici & Vondrák – VONDRÁK et al. (2018: 911)
- C. polycarpoides* (J.Steiner) Arup, Frödén & Söchting – Vondrák (2014 in litt.)
- C. pusilla* (A.Massal.) Arup, Frödén & Söchting – TCHOU (1935: 319), ABBAS & WU (1994: 20 & 1998: 147 as *Caloplaca saxicola*)
- C. schistidii* (Anzi) Arup, Frödén & Söchting – Vondrák (2014 in litt.), XAHIDIN et al. (2009: 109)
- C. xanthoriella* Shahidin – VONDRÁK et al. (2018: 912)
- C. xinjiangis* Shahidin – VONDRÁK et al. (2018: 913)

Caloplaca Th.Fr.

- C. albovariegata* (B.de Lesd.) Wetmore – Vondrák (2014 in litt.)
- C. anchonphoeniceon* Poelt & Clauzade – Vondrák (2014 in litt.)
- C. atrosanguinea* (G.Merr.) I.M.Lamb – ZHOU, G. L. et al. (2012: 310)
- C. cerina* (Ehrh. ex Hedw.) Th.Fr. – ABBAS & WU (1998: 145), ABBAS et al. (2001: 361, 2002: 183), YANG et al. (2008: 86), VONDRÁK et al. (2019: 62)
- var. *muscorum* (A.Massal.) Jatta – MAGNUSSON (1940: 133)
- C. chlorina* (Flot.) H.Olivier – VONDRÁK et al. (2019: 62)
- C. diphyodes* (Nyl.) Jatta – Vondrák (2014 in litt.)
- C. helygeoides* (Vain.) Dalla Torre & Sarnth. – VONDRÁK et al. (2019: 62)
- C. lallavei* (Clem. ex Ach.) Flagey – ABBAS & WU (1994: 20)
- C. paulsenii* (Vain.) Zahlbr. – ABBAS et al. (1993: 76, 2001: 361), ABBAS & WU (1994: 20, 1998: 147)
- C. scrobiculata* H.Magn. – ABBAS et al. (1993: 76, 2001: 361, 2002: 183), ABBAS & WU (1998: 147)
- C. stillicidiorum* (Vahl) Lyngé – Vondrák (2014 in litt.), VONDRÁK et al. (2019: 62)
- C. tianshanensis* Xahidin, A.Abbas & J.C.Wei – XAHIDIN (2010: 3)
- C. teicholyta* (Ach.) J.Steiner – ABBAS & WU (1994: 20, 1998: 146), ABBAS et al. (2001: 361)
- C. tominii* Savicz – ABBAS & WU (1998: 147), ABBAS et al. (2001: 361, 2002: 183)

Candelaria A.Massal.

- C. concolor* (J.Dicks.) Arnold – WANG, X. (1985: 348), ABBAS et al. (1993: 76, 2001: 361, 2002: 183), ABBAS & WU (1998: 47), Ahti (2000 in litt.)

Candelariella Müll.Arg.

- C. aggregata* M.Westb. – LIU et al. (2012: 320)
- C. antennaria* Räsänen – SERIK et al. (2018: 670)
- C. aurella* (Hoffm.) Zahlbr. – ABBAS et al. (1993: 76, 2001: 361, 2002: 183), ABBAS & WU (1998: 48), Ahti (2000 in litt.), YANG et al. (2008: 87)
- C. blastidiata* Yakovch. – YAKOVCHENCKO et al. (2017: 122)
- C. efflorescens* R.C.Harris & W.R.Buck – KURAX et al. (2010: 7)
- C. kansuensis* HMagn. – SERIK et al. (2018: 670)

- C. oleifera* H.Magn. – ABBAS et al. (1993: 76, 2001: 361, 2002: 183), ABBAS & WU (1994: 20, 1998: 48)
C. vitellina (Hoffm.) Müll.Arg. – Ahti (2000 in litt.), SERIK et al. (2018: 672)
C. xanthostigma (Pers. ex Ach.) Lettau – ABBAS et al. (1996: 233, 2001: 361, 2002: 183), ABBAS & WU (1998: 48)

***Catapyrenium* Flot.**

- C. bohlinii* (H.Magn.) J.C.Weï – ABBAS et al. (1993: 76, 2001: 361, 2002: 183), ABBAS & WU (1998: 153)
C. crustosum (H.Magn.) J.C.Weï – ABBAS & WU (1998: 153), ABBAS et al. (2001: 362, 2002: 183)
C. inaequale (H.Magn.) N.S.Golubk. – ABBAS et al. (1993: 76, 2001: 362, 2002: 183), ABBAS & WU (1998: 153)
C. lachneum (Ach.) R.Sant. – ABBAS et al. (1993: 76, 2001: 361, 2002: 183), ABBAS & WU (1998: 154)
C. perumbratum (Nyl.) J.C.Weï – ABBAS & WU (1998: 154), ABBAS et al. (2001: 362, 2002: 183)

***Cetraria* Ach.**

- C. aculeata* (Schreb.) Fr. – WANG, X. (1985: 350), ABBAS & WU (1998: 92), ABBAS et al. (2001: 363, 2002: 183)
C. ericetorum Opiz – MOREAU & MOREAU (1951: 191 as *C. islandica* var. *crispa*), ABBAS et al. 2002: 184)
C. islandica (L.) Ach. – TCHOU (1935: 312), WEI et al. (1982: 44), WU 1985: 74), WANG, X. (1985: 348), ABBAS & WU (1998: 91), ABBAS et al. (2001: 361, 2002: 183), YANG et al. (2008: 87)
 subsp. *orientalis* (Asahina ex M.Satô) Kärnefelt – ABBAS et al. (1993: 76, 2001: 362), ABBAS & WU (1998: 91)
C. laevigata Rass. – ABBAS et al. (1997: 1, 2002: 183)

***Cetrariella* Kärnefelt & A.Thell**

- C. delisei* (Bory ex Schaer.) Kärnefelt & A.Thell. – MUHAMMAT et al. (2012: 6)

***Chaenotheca* Th.Fr.**

- C. brachypoda* (Ach.) Tibell – Andreev et al. (1998 in litt.)
C. furfuracea (L.) Tibell – Andreev et al. (1998 in litt.)
C. stemonea (Ach.) Müll.Arg. – ABBAS et al. (1993: 76, 2001: 362, 2002: 183), ABBAS & WU (1994: 20, 1998: 33)
C. trichialis (Ach.) Th.Fr. – Andreev et al. (1998 in litt.)

***Chaenothecopsis* Vain.**

- C. nigra* Tibell – Andreev et al. (1998 in litt.)

***Circinaria* Link**

- C. affinis* (Eversm.) Sohrabi – WU (1985: 73), ABBAS & WU (1998: 73), ABBAS et al. (2001: 361, 2002: 183), SOHRABI et al. (2013: 249)
C. alpicola (Elenkin) Sohrabi – ELENKIN (1901b: 36)
C. caesiocinerea (Nyl. ex Malbr.) A.Nordin, Savić & Tibell – TUMUR et al. (2009: 105)
C. contorta (Hoffm.) A.Nordin, Savić & Tibell – ABBAS et al. (1993: 75, 2001: 360, 2002: 183), ABBAS & WU (1994: 20, 1998: 70), TUMUR et al. (2009: 105), ISMAYIL et al. (2015: 230)
C. esculenta (Pall.) Sohrabi – WU (1985: 73)
C. fruticulosa (Eversm.) Sohrabi – ABBAS et al. (1996: 232, 2001: 360), ABBAS & WU (1998: 69)
C. lacunosa (Mereschk.) Sohrabi – ABBAS et al. (1996: 232, 2001: 360), ABBAS & WU (1998: 70)
C. maculata (H.Magn.) Q.Ren – ABBAS et al. (1993: 75, 2001: 360, 2002: 183), ABBAS & WU (1998: 71)

C. ochracealba (H.Magn.) Q.Ren – ABBAS et al. (1993: 75, 2001: 361, 2002: 183), ABBAS & WU (1998: 71)

C. tortuosa (H.Magn.) Q.Ren (incl. var. *simplicior*) – ABBAS & WU (1998: 73), ABBAS et al. (2001: 361, 2002: 183)

C. transbaicalica (Oxner) Q.Ren – TUMUR et al. (2009: 105)

Cladonia P.Browne

C. acuminata (Ach.) Norrl. – Ahti (2000 in litt.)

C. amaurocraea (Flörke) Schaer. – ABBAS & WU (1998: 52), Ahti (2000 in litt.), ABBAS et al. (2001: 362, 2002: 183), YANG et al. (2008: 87)

C. arbuscula (Wallr.) Flot. – Ahti (2000 in litt.)

C. bacilliformis (Nyl.) Sarnth. – Ahti (2000 in litt.)

C. bellidifora (Ach.) Schaer. – YANG et al. (2008: 86)

C. borealis S.Stenroos – ABBAS & WU (1998: 54 as *C. coccifera*), Ahti (2000 in litt.), ABBAS et al. (2001: 362 & 2002: 183 as *C. coccifera*), YANG et al. (2008: 86 as *C. coccifera*)

C. botrytes (K.G.Hagen) Willd. – Ahti (2000 in litt.)

C. cariosa (Ach.) Spreng. – MAGNUSSON (1940: 68 as *C. brevis*), AHTI (1977: 369), WU (1986: 74), ABBAS et al. (1993: 76, 2001: 362, 2002: 183), ABBAS & WU (1998: 53), Ahti (2000 in litt.)

C. cenotea (Ach.) Schaer. – ABBAS et al. (1993: 76, 2001: 362, 2002: 183), ABBAS & WU (1998: 53), Ahti (2000 in litt.), YANG et al. (2008: 87)

C. chlorophaea (Flörke ex Sommerf.) Spreng. – WANG, X. (1985: 343), ABBAS et al. (1993: 76, 2001: 362, 2002: 183), ABBAS & WU (1998: 53), Ahti (2000 in litt.), YANG et al. (2008: 87)

C. coniocraea (Flörke) Spreng. (incl. *C. ochrochlora* Flörke) – MAGNUSSON (1940: 69), AHTI (1977: 369), WANG, X. (1985: 343), ABBAS et al. (1993: 77, 2001: 362, 2002: 183), ABBAS & WU (1998: 55), Ahti (2000 in litt.), YANG et al. (2008: 86)

C. conista (Nyl.) Robbins – WANG, X. (1985: 344 as *C. humilis*), ABBAS et al. (1993: 77, 2001: 362 & 2002: 183 as *C. humilis*), ABBAS & WU (1998: 56 as *C. humilis*), Ahti (2000 in litt.), YANG et al. (2008: 86, as *C. humilis*), PINO-BODAS et al. (2012: 149)

C. cornuta (L.) Hoffm. – TCHOU (1935: 303), ABBAS & WU (1998: 55), Ahti (2000 in litt.), ABBAS et al. (2001: 362, 2002: 183)

C. cyanipes (Sommerf.) Nyl. – Ahti (2000 in litt.)

C. deformis (L.) Hoffm. – Ahti (2000 in litt.)

C. farinacea (Vain.) A.Evans – WANG, X. (1985: 341 as *C. scabriuscula*), ABBAS et al. (1993: 77, 2001: 362 & 2002: 183 as *C. scabriuscula*), ABBAS & WU (1998: 59 as *C. scabriuscula*), Ahti (2000 in litt.)

C. fimbriata (L.) Fr. – MAGNUSSON (1940: 69), MOREAU & MOREAU (1951: 188), AHTI (1977: 369), ABBAS et al. (1993: 77, 2001: 362, 2002: 183), ABBAS & WU (1998: 55), Ahti (2000 in litt.), YANG et al. (2008: 86)

C. furcata (Huds.) Schrad. – MOREAU & MOREAU (1951: 188), WANG, X. (1985: 340), ABBAS et al. (2001: 362, 2002: 183), ABBAS & WU (1998: 56), Andreev et al. (1998 in litt.), Ahti (2000 in litt.), YANG et al. (2008: 87)

C. gracilis (L.) Willd. – ABBAS & WU (1998: 56), ABBAS et al. (2001: 362, 2002: 183), YANG et al. (2008: 86)

subsp. *turbinata* (Ach.) Ahti – WANG, X. (1985: 341 as vars. *aspera* & *dilatata*), Ahti (2000 in litt.)

C. grayi G.Merr. ex Sandst. – Ahti (2000 in litt.)

C. libifera Savicz – Ahti (2000 in litt.), YANG & ABBAS (2003: 512)

C. luteoalba Wheld. & A.Wilson – Ahti (2000 in litt.)

- C. macilenta* Hoffm. – ABBAS & WU (1998: 57), Ahti (2000 in litt.), ABBAS et al. (2001: 362, 2002: 183), YANG et al. (2008: 87)
- C. macroceras* (Flörke) Ahti – MOREAU & MOREAU (1951: 188), WANG, X. (1985: 342 as *C. elongata*), ABBAS & WU (1998: 55 as *C. ecmocyna*), Ahti (2000 in litt.), ABBAS et al. (2001: 362 & 2002: 183 as *C. ecmocyna*)
- C. macrophylla* (Schaer.) Stenh. – Ahti (2000 in litt.)
- C. macroptera* Räsänen – ABBAS & WU (1998: 57), Ahti (2000 in litt.), ABBAS et al. (2001: 362, 2002: 183)
- C. magyarica* Vain. – Ahti (2000 in litt.)
- C. mitis* Sandst. – ABBAS & WU (1998: 50), Ahti (2000 in litt.), ABBAS et al. (2001: 362), YANG et al. (2008: 86)
- C. phyllophora* Ehrh. ex Hoffm. – ABBAS & WU (1998: 57), Ahti (2000 in litt.), ABBAS et al. (2001: 362, 2002: 183)
- C. pocillum* (Ach.) O.J.Rich. – MOREAU & MOREAU (1951: 188), AHTI (1977: 370), WANG, X. (1985: 343), ABBAS et al. (1993: 77, 2001: 362, 2002: 183), ABBAS & WU (1994: 20, 1998: 58), Andreev et al. (1998 in litt.), Ahti (2000 in litt.)
- C. pyxidata* (L.) Hoffm. – TCHOU (1935: 304), WEI et al. (1982: 25), WANG, X. (1985: 342), WU (1985: 74), ABBAS et al. (1993: 77, 2001: 362, 2002: 183), ABBAS & WU (1998: 58), Andreev et al. (1998 in litt.), Ahti (2000 in litt.), YANG et al. (2008: 86)
- C. rangiferina* (L.) F.H.Wigg. – ABBAS & WU (1998: 50 as *Cladina grisea*), Ahti (2000 in litt.), ABBAS et al. (2001: 362 as *C. grisea*), YANG et al. (2008: 86 as *C. grisea*)
- C. rei* Schaer. – Ahti (2000 in litt.)
- C. sinoaltaica* Ahti & Davydov – AHTI et al. (2016 : 390)
- C. squamosa* (Scop.) Hoffm. – ABBAS & WU (1998: 59 as *C. subsquamosa*), ABBAS et al. (2001: 362 & 2002: 183 as *C. subsquamosa*)
- C. stellaris* (Opiz) Pouzar & Vězda – ABBAS et al. (1993: 76, 2001: 362), ABBAS & WU (1998: 50), Ahti (2000 in litt.), YANG et al. (2008: 86)
- C. subconistea* Asahina – ABBAS & WU (1998: 59), ABBAS et al. (2001: 362, 2002: 183)
- C. subulata* (L.) Weber ex F.H.Wigg. – MOREAU & MOREAU (1951: 188), ABBAS & WU (1998: 60), Ahti (2000 in litt.), ABBAS et al. (2001: 362, 2002: 183), YANG et al. (2008: 87)
- C. sulphurina* (Michx.) Fr. – ABBAS & WU (1998: 60), Ahti (2000 in litt.), ABBAS et al. (2001: 362, 2002: 183)
- C. symphycarpa* (Flörke) Fr. – MAGNUSSON (1940: 69), AHTI (1977: 371)
- Clauzadea* Hafellner & Bellem.
- C. monticola* (Ach.) Hafellner & Bellem. – ZHANG et al. (2015: 900)
- Clauzadeana* Cl.Roux
- C. macula* (Taylor) Coppins & Rambold – ZHAO, X. et al. (2015: 708)
- Collema* F.H.Wigg.
- C. flaccidum* (Ach.) Ach. – ABBAS et al. (1993: 77, 2001: 363, 2002: 183), ABBAS & WU (1998: 61), YANG et al. (2008: 87), WU & LIU (2012: 203)
- C. furfuraceum* (Arnold) Du Rietz – WU & LIU (2012: 211 as var. *furfuraceum*)
- C. glebulentum* (Nyl. ex Cromb.) Degel. – MAGNUSSON (1940: 40 as *C. furvum*), ABBAS et al. (1993: 77, 2001: 363, 2002: 183), ABBAS & WU (1998: 62)
- C. pulcellum* Ach. – LIU & WEI (2003: 352), WU & LIU (2012: 217)
- C. rugosum* Kremp. – WU & LIU (2012: 202)

- C. subconveniens* Nyl. – ABBAS et al. (1993: 77, 2001: 363, 2002: 183), ABBAS & WU (1998: 62)
C. subflaccidum Degel. – WU & LIU (2012: 207)
C. cf. thamnodes Riddle – ABBAS et al. (1993: 77, 2001: 363, 2002: 183), ABBAS & WU (1998: 64)

Dermatocarpon Eschw.

- D. miniatum* (L.) W.Mann – MAGNUSSON (1940: 30), WANG, X. (1985: 334), ABBAS et al. (1993: 77, 2001: 363, 2002: 183), ABBAS & WU (1998: 155)
var. *complicatum* (Leight.) Th.Fr. – WANG, X. (1985: 334), ABBAS et al. (1993: 77, 2001: 363, 2002: 183), ABBAS & WU (1998: 155)
var. *imbricatum* (A.Massal.) Vain. – WANG, X. (1985: 334), ABBAS et al. (1993: 77, 2001: 363, 2002: 183), ABBAS & WU (1998: 155)
var. *papillosum* (Anzi) Zahlbr. – WANG, X. (1985: 334), ABBAS et al. (1993: 77, 2001: 363, 2002: 183), ABBAS & WU (1998: 155)
D. moulinsii (Mont.) Zahlbr. – WANG, X. (1985: 335)
D. vellereum Zschacke – WANG, X. (1985: 334), ABBAS et al. (1993: 77, 2001: 363), ABBAS & WU (1998: 155)

Dimelaena Norman

- D. oreina* (Ach.) Norman – ABBAS et al. (1993: 77, 2001: 363, 2002: 183), Andreev et al. (1998 in litt.), Ahti (2000 in litt.)
var. *exalbescens* (H.Magn.) J.C.Weï – ABBAS & WU (1998: 108), ABBAS et al. (2001: 363, 2002: 183), YANG et al. (2008: 86)
D. radiata (Tuck.) Hale & W.L.Culb. – ABBAS et al. (1993: 77, 2001: 363 as *D. cf. radiata*, 2002: 183)

Diploschistes Norman

- D. muscorum* (Scop.) R.Sant. – WANG, X. (1985: 335), ABBAS et al. (1993: 77, 2001: 363, 2002: 184), ABBAS & WU (1998: 34)
D. scruposus (Schreb.) Norman – MAGNUSSON (1940: 33), WANG, X. (1985: 335), ABBAS et al. (1993: 77, 2001: 363, 2002: 184), ABBAS & WU (1994: 21, 1998: 34)
D. tianshanensis A.Abbas, S.Y.Guo & Ababaikeli – ABABAIKELI et al. (2016: 579)
D. wui A.Abbas, S.Y.Guo & Ababaikeli – ABABAIKELI et al. (2018: 141)
D. xinjiangensis A.Abbas & S.Y.Guo – ABBAS & GUO (2014: 469)

Diplotomma Flot.

- D. alboatrum* (Hoffm.) Flot. – ABBAS et al. (1993: 76, 2001: 363, 2002: 184), ABBAS & WU (1998: 108)
D. epipodium (Ach.) Arnold – ABBAS et al. (1993: 77, 2001: 363, 2002: 184), ABBAS & WU (1998: 108)
D. hedinii (H.Magn.) P.Clerc & Cl.Roux – ABBAS et al. (1993: 77, 2001: 363, 2002: 184), ABBAS & WU (1994: 21, 1998: 109), YANG et al. (2008: 86)

Enchylium (Ach.) Gray

- E. coccophorum* (Tuck.) P.M.Jørg. & Wedin – LIU & WEI (2009: 20), WU & LIU (2012: 184), YANG et al. (2008: 86), YANG et al. (2008: 87)
E. expansum (Degel.) P.M.Jørg. – WU & LIU (2012: 180)
E. nipponicum (Degel.) Otálora
E. substellatum (H.Magn.) P.M.Jørg. – ABBAS & WU (1998: 63), ABBAS et al. (2001: 363), WU & LIU (2012: 177)
E. tenax (Sw.) Gray – ABBAS & WU (1994: 21 var. *vulgare*, 1998: 63 vars. *corallinum* & *vulgare*), ABBAS et al. (2001: 363 var. *corallinum*), GUO (2005: 47 vars. *crustaceum* & *vulgare*), LIU & WEI

(2009: 24 vars. *crustaceum* & *vulgare*), WU & LIU (2012: 177 vars. *corallinum*, *crustaceum*, *diffRACTOAREOLATUM*, *ogatae* & *vulgare*)

Endocarpon Hedw.

E. sinense H.Magn. var. *sinense* – ABBAS & WU (1994: 21, 1998: 156), ABBAS et al. (2001: 363, 2002: 184)
var. *ascendens* H.Magn. – ABBAS et al. (1993: 77, 2001: 363, 2002: 184), ABBAS & WU (1998: 156)

Erichansenia S.Y.Kondr., Kärnefelt & A.Thell

E. epithallina (Lyngé) S.Y.Kondr., Kärnefelt & A.Thell – Vondrák (2014 in litt.)

Evernia Ach.

E. divaricata (L.) Ach. – MAGNUSSON (1940: 129), MOREAU & MOREAU (1951: 191), WEI et al. (1982: 46), WU (1985: 75), WANG, X. (1985: 359), ABBAS et al. (1993: 77, 2001: 63, 2002: 184), ABBAS & WU (1998: 92), YANG et al. (2008: 86)

E. esorediosa (Müll.Arg.) Du Rietz – ABBAS & WU (1998: 93), ABBAS et al. (2001: 363, 2002: 184), YANG et al. (2008: 86)

E. mesomorpha Nyl. – WU (1985: 76)

Farnoldia Hertel

F. hypocrita (A.Massal.) Hertel – MAHMUT et al. (2011: 134)

F. micropsis (A.Massal.) Hertel – ZHAO, X. X. et al. (2016: 1711)

Flavoplaca Arup, Søchting & Frödén

F. coronata (Kremp. ex Körb.) Arup, Frödén & Søchting – ABBAS et al. (1993: 76, 2001: 361), ABBAS & WU (1998: 145)

Flavocetraria Kärnefelt & A.Thell

F. nivalis (L.) Kärnefelt – WU (1985: 74), ABBAS et al. (1993: 76, 2001: 362), ABBAS & WU (1998: 91), Andreev et al. (1998 in litt.), YANG et al. (2008: 87)

Flavoparmelia Hale

F. caperata (L.) Hale – WANG, X. (1985: 347), CHEN (2015: 71)

Flavopunctelia (Krog) Hale

F. soreдика (Nyl.) Hale – ABBAS et al. (1997: 2, 2002: 184)

Gallowayella S.Y.Kondr., Fedorenko, S.Stenroos, Kärnefelt, Elix, Hur & A.Thell

G. fulva (Hoffm.) S.Y. Kondr. et al. – Ahti (2000 in litt.)

Glaucumaria M.Choisy

G. swartzii (Ach.) S.Y.Kondr., Lökös & Farkas – MAMUT et al. (2009: 155)

Glypholecia Nyl.

G. scabra (Pers.) Müll.Arg. – WANG, X. (1985: 345), ABBAS et al. (1993: 78, 2001: 368, 2002: 184), ABBAS & WU (1998: 39), YANG et al. (2008: 87)

Gyalolechia A.Massal.

G. bracteata (Hoffm.) Räsänen – ABBAS et al. (1993: 78, 2001: 363, 2002: 184), ABBAS & WU (1994: 21, 1998: 148), XAHIDIN et al. (2009: 108 as subsp. *deformis*)

G. desertorum (Tomin) Søchting, Frödén & Arup – XAHIDIN et al. (2009: 108)

G. epiphyta (Lyngé) Vondrák – Vondrák (2014 in litt.), VONDRÁK et al. (2019: 62)

G. flavorubescens (Huds.) Søchting, Frödén & Arup – ABBAS et al. (1993: 76, 2001: 361), ABBAS & WU (1998: 146).

G. fulgens (Sw.) Søchting, Frödén & Arup – WANG, X. (1985: 351), XAHIDIN et al. (2009: 109)

G. subbracteata (Nyl.) Søchting, Frödén & Arup – WANG, X. (1985: 351), XAHIDIN et al. (2009: 110)

Gypsoplaca Timdal

G. macrophylla (Zahlbr.) Timdal – ABBAS et al. (2015: 510)

Halecania M.Mayrhofer

H. alpivaga (Th.Fr.) M.Mayrhofer – ABBAS & WU (1998: 43), ABBAS et al. (2001: 364)

Heterodermia Trevis.

H. pseudospeciosa (Kurok.) W.L.Culb. – ABBAS et al. (1997: 2), ABBAS et al. (2002: 184)

H. speciosa (Wulfen) Trevis. – Ahti (2000 in litt.)

Hypocenomyce M.Choisy

H. scalaris (Ach.) M.Choisy – Ahti (2000 in litt.), MAMUT & ABBAS (2016b: 212)

Hypogymnia (Nyl.) Nyl.

H. austerodes (Nyl.) Räsänen – WANG, X. (1985: 346), ABBAS & WU (1998: 93), Ahti (2000 in litt.), ABBAS et al. (2001: 363, 2002: 184)

H. bitteri (Lyngé) Ahti – Ahti (2000 in litt.)

H. physodes (L.) Nyl. – WANG, X. (1985: 346), ABBAS et al. (1993: 78, 2002: 184), Ahti (2000 in litt.), YANG et al. (2008: 87)

H. pseudophysodes (Asahina) Rass. – WANG, X. (1985: 346), ABBAS et al. (2002: 184)

Icmadophila Trevis.

I. ericetorum (L.) Zahlbr. – ABBAS et al. (1997: 2)

Kiliasia Hafellner

K. sculpturata (H.Magn.) Kistenich et al. – ABBAS et al. (1993: 76, 2001: 362), ABBAS & WU (1998: 49)

Immersaria Rambold & Pietschm.

I. athrocarpa (Ach.) Rambold & Pietschm. – ABBAS & WU (1998: 123), ABBAS et al. (2001: 367)

I. iranica Valadb., Sipman & Rambold – ZHANG et al. (2015: 901)

I. usbekica (Hertel) M.Barbero, Nav.-Ros. & Cl.Roux – ZHANG et al. (2015: 903)

Lasallia (L.) Mérat

L. papulosa (Ach.) Llano – WEI & JIANG (1992: 86, 1993: 29)

L. pertusa (Rass.) Llano – WEI & JIANG (1988: 94, 1993: 37), Ahti (2000 in litt.)

L. pensylvanica (Hoffm.) Llano – WEI & JIANG (1993: 35), Ahti (2000 in litt.)

Lathagrium (Ach.) Gray

L. auriforme (With.) Otálora, P.M.Jørg. & Wedin – WU & LIU (2012: 194)

L. cristatum (L.) Otálora, P.M.Jørg. & Wedin – WU & LIU (2012: 191 var. *cristatum*)

var. *marginale* (Huds.) Cl.Roux – WU & LIU (2012: 191)

L. fuscovirens (With.) Otálora, P.M.Jørg. & Wedin – ABBAS et al. (1993: 77, 2001: 363), ABBAS & WU (1998: 62), WU & LIU (2012: 193)

L. undulatum (Laurer ex Flot.) Poetsch – WU & LIU (2012: 195)

Lecania A.Massal.

L. koerberiana J.Lahm – ABBAS et al. (1993: 78, 2001: 364, 2002: 184), ABBAS & WU (1998: 43)

L. toninioides Zahlbr. – MUHAMMAT et al. (2012: 5)

Lecanora Ach.

- L. accumulata* H.Magn. – ABBAS et al. (1993: 78, 2001: 364, 2002: 184), ABBAS & WU (1998: 75)
- L. alpigena* (Ach.) Cl.Roux – ABBAS & WU (1998: 78), ABBAS et al. (2001: 364)
- L. argopholis* (Ach.) Ach. – ABBAS et al. (1993: 78 as *L. frustulosa* var. *thiodes*, 2001: 364, 2002: 184), ABBAS & WU (1998: 76), Ahti (2000 in litt.), OBERMAYER (2004: 500)
- L. cenisia* Ach. – Ahti (2000 in litt.), MAMUT et al. (2005: 204)
- L. chlarotera* Nyl. – Ahti (2000 in litt.)
- L. formosa* (Bagl. & Carestia) Knoph & Leuckert – ZHANG, Y. Y. et al. (2020: 138)
- L. frustulosa* (Dicks.) Ach. – Andreev et al. (1998 in litt.)
- L. impudens* Degel. – MAMUT et al. (2004: 167)
- L. intricata* (Ach.) Ach. – MAMUT et al. (2005: 205)
- L. isabellina* H.Magn. – ABBAS et al. (1993: 78, 2001: 364, 2002: 184), ABBAS & WU (1998: 77)
- L. piniperda* Körb. – MAMUT et al. (2004: 168)
- L. rupicola* (L.) Zahlbr. – MAMUT et al. (2004: 168)
- L. saligna* (Schrad.) Zahlbr. – ABBAS et al. (1993: 78, 2001: 364, 2002: 184), ABBAS & WU (1998: 78)
- L. umbrina* (Ach.) A.Massal. (cf. *Myriolecis hagenii* (Ach.) Śliwa, Zhao Xin & Lumbsch) – ABBAS & WU (1998: 79), ABBAS et al. (2001: 364, 2002: 184), YANG et al. (2008: 86)

Lecidea Ach.

- L. atrobrunnea* (DC.) Schaer. – ABBAS & WU (1998: 84), ABBAS et al. (2001: 364, 2002: 184)
- L. auriculata* Th.Fr. – ABBAS et al. (1993: 78, 2001: 364, 2002: 184) ABBAS & WU (1994: 21, 1998: 84)
- L. berengeriana* (A.Massal.) Nyl. – MAHMUT et al. (2011: 134)
- L. bohlinii* H.Magn. – ABBAS et al. (1993: 78, 2001: 364, 2002: 184), ABBAS & WU (1998: 84)
- L. confluens* (Weber) Ach. – MAHMUT et al. (2011: 134)
- L. fuscoatrina* Hertel & Leuckert – JIAMAHAHAT & MAMUT (2019: 1694)
- L. kansuensis* H.Magn. – ABBAS et al. (1993: 78, 2001: 364, 2002: 184), ABBAS & WU (1998: 85)
- L. lactea* Flörke ex Schaer. – MAHMUT et al. (2011: 134)
- L. lithophila* (Ach.) Ach. – MAHMUT et al. (2011: 134)
- L. perlaticola* Hertel & Leuckert – JIAMAHAHAT & MAMUT (2019: 1695)
- L. polypycnidophora* U.Rupr. & Türk – JIAMAHAHAT & MAMUT (2019: 1697)
- L. subelevata* H.Magn. – ABBAS et al. (1993: 78, 2001: 364, 2002: 184), ABBAS & WU (1998: 85)
- L. tessellata* Flörke – ABBAS et al. (1993: 78, 2001: 364, 2002: 184), ABBAS & WU (1998: 86), Andreev et al. (1998 in litt.), OBERMAYER (2004: 501), JIAMAHAHAT & MAMUT (2019: 40)
- var. *caesia* (Anzi) Arnold – JIAMAHAHAT & MAMUT (2019: 40)
- L. turgidula* Fr. – Vondrák (2014 in litt.)

Lecidella Körb.

- L. alaiensis* (Vain.) Hertel – ABBAS et al. (1993: 78, 2001: 364, 2002: 184), ABBAS & WU (1998: 79)
- L. carpathica* Körb. – ABBAS et al. (1993: 78, 1994: 21, 2001: 364, 2002: 184), ABBAS & WU (1998: 79), ZHANG, Y. Y. et al. (2020: 138)
- L. elaeochroma* (Ach.) M.Choisy – MOREAU & MOREAU (1951: 187), WEI (1991: 139)
- L. euphorea* (Flörke) Kremp. – ABBAS et al. (1993: 78, 2001: 364, 2002: 184), Ahti (2000 in litt.)
- L. stigmattea* (Ach.) Hertel & Leuckert – ABBAS & WU (1998: 80), ABBAS et al. (2001: 364, 2002: 184), ZHANG, Y. Y. et al. (2020: 138)

L. tumidula (A.Massal.) Knoph & Leuckert – ZHAO, X. et al. (2015: 711), ZHANG, Y. Y. et al. (2020: 138)

L. wulfenii (Ach.) Körb. – ABBAS & WU (1994: 21, 1998: 81), ABBAS et al. (2001: 364)

***Lempholemma* Körb.**

L. cladodes (Tuck.) Zahlbr. – TURSUN et al. (2015: 2340)

***Lepra* Scop.**

L. multipuncta (Turner) Hafellner – ABBAS et al. (1993: 79, 2001: 366), ABBAS & WU (1998: 142)

L. weii (Q.Ren) Q.Ren – REN & KOU (2013: 337)

***Lepraria* Ach.**

L. crassissima (Hue) Lettau – WANG, X. (1985: 353)

L. incana (L.) Ach. – WANG, X. (1985: 353), ABBAS et al. (1993: 78, 2001: 364, 2002: 184), ABBAS & WU (1998: 160)

L. membranacea (Dicks.) Vain. – ABBAS et al. (1993: 78, 2001: 364), ABBAS & WU (1998: 159), Ahti (2000 in litt.)

***Leproplaca* (Nyl.) Nyl.**

L. cirrochroa (Ach.) Arup, Frödén & Söchting – ABBAS et al. (1996: 232, 2001: 361), ABBAS & WU (1998: 145), YANG et al. (2008: 86)

L. xantholyta (Nyl.) Nyl. – ABBAS & WU (1998: 160), ABBAS et al. (2001: 364, 2002: 184)

***Leptogium* (Ach.) Gray**

L. brebissonii Mont. – WANG, X. (1985: 336)

L. cyanescens (Ach.) Körb. – WANG, X. (1985: 336), ABBAS et al. (1997: 3)

L. saturninum (Dicks.) Nyl. – MAGNUSSON (1940: 42), MOREAU & MOREAU (1951: 185 as *L. myochroum*), WANG, X. (1985: 336), ABBAS et al. (1993: 78, 2001: 364, 2002: 184), ABBAS & WU (1994: 22, 1998: 64), Andreev et al. (1998 in litt.), Ahti (2000 in litt.), YANG et al. (2008: 87)

***Leucodermia* Kalb**

L. leucomelos (L.) Kalb – MAGNUSSON (1940: 159)

***Lichinella* Nyl.**

L. nigrivetella (Lettau) P.P.Moreno & Egea – TURSUN et al. (2015: 2342)

L. polyspora (H.Magn.) P.P.Moreno & Egea – ABBAS et al. (1993: 79, 2001: 365, 2002: 184), ABBAS & WU (1998: 131)

***Lobarina* Nyl.**

L. scrobiculata (Scop.) Nyl. ex Cromb. – ABBAS & WU (1998: 133), ABBAS et al. (2001: 365, 2002: 184), YANG et al. (2008: 87)

***Lobothallia* (Clauzade & Cl.Roux) Hafellner**

L. alphoplaca (Wahlenb.) Hafellner – ABBAS et al. (1993: 75, 2001: 360), ABBAS & WU (1994: 20, 1998: 67), MAMUT et al. (2010: 363)

L. hedinii (H.Magn.) Paukov, A.Nordin & Sohrabi – ABBAS et al. (1993: 75, 2001: 360), ABBAS & WU (1998: 70)

L. praeradiosa (Nyl.) Hafellner – KOU & REN (2013: 248), PAUKOV et al. (2019: 303)

L. radiosa (Hoffm.) Hafellner – MAMUT et al. (2012: 306)

L. zogtii Paukov & Davydov – PAUKOV et al. (2019: 312)

Megaspora (Clauzade & Cl.Roux)

M. verrucosa (Ach.) B.F.M.Abbott & A.Nordin – MAGNUSSON (1940: 113), ABBAS et al. (1993: 79, 2001: 365, 2002: 184), ABBAS & WU (1994: 22, 1998: 74), Ahti (2000 in litt.)

var. ***mutabilis*** (Ach.) Nimis & Cl.Roux – ZHAO, N. et al. (2013: 1701)

Melanelia Essl.

M. incolorata (Parrique) Essl. – WANG, Y. et al. (2008: 588)

M. stygia (L.) Essl. – Ahti (2000 in litt.), CHEN (2015: 101)

Melanelixia O.Blanco, A.Crespo, Divakar, Essl., D.Hawksw. & Lumbsch

M. albertana (Ahti) O.Blanco et al. – NAZARBEB et al. (2016: 29)

M. fuliginosa (Fr. ex Duby) O.Blanco et al. – NAZARBEB et al. (2016: 29)

M. glabra (Schaer.) O.Blanco et al. – ABBAS & WU (1998: 95), ABBAS et al. (2001: 365, 2002: 184), NAZARBEB et al. (2016: 30)

M. glabroides (Essl.) O.Blanco et al. – OMAR et al. (2004: 386), NAZARBEB et al. (2016: 30)

M. subargentifera (Nyl.) O.Blanco et al. – WANG, X. (1985: 348), ABBAS & WU (1998: 97), ABBAS et al. (2001: 365, 2002: 184), CHEN (2015: 105), NAZARBEB et al. (2016: 30)

M. subaurifera (Nyl.) O.Blanco et al. – NAZARBEB et al. (2016: 30)

M. villosella (Essl.) O.Blanco et al. – CHEN (2015: 107), NAZARBEB et al. (2016: 31)

Melanohalea O.Blanco, A.Crespo, Divakar, Essl., D. Hawksw. & Lumbsch

M. elegantula (Zahlbr.) O.Blanco et al. – ABBAS & WU (1998: 96), ABBAS et al. (2001: 365 as *Melanelia incolorata*), CHEN (2015: 109), SAHEDAT et al. (2015: 2333)

M. exasperata (De Not.) O.Blanco et al. – CHEN (2005: 72, 2015: 110), SAHEDAT et al. (2015: 2334)

M. exasperatula (Nyl.) O.Blanco et al. – MAGNUSSON (1940: 128), WEI (1991: 152), ABBAS (1993: 78, 2001: 365, 2002: 184), ABBAS & WU (1998: 95), CHEN (2015: 111), SAHEDAT et al. (2015: 2334)

M. halei (Ahti) O.Blanco et al. – HABUL et al. (2018: 182)

M. infumata (Nyl.) O.Blanco et al. – SAHEDAT et al. (2015: 2332)

M. laciniatula (Flagey ex H.Olivier) O.Blanco et al. – HABUL et al. (2018: 183)

M. olivacea (L.) O.Blanco et al. – ABBAS & WU (1998: 96), ABBAS et al. (2001: 365, 2002: 184), SAHEDAT et al. (2015: 2334)

M. subelegatula (Essl.) O.Blanco et al. – SAHEDAT et al. (2015: 2332)

M. subolivacea (Nyl. ex. Hasse) O.Blanco et al. – SAHEDAT et al. (2015: 2333)

Micarea Fr.

M. melaena (Nyl.) Hedl. – ABBAS et al. (1993: 75, 2001: 365, 2002: 184), ABBAS & WU (1994: 22, 1998: 86)

Montanelia Divakar, A.Crespo, Wedin & Essl.

M. disjuncta (Erichsen) Divakar et al. – ABBAS et al. (1993: 79, 2001: 365), ABBAS & WU (1998: 79), Ahti (2000 in litt.)

M. panniformis (Nyl.) Divakar et al. – ABBAS & WU (1998: 79), Ahti (2000 in litt.), ABBAS et al. (2001: 365, 2002: 184)

M. tominii (Oxner) Divakar et al. – OMAR et al. (2004: 386)

Myriolecis Clements

M. altunica R.Mamut & A.Abbas – MAMUT et al. (2019: 380)

M. caesioalutacea (H.Magn.) R.Mamut – ABBAS et al. (1993: 78, 2001: 364), ABBAS & WU (1998: 76), MAMUT et al. (2019: 380)

- M. crenulata* (Ach.) Šliwa, Zhao Xin & Lumbsch – MAMUT et al. (2006: 204)
- M. dispersa* (Pers.) Šliwa, Zhao Xin & Lumbsch – ABBAS et al. (1993: 78, 1994: 21, 2001: 364, 2002: 184), ABBAS & WU (1998: 76)
- M. hagenii* (Ach.) Šliwa, Zhao Xin & Lumbsch – MAGNUSSON (1940: 87), ABBAS et al. (1993: 78, 1994: 21, 2001: 364, 2002: 184), ABBAS & WU (1998: 77), YANG et al. (2008: 86)
- Myriospora* Nägeli ex Uloth
- M. smaragdula* (Wahlenb.) Nägeli ex Uloth – SAHEDAT et al. (2015: 292)
- Nephroma* Ach.
- N. parile* (Ach.) Ach. – ABBAS & WU (1998: 134), ABBAS et al. (2001: 365, 2002: 184), WU & LIU (2012: 123)
- Normandina* Nyl.
- N. pulchella* (Borrer) Nyl. – ABBAS et al. (1997: 3), ABBAS et al. (2002: 184)
- Notoparmelia* A.Crespo, Ferencová & Divakar
- N. erumpens* (Kurok.) A.Crespo, Ferencová & Divakar – TUMUR et al. (2006: 8)
- Ochrolechia* A.Massal.
- O. pallescens* (L.) A.Massal. – ABBAS et al. (1993: 79, 2001: 365, 2002: 184), ABBAS & WU (1998: 142)
- O. parella* (L.) A.Massal. – ABBAS et al. (1993: 79, 2001: 365, 2002: 184), ABBAS & WU (1998: 142)
- O. szatalaënsis* Verseghy – REN (2017: 78)
- O. upsaliensis* (L.) A.Massal. – MAMUT et al. (2014: 856), REN (2017: 79)
- Omphalodina* M.Choisy
- O. chrysoleuca* (Sm.) S.Y.Kondr., L.Lökös & Farkas – WEI (1984: 210), WANG, X. (1985: 346), ABBAS et al. (1993: 80, 2001: 367, 2002: 185), Ahti (2000 in litt.), TUMUR et al. (2017: 70), ABBAS & WU (1998: 82)
- Opeltia* S.Y.Kondr. & Lökös
- O. juniperina* (Tomin) S.Y.Kondr. & Lökös – Vondrák (2014 in litt.)
- Oxnerella* S.Y.Kondr., Zarei-Darki, Lökös & Hur
- O. safavidiorum* S.Y.Kondr. et al. – JIAMAHAHAT & MAMUT (2020: 543)
- Oxneria* S.Y.Kondr. & Kärnefelt
- O. fallax* (Arnold) S.Y.Kondr. & Kärnefelt – ABBAS et al. (1993: 81, 2001: 369), ABBAS & WU (1998: 151), Andreev et al. (1998 in litt.), YANG et al. (2008: 86)
- Oxneriaria* S.Y.Kondr. & Lökös
- O. mashiginensis* (Zahlbr.) Oxner – TUMUR et al. (2009: 105)
- Pachypeltis* Frödén, Arup & Söchting
- P. intrudens* (H.Magn.) Frödén, Arup & Söchting – Vondrák (2014 in litt.)
- Pannaria* Delise ex Bory
- P. conoplea* (Ach.) Bory – ABBAS et al. (1997: 3), Ahti (2000 in litt.)
- Parasiphula* Kantvilas & Grube
- P. complanata* (Hook. f. & Taylor) Kantvilas & Grube – ABBAS et al. (1993: 81, 1994: 23, 2001: 368), ABBAS & WU (1998: 161)
- Parmelia* Ach.
- P. fertilis* Müll.Arg. – ABBAS & WU (1998: 98), ABBAS et al. (2001: 365, 2002: 184), YANG et al. (2008: 87)

P. fraudans (Nyl.) Nyl. – Ahti (2000 in litt.)

P. meiophora Nyl. – TUMUR et al. (2006: 8)

P. omphalodes (L.) Ach. – Ahti (2000 in litt.), TUMUR et al. (2006: 8)

P. saxatilis (L.) Ach. – ABBAS et al. (1997: 3, 2002: 184), Ahti (2000 in litt.)

P. sulcata Taylor – WANG, X. (1985: 347), ABBAS et al. (1993: 79, 2001: 365, 2002: 84), ABBAS & WU (1998: 98), Ahti (2000 in litt.), YANG et al. (2008: 87), CHEN (2015: 150)

Parmeliella Müll.Arg.

P. incisa Müll.Arg. – WU & QIAN (1999: 90), ABBAS & WU (1998: 88), ABBAS et al. (2001: 365, 2002: 184)

Parmelina Hale

P. quercina (Willd.) Hale – ABBAS & WU (1998: 98), ABBAS et al. (2001: 365, 2002: 184)

Parmelinella Elix & Hale

P. wallichiana (Taylor) Elix & Hale – ABBAS et al. (1997: 3)

Parmeliopsis (Nyl.) Nyl.

P. ambigua (Hoffm.) Nyl. – ABBAS & WU (1998: 99), Ahti (2000 in litt.), ABBAS et al. (2001: 365, 2002: 184)

Parvoplaca Arup, Søchting & Frödén

P. tirolensis (Zahlbr.) Arup, Søchting & Frödén – VONDRÁK (2014 in litt.), VONDRÁK et al. (2019: 62)

Peccania A.Massal. ex Arnold

P. terricola H.Magn. – ABBAS et al. (1993: 79, 2001: 365, 2002: 184), ABBAS & WU (1998: 131)

Peltigera Willd.

P. aphthosa (L.) Willd. – ABBAS & WU (1998: 136), ABBAS et al. (2001: 365, 2002: 184), WU & LIU (2012: 129)

P. canina (L.) Willd. – TCHOU (1935: 317), MAGNUSSON (1940: 46), MOREAU & MOREAU (1951: 187), WU (1985: 76), ABBAS et al. (1993: 79, 2001: 365, 2002: 184), ABBAS & WU (1998: 136), YANG et al. (2008: 87), WU & LIU (2012: 130)

P. coloradoensis Gyeln. – WANG, X. (1985: 338), JIANG et al. (1996: 443), ABBAS et al. (1993: 79)

P. continentalis Vitik. – Ahti (2000 in litt.)

P. degenii Gyeln. – WANG, X. (1985: 338)

P. didactyla (With.) J.R.Laundon – WANG, X. (1985: 338), ABBAS et al. (1993: 79, 2001: 365, 2002: 184), ABBAS & WU (1998: 137), YANG et al. (2008: 87), WU & LIU (2012: 136)

P. elisabethae Gyeln. – ABBAS & WU (1998: 137), ABBAS et al. (2001: 365, 2002: 184), WU & LIU (2012: 138)

var. *mauritzii* (Gyeln.) J.C.Weil (incl. var. *stuckenbergiae*, f. *isidiifera* & f. *subpolydactyla*) – WANG, X. (1985: 337 as *P. mauritzii*), ABBAS et al. (1993: 79, 2001: 365, 2002: 184), JIANG et al. (1996: 443), ABBAS & WU (1998: 137)

P. evansiana Gyeln. – WU & LIU (2012: 140)

P. extenuata (Nyl. ex Vain.) Lojka – Ahti (2000 in litt.)

P. horizontalis (Huds.) Baumg. – JIANG et al. (1996: 443), WU & LIU (2012: 141)

P. hymenina (Ach.) Delise – WU & LIU (2012: 143)

P. kristinssonii Vitik. – ZHAO, Z. & LIU (2002: 457), WU & LIU (2012: 144)

P. lepidophora (Nyl. ex Vain.) Bitter – ABBAS & WU (1998: 138), ABBAS et al. (2001: 365, 2002: 184)

P. leucophlebia (Nyl.) Gyeln. – ABBAS & WU (1998: 138), ABBAS et al. (2001: 365, 2002: 184), WU & LIU (2012: 145 as f. *angustiloba*)

P. malacea (Ach.) Funck – MAGNUSSON (1940: 46), Ahti (2000 in litt.)

P. membranacea (Ach.) Nyl. – ABBAS et al. (1993: 79, 2001: 366, 2002: 184), ABBAS & WU (1998: 138), YANG et al. (2008: 87), WU & LIU (2012: 149)

P. microphylla (Anders) Gyeln. – JIANG et al. (1996: 443)

P. neopolydactyla (Gyeln.) Gyeln. – ABBAS & WU (1998: 139), ABBAS et al. (2001: 366, 2002: 184), WU & LIU (2012: 151)

P. nigripunctata Bitter – ABBAS et al. (1993: 79, 2001: 366, 2002: 184), ABBAS & WU (1998: 139), WU & LIU (2012: 153)

P. polydactylon (Neck.) Hoffm. – MOREAU & MOREAU (1951: 187), WANG, X. (1985: 337), ABBAS et al. (1993: 79, 2001: 366 as *P. polydactyla*, 2002: 184), ABBAS & WU (1998: 139), YANG et al. (2008: 87), WU & LIU (2012: 154)

P. praetextata (Flörke ex Sommerf.) Zopf – MAGNUSSON (1940: 46), WANG, X. (1985: 338), ABBAS et al. (1993: 79, 2001: 366, 2002: 184), ABBAS & WU (1994: 22, 1998: 139), Ahti (2000 in litt.), YANG et al. (2008: 87), WU & LIU (2012: 158)

P. pruinosa (Gyeln.) Inumaru – ABBAS et al. (1993: 79)

P. rufescens (Weiss) Humb. – MAGNUSSON (1940: 46), WANG, X. (1985: 338), WU (1985: 76), ABBAS et al. (1993: 79, 2001: 366, 2002: 184), ABBAS & WU (1998: 140), Ahti (2000 in litt.), YANG et al. (2008: 87), WU & LIU (2012: 161)

P. venosa (L.) Hoffm. – ABBAS et al. (1993: 79, 2001: 366, 2002: 184), ABBAS & WU (1998: 140)

Petula Nyl.

P. euploca (Ach.) Poelt ex Pišút – ABBAS et al. (1993: 79, 2001: 366, 2002: 184), ABBAS & WU (1998: 132)

P. tortuosa (Ach.) Wetmore – WU et al. (1997: 14), ABBAS et al. (2002: 184)

Pertusaria DC.

P. oculata (Dicks.) Th.Fr. – ABBAS & WU (1998: 143), ABBAS et al. (2001: 366, 2002: 184), ZHAO, Z. et al. (2004: 536)

Phaeophyscia Moberg

P. cernohorskyi (Nádv.) Essl. – WANG, Y. et al. (2005: 147)

P. ciliata (Hoffm.) Moberg – ZHAO, J. et al. (1982: 113), WEI (1991: 195), ABBAS et al. (1993: 79, 2001: 366, 2002: 185), ABBAS & WU (1998: 10), Ahti (2000 in litt.)

P. constipata (Nyl.) Moberg – ABBAS et al. (1993: 79, 2001: 366, 2002: 185), ABBAS & WU (1998: 110)

P. decolor (Kashiw.) Essl. – WANG, Y. et al. (2005: 148)

P. endococcina (Körb.) Moberg – Andreev et al. (1998 in litt.)

P. erythrocardia (Tuck.) Essl. – ABBAS et al. (1993: 80, 2001: 366, 2002: 185), ABBAS & WU (1998: 110), YANG et al. (2008: 86)

P. hirsuta (Mereschk.) Essl. – Andreev et al. (1998 in litt.)

P. hirtuosa (Kremp.) Essl. – ABBAS & WU (1998: 111), ABBAS et al. (2001: 366, 2002: 185) YANG et al. (2008: 86)

P. hispidula (Ach.) Moberg – WU (1985: 77)

P. imbricata (Vain.) Essl. – ABBAS et al. (1993: 80, 2001: 366, 2002: 185), ABBAS & WU (1998: 111)

P. kairamoi (Vain.) Moberg – Ahti (2000 in litt.)

P. limbata (Poelt) Kashiw. – ABBAS et al. (1993: 80, 2001: 366, 2002: 185), ABBAS & WU (1998: 111)

P. nigricans (Flörke) Moberg – MAGNUSSON (1940: 159 as var. *sciastrella*), WEI (1991: 197), ABBAS & WU (1998: 111), Andreev et al. (1998 in litt.), ABBAS et al. (2001: 366, 2002: 185)

- P. orbicularis* (Neck.) Moberg – ABBAS et al. (1993: 80, 2001: 366, 2002: 185), ABBAS & WU (1998: 112)
P. pusilloides (Zahlbr.) Essl. – WANG, Y. et al. (2005: 148)
P. pyrrophora (Poelt) D.D.Awasthi & M.Joshi – Andreev et al. (1998 in litt.)
P. rubropulchra (Degel.) Moberg – ABBAS & WU (1998: 112), ABBAS et al. (2001: 366, 2002: 185)
P. sciastra (Ach.) Moberg – ABBAS et al. (1993: 80, 2001: 366, 2002: 185), Andreev et al. (1998 in litt.), ABBAS & WU (1998: 112), Ahti (2000 in litt.)

Physcia (Schreb.) Michx.

- P. adscendens* H.Olivier – MAGNUSSON (1940: 159), MOREAU & MOREAU (1951: 195 as *P. hispida*), ZHAO, J. et al. (1982: 97), ABBAS et al. (1993: 80, 2001: 366, 2002: 185), Andreev et al. (1998 in litt.), ABBAS & WU (1998: 113), Ahti (2000 in litt.)
P. aipolia (Ehrh. ex Humb.) Fűrnr. – WANG, X. (1985: 352), ABBAS et al. (1993: 80, 2001: 366, 2002: 185), Andreev et al. (1998 in litt.), ABBAS & WU (1998: 114), YANG et al. (2008: 86)
P. alnophila (Vain.) Loht. et al. – Andreev et al. (1998 in litt.), Ahti (2000 in litt.)
P. caesia (Hoffm.) Fűrnr. – MAGNUSSON (1940: 157), WANG, X. (1985: 353), ABBAS et al. (1993: 80, 2001: 366, 2002: 185), Andreev et al. (1998 in litt.), ABBAS & WU (1998: 114), YANG et al. (2008: 86)
P. clementei (Sm.) Lyngø – ABBAS et al. (1993: 80, 2001: 366, 2002: 185), ABBAS & WU (1998: 115), YANG et al. (2008: 86)
P. dimidiata (Arnold) Nyl. – ABBAS & WU (1998: 115), ABBAS et al. (2001: 366, 2002: 185)
P. dubia (Hoffm.) Lettau – ABBAS & WU (1998: 115), ABBAS et al. (2001: 366, 2002: 185)
P. leptalea (Ach.) DC. – ABBAS et al. (1993: 80, 2001: 366, 2002: 185), ABBAS & WU (1998: 116), YANG et al. (2008: 86)
P. phaea (Tuck.) J.W.Thomson – ABBAS & WU (1998: 115), ABBAS et al. (2001: 366, 2002: 185)
P. stellaris (L.) Nyl. – WANG, X. (1985: 352), ABBAS et al. (1993: 80, 2001: 366, 2002: 185), ABBAS & WU (1998: 116), Ahti (2000 in litt.), YANG et al. (2008: 86)
P. tenella (Scop.) DC. – Andreev et al. (1998 in litt.), ABBAS & WU (1998: 116), ABBAS et al. (2001: 366, 2002: 185)
P. tribacia (Ach.) Nyl. – Andreev et al. (1998 in litt.), ABBAS & WU (1998: 116), ABBAS et al. (2001: 366, 2002: 185)
P. tribacioides Nyl. – ABBAS & WU (1998: 117), ABBAS et al. (2001: 366, 2002: 185)

Physconia Poelt

- P. americana* Essl. – MUHAMMAT et al. (2012: 6)
P. detersa (Nyl.) Poelt – ABBAS et al. (1997: 4, 2002: 185)
P. distorta (With.) J.R.Laundon – TCHOU (1935: 312), ABBAS & WU (1998: 118), ABBAS et al. (2001: 366, 2002: 185)
P. elegantula Essl. – WANG, Y. et al. (2005: 148)
P. grisea (Lam.) Poelt – WU (1985: 77), ABBAS et al. (1993: 80, 2001: 366, 2002: 185), ABBAS & WU (1998: 118), YANG et al. (2008: 86)
P. hokkaidensis Kashiw. – CHEN & HU (2003: 189)
P. kansuensis (H.Magn.) Wu, Abbas & Jiang – MAGNUSSON (1940: 157), ABBAS et al. (1993: 80, 2001: 367, 2002: 185), ABBAS & WU (1998: 118)
P. leucoleiptes (Tuck.) Essl. – CHEN & HU (2003: 191)
P. muscigena (Ach.) Poelt – ZHAO, J. et al. (1982: 119), WANG, X. (1985: 352), ABBAS et al. (1993: 80, 2001: 367, 2002: 185), ABBAS & WU (1994: 22, 1998: 118), Andreev et al. (1998 in litt.), YANG et al. (2008: 86)

P. perisidiosa (Erichsen) Moberg – ABBAS et al. (1993: 80, 2001: 367, 2002: 185), Andreev et al. (1998 in litt.), ABBAS & WU (1998: 119), Ahti (2000 in litt.)

Placidiopsis Beltr.

P. pseudocinerea Breuss – XAHIDIN et al. (2010: 114)

Placynthiella Elenkin

P. oligotropha (J.R.Laundon) Coppins & P.James – ABBAS et al. (2015: 423)

Platismatia W.L.Culb. & C.F.Culb.

P. glauca (L.) W.L.Culb. & C.F.Culb. – Ahti (2000 in litt.)

Pleopsidium Körb.

P. chlorophanum (Wahlenb.) Zopf – FUTTERER (1911: 37)

Pleurosticta Petr.

P. koflerae (Clauzade & Poelt) Elix & Lumbsch – CHEN (2015: 221)

Polyblastia A.Massal.

P. integrascens (Nyl.) Vain. – ABBAS et al. (1993: 80, 2001: 367, 2002: 185), ABBAS & WU (1994: 22, 1998: 157)

P. kansuensis H.Magn. – ABBAS et al. (1993: 80, 2001: 367, 2002: 185), ABBAS & WU (1998: 157)

Polycauliona Hue

P. candelaria (L.) Frödén, Arup & Søchting – ABBAS & WU (1998: 150), Ahti (2000 in litt.), ABBAS et al. (2001: 369)

P. polycarpa (Hoffm.) Frödén, Arup & Søchting – ABBAS & WU (1998: 151), ABBAS et al. 2001: 369), YANG et al. (2008: 86)

Polychidium (Ach.) Gray

P. muscicola (Sw.) Gray – Ahti (2000 in litt.)

Porpidia Körb.

P. speirea (Ach.) Kremp. – ABBAS & WU (1994: 22, 1998: 123), ABBAS et al. (2001: 367, 2002: 185)

P. squamosa Xin Y.Wang & Lu L.Zhang – WANG, X. et al. (2012: 623)

Protoblastenia Stein.

P. areolata H.Magn. – ABBAS & WU (1994: 22, 1998: 124), ABBAS et al. (2001: 367, 2002: 185)

Protopannaria (Gyeln.) P.M.Jørg. & S.Ekman

P. pezizoides (Weber) P.M.Jørg. & S.Ekman – WANG, X. (1985: 339), ABBAS & WU (1998: 87), WU & QIAN (1999: 87), ABBAS et al. (2001: 365, 2002: 184)

Protoparmeliopsis M.Choisy

P. kukunorensis (H.Magn.) S.Y.Kondr. – ABBAS et al. (1993: 78, 2001: 364, 2002: 185), ABBAS & WU (1998: 77)

P. muralis (Schreb.) M.Choisy – ABBAS et al. (1993: 78, 2001: 364, 2002: 185), ABBAS & WU (1998: 78), Andreev et al. (1998 in litt.), Ahti (2000 in litt.)

P. peltata (Ramond) Aruo, Zhao Xin & Lumbsch (incl. var. *regalis*) – MAGNUSSON (1940: 121), MOREAU & MOREAU (1951: 189), WEI (1984: 209), ABBAS et al. (1993: 81, 2001: 367, 2002: 185), ABBAS & WU (1998: 82)

Pseudevernia Zopf.

P. furfuracea (L.) Zopf – WU et al. (1997: 14), Ahti (2000 in litt.), ABBAS et al. (2002: 185), WEI & ABBAS (2003: 27)

Psora Hoffm.

P. cerebriformis W.A.Weber – MAMUT & ABBAS (2016a: 1483)

P. decipiens (Hedw.) Hoffm. – WANG, X. (1985: 339), ABBAS et al. (1993: 80, 2001: 367, 2002: 185), ABBAS & WU (1998: 124), MAMUT & ABBAS (2016a: 1484)

P. luridella (Tuck.) Fink – MAMUT & ABBAS (2016a: 1484)

Psorotichia A.Massal.

P. nigra H.Magn. – ABBAS & WU (1994: 22, 1998: 132), ABBAS et al. (2001: 367, 2002: 185)

Psorula Gotth.Schneid.

P. rufonigra (Tuck.) Gotth.Schneid. – ABBAS & WU (1998: 125), ABBAS et al. (2001: 367, 2002: 185)

Pyrenodesmia A.Massal.

P. bicolor (H.Magn.) S.Y.Kondr. – Vondrák (2014 in litt.)

P. concreticola (Vondrák & Khodos.) Søchting, Arup & Frödén – Vondrák (2014 in litt.)

P. microstepposa (Frolov et al.) Hafellner & Türk – Vondrák (2014 in litt.)

Ramalina Ach.

R. almquistii Vain. – FU et al. (2009: 98)

R. chihuahuaana Kashiw. & T.H.Nash – FU et al. (2009: 98)

R. complanata (Sw.) Ach. – FU et al. (2009: 99)

R. conduplicans Vain. – FU et al. (2009: 99)

R. dilacerata (Hoffm.) Hoffm. – Andreev et al. (1998 in litt.), YANG et al. (2008: 86), ZHOU, C. L. et al. (2009: 10), WEN et al. (2009: 627)

R. farinacea (L.) Ach. – WANG, X. (1985: 349), ABBAS et al. (1993: 80, 2001: 367, 2002: 185), ABBAS & WU (1998: 126), YANG et al. (2008: 86), ZHOU, C. L. et al. (2009: 10)

R. fissa (Müll.Arg.) Vain. – MOREAU & MOREAU (1951: 193)

R. fraxinea (L.) Ach. – WANG, X. (1985: 349), FU et al. (2009: 99)

var. *calicariformis* Nyl. – MOREAU & MOREAU (1951: 192)

R. intermedia (Delise ex Nyl.) Nyl. – WANG, X. (1985: 349), ABBAS & WU (1998: 126), ABBAS et al. (2001: 367, 2002: 185), ZHOU, C. L. et al. (2009: 11)

R. obtusata (Arnold) Bitter – ZHOU, C. L. et al. (2009: 11)

R. pentecostii Krog & Swinscow – FU et al. (2009: 100)

R. pollinaria (Westr.) Ach. – WANG, X. (1985: 349), ABBAS et al. (1993: 80 as var. *pollinaria*, 2001: 367, 2002: 185), ABBAS & WU (1998: 126), ZHOU, C. L. et al. (2009: 12)

R. sinensis Jatta – ABBAS et al. (1993: 80, 2001: 367, 2002: 185), ABBAS & WU (1998: 127), YANG et al. (2008: 86), ZHOU, C. L. et al. (2009: 12), FU et al. (2009: 100)

R. subleptocarpha Rundel & Bowler – ZHOU, C. L. et al. (2009: 12)

Ramboldia Kantvilas & Elix

R. elabens (Fr.) Kantvilas & Elix – ABBAS & WU (1994: 21, 1998: 85), ABBAS et al. (2001: 364, 2002: 185), YANG et al. (2008: 87)

Rhizocarpon Ramond ex DC.

R. atroflavescens Lyngé – HANAT et al. (2019: 1591)

R. atrovirellum (Nyl.) Zahlbr. – WANG, W. (2016: 10)

R. badioatrum (Flörke ex Spreng.) Th.Fr. – NURAHMAT et al. (2015: 423), HANAT et al. (2019: 1592)

R. concentricum (Davies) Beltr. – LI, X. et al. (2013: 146)

- R. disporum* (Nägeli ex Hepp) Müll.Arg. – ABBAS et al. (1993: 80, 2001: 367, 2002: 185), ABBAS & WU (1998: 127), WANG, W. (2016: 11), HANAT et al. (2019: 1592)
- R. eupetraeoides* (Nyl.) Blomb. & Forssell – WANG, X. (1985: 340), ABBAS et al. (1993: 80)
- R. furax* Poelt & V.Wirth – WANG, W. (2016: 15)
- R. geminatum* Körb. – LI, X. et al. (2013: 146), HANAT et al. (2019: 1593)
- R. geographicum* (L.) DC. – ABBAS et al. (1993: 80, 2001: 367, 2002: 185), ABBAS & WU 1994: 22, 1998: 128), Ahti (2000 in litt.), YANG et al. (2008: 87), NURAHMAT et al. (2015: 424)
- R. grande* (Flörke ex Flot.) Arnold – NURAHMAT et al. (2015: 423), HANAT et al. (2019: 1593)
- R. lecanorinum* Anders – NURAHMAT et al. (2015: 424)
- R. macrosporum* Räsänen – NURAHMAT et al. (2015: 424)
- R. nipponense* Räsänen – WU (1987: 94)
- R. parvum* Runemark – WANG, W. et al. (2015a: 744)
- R. petraeum* (Wulfen) A.Massal. – ZHAO, Z. et al. (2013: 221)
- R. pusillum* Runemark – WANG, W. et al. (2015a: 743)
- R. reductum* Th.Fr. – WANG, W. (2015b: 885)
- R. saurinum* (W.A.Weber) Bungartz – WANG, W. et al. (2015b: 887), WANG, W. (2016: 28)
- R. simillimum* (Anzi) Lettau – WANG, W. et al. (2015b: 887)
- R. superficiale* (Schaer.) Malme – WANG, W. (2016: 30), HANAT et al. (2019: 1593)
- R. umense* (H.Magn.) A.Nordin – WANG, W. et al. (2015b: 889)
- R. viridiatrum* (Wulfen) Körb. – ABBAS et al. (1993: 80, 2001: 367, 2002: 185), ABBAS & WU (1994: 22, 1998: 128)

Rhizoplaca Zopf

- R. haydenii* (Tuck.) W.A.Weber – ZHENG et al. (2007: 757)
- R. melanophthalma* (DC.) Leuckert & Poelt – ABBAS et al. (1993: 80, 2001: 367, 2002: 185), ABBAS & WU (1998: 82), Andreev et al. (1998 in litt.), Ahti (2000 in litt.)
- R. pachyphylla* (H.Magn.) Y.Y.Zhang – ABBAS et al. (1993: 78, 2001: 368), ABBAS & WU (1998: 45)

Rimularia Nyl.

- R. subconcava* (H.Magn.) Timdal – ABBAS & WU (1998: 85), ABBAS et al. (2001: 364)

Rinodina (Ach.) Gray

- R. afghanica* M.Steiner & Poelt – TURSUN et al. (2020: 1982)
- R. bischoffii* (Hepp) A.Massal. – TURSUN et al. (2020: 1984)
- R. bohlinii* H.Magn. – ABBAS et al. (1993: 81, 2001: 367, 2002: 185), ABBAS & WU (1994: 22, 1998: 120), REN & ZHENG (2020: 87)
- R. gennarii* Bagl. – ABBAS et al. (1993: 81, 2001: 367), ABBAS & WU (1994: 22, 1998: 120)
- R. guzzinii* Jatta – TURSUN et al. (2020: 1983)
- R. metaboliza* Vain. – TURSUN et al. (2020: 1985)
- R. pycnocarpa* H.Magn. – TURSUN et al. (2020: 1985)
- R. sophodes* (Ach.) A.Massal. – ABBAS & WU (1998: 121), ABBAS et al. (2001: 367, 2002: 185)
- R. straussii* J.Steiner – TURSUN et al. (2020: 1985)
- R. terrestris* Tomin – OBERMAYER (2004: 507), REN & ZHENG (2020: 96), TURSUN et al. (2020: 1986)
- R. trevisanii* (Hepp) Körb. – TURSUN et al. (2020: 1986)
- R. turfacea* (Wahlenb.) Körb. – ABBAS & WU (1994: 22, 1998: 121), ABBAS et al. (2001: 368, 2002: 185), REN & ZHENG (2020: 97)

- R. zwackhiana* (Kremp.) Kőr. – Vondrák (2014 in litt.)
- Rufoplaca** Arup, Søchting & Frödén
- R. arenaria* (Pers.) Arup, Søchting & Frödén – ABBAS et al. (2001: 361), LIU et al. (2012: 319)
- Rusavskia** S.Y.Kondr. & Kärnefelt
- R. soreliata* (Vain.) S.Y.Kondr. & Kärnefelt – ABBAS & WU (1998: 151), ABBAS et al. (2001: 369)
- Sarcogyne** Flot.
- S. privigna* (Ach.) A.Massal. – Andreev et al. (1998 in litt.)
- S. saphyniana* L.Nurtai, K.Knudsen & A.Abbas – NURTAI et al. (2016: 136)
- S. solitaria* H.Magn. – ABBAS et al. (1993: 81, 2001: 368, 2002: 185), ABBAS & WU (1998: 40)
- Scytinium** (Ach.) Gray
- S. lichenoides* (L.) Otálora, P.M.Jørg & Wedin – MAGNUSSON (1940: 42)
- Seiophora** Poelt
- S. lacunosa* (Rupr.) Frödén – WANG, X. (1985: 350), WU (1987: 190), WEI (1991: 241), ABBAS et al. (1993: 81, 2001: 368), ABBAS & WU (1994: 23, 1998: 149)
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- Solorina** Ach.
- S. bispora* Nyl. – WANG, X. (1985: 336), WU (1985: 77), ABBAS et al. (1993: 81, 2001: 368, 2002: 185), ABBAS & WU (1994: 23, 1998: 112), WU & LIU (2012: 166)
- S. octospora* Arnold – MOREAU & MOREAU (1951: 186), WU & LIU (2012: 166)
- S. saccata* (L.) Ach. – TCHOU (1935: 318), ABBAS et al. (2001: 368), WU & LIU (2012: 168)
- Sporastatia** A.Massal.
- S. asiatica* H.Magn. – ABBAS et al. (1993: 81, 2001: 36, 2002: 185), ABBAS & WU (1998: 41)
- S. crassulata* Yakovch. & Davydov – YAKOVCHENKO & DAVYDOV (2018: 445)
- Squamarina** Poelt
- S. cartilaginea* (With.) P.James – ABBAS & WU (1998: 44), ABBAS et al. (2001: 368, 2002: 185)
- S. kansuensis* (H.Magn.) Poelt – ABBAS et al. (1993: 81, 2001: 368, 2002: 185), ABBAS & WU (1998: 44), ZHANG, Y. Y. et al. (2020: 154)
- Staurothele** Norm.
- S. clopima* (Wahlenb.) Th.Fr. – ABBAS et al. (1993: 81, 2001: 368, 2002: 185), ABBAS & WU (1998: 158)
- S. rufa* (A.Massal.) Zschacke – ABBAS et al. (1993: 81, 2001: 368, 2002: 185), ABBAS & WU (1998: 158)
- Stereocaulon** (Schreb.) Hoffm.
- S. paschale* (L.) Hoffm. – ABBAS & WU (1998: 129), ABBAS et al. (2001: 368, 2002: 185), YANG et al. (2008: 87)
- S. tomentosum* Th.Fr. – Ahti (2000 in litt.), YANG et al. (2008: 87)
- Sticta** (Schreb.) Ach.
- S. limbata* (Sm.) Ach. – DAVYDOV et al. (2012: 33)
- Teloschistes** Norm.
- T. brevior* (Nyl.) Hillmann – ABBAS & WU (1994: 23, 1998: 148, 2002: 185)
- Tephromela** M.Choisy
- T. atra* (Huds.) Hafellner – ABBAS & WU (1998: 45), ABBAS et al. (2001: 368, 2002: 185)

Thalloidima A.Massal.

T. candida (Weber) A.Massal. – ABBAS et al. (1993: 81, 2001: 368, 2002: 185), ABBAS & WU (1994: 23, 1998: 46), MAMUT et al. (2015: 163)

T. physaroides (Opiz) Opiz – MAMUT et al. (2015: 163)

T. sedifolium (Scop.) Kistenich et al. – TCHOU (1935: 322), MOREAU & MOREAU (1951: 187), ABBAS & WU (1994: 23), MAMUT et al. (2015: 162)

Thamnotia Ach.

T. subuliformis s. lat. – WU (1985: 77 as *T. subuliformis*), ABBAS & WU (1998: 161 as *T. subuliformis*), ABBAS et al. (1993: 81 as *T. vermicularis*, 2001: 368 & 2002: 185 as *T. subuliformis*)

Thelidium A.Massal.

T. pyrenophorum (Ach.) Körb. – XAHIDIN et al. (2010: 115)

Thyrea A.Massal.

T. pulvinata auct. (cf. *T. confusa* Henssen) – WU (1985: 78)

Toninia Th.Fr.

T. alutacea (Anzi) Jatta – MAMUT et al. (2015: 162)

T. caeruleonigricans (Lightf.) Th.Fr. – MOREAU & MOREAU (1951: 187), WU (1985: 77), ABBAS & WU (1998: 46), ABBAS et al. (2001: 368, 2002: 185), MAMUT et al. (2015: 162)

T. tristis subsp. *asiae-centralis* (H.Magn.) Timdal – MAMUT et al. (2015: 164)

Trapeliopsis Hertel & Gotth.Schneid.

T. flexuosa (Fr.) Coppins & P.James – Ahti (2000 in litt.)

T. granulosa (Hoffm.) Lumbsch – Ahti (2000 in litt.)

Umbilicaria Hoffm.

U. altaiensis J.C.Weil & Y.M.Jiang – WEI & JIANG (1993: 70)

U. aprina Nyl. – WEI & JIANG (1992: 77)

U. cylindrica (L.) Delise – WEI & JIANG (1993: 115)

U. decussata (Vill.) Zahlbr. – ABBAS et al. (1993: 81, 2001: 368, 2002: 185), ABBAS & WU (1998: 130)

U. deusta (L.) Baumg. – WEI & JIANG (1993: 124), Ahti (2000 in litt.)

U. hirsuta (Sw. ex Westr.) Ach. – WEI & JIANG (1993: 133), Ahti (2000 in litt.)

U. leiocarpa DC. – ABBAS & WU (1998: 130), ABBAS et al. (2001: 368, 2002: 185)

U. nylanderiana (Zahlbr.) H.Magn. – WEI & JIANG (1992: 79, 1993: 154)

U. subglabra (Nyl.) Harm. – WEI & JIANG (1992: 81, 1993: 66)

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Usnea Adans.

U. ceratina Ach. – TCHOU (1935: 301)

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U. pangiana Stirt. – ABBAS & WU (1998: 100 as subsp. *hondoensis*), YANG et al. (2008: 86)

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Vahliella P.M.Jørg.

V. leucophaea (Vahl) P.M.Jørg. – ABBAS et al. (1997: 2), WU & QIAN (1999: 88), ABBAS et al. (2002: 184)

Variospora Arup, Søchting & Frödén

V. australis (Arnold) Arup, Søchting & Frödén – XAHIDIN et al. (2009: 107)

Verrucaria Schrad.

V. applanatula H.Magn. – ABBAS & WU (1994: 23, 1998: 158), ABBAS et al. (2001: 368, 2002: 185)

V. inaequalis H.Magn. – ABBAS & WU (1994: 81, 1998: 159), ABBAS et al. (2001: 368, 2002: 185)

Vulpicida J.-E.Mattsson & M.J.Lai

V. juniperinus (L.) J.-E.Mattsson & M.J.Lai – ABBAS et al. (1993: 81, 2001: 368, 2002: 185), ABBAS & WU (1998: 101)

V. pinastri (Scop.) J.-E.Mattsson & M.J.Lai – ABBAS & WU (1998: 101), Ahti (2000 in litt.), ABBAS et al. (2001: 368, 2002: 185), YANG et al. (2008: 87 #)

Xanthaptychia S.Y.Kondr. & Ravera

X. contortuplicata (Ach.) S.Y.Kondr. & Ravera – OBERMAYER (2004: 515)

Xanthocarpia A.Massal. & De Not.

X. feracissima (H.Magn.) Frödén, Arup & Søchting – Vondrák (2014 in litt.)

Xanthoparmelia (Vain.) Hale

X. camtschadalis (Ach.) Hale – WEI (1983: 225), WU (1985: 76), WANG, X. (1985: 347 as *Parmelia vagans*), ABBAS et al. (1993: 81), ABBAS & WU (1994: 23, 1998: 102), CHEN (2015: 235)

X. coloradoensis (Gyeln.) Hale – CHEN (2015: 236)

X. conspersa (Ehrh. ex Ach.) Hale – WANG, X. (1985: 347)

X. coreana (Gyeln.) Hale – ABBAS et al. (1996: 233, 2001: 368, 2002: 185), ABBAS & WU (1998: 102)

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X. desertorum (Elenkin) Hale – ABBAS et al. (1996: 233, 2001: 368, 2002: 185), ABBAS & WU (1998: 102)

X. durietzii Hale – ABBAS & WU (1998: 103)

X. mexicana (Gyeln.) Hale – WEI (1983: 224)

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X. taractica (Kremp.) Hale – WEI (1983: 224)

X. tinctina (Maheu & A. Gillet) Hale – WEI (1983: 223)

Xanthoria (Fr.) Th.Fr.

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Addresses of the authors

Anwar Tumur, Reyim Mamut, College of Life Sciences and Technology, Xinjiang University, Urumqi 830046, Xinjiang, China. E-mail: anwartumur@sina.com

Mark R. D. Seaward, School of Archaeological & Forensic Sciences, University of Bradford, Bradford BD7 1DP, United Kingdom. E-mail: m.r.d.seaward@bradford.ac.uk