

# A revised checklist of lichenized, lichenicolous and allied fungi for Iran

Eine revidierte Checkliste der lichenisierten, lichenicolen und verwandten Pilze für Iran

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**Key words:** lichenized fungi, Iran, checklist, bibliography, *Aspicilia*, lectotype.

Schlagwörter: lichenisierte Pilze, Iran, Checkliste, Bibliographie, *Aspicilia*, Lectotype.

**Summary:** A further evaluation of recent collections, many made by Iranian researchers, of herbarium material, mainly in Turku, Helsinki and London, and of the literature, has revealed many additions to our knowledge of the lichen flora of Iran. To date, 645 taxa (590 lichens and 55 lichenicolous and allied fungi) have been recorded from Iran, 242 of which are additional to the 2004 checklist. New combinations for *Aspicilia persica* and *A. straussii* are proposed and the species lectotypified.

**Zusammenfassung:** Die Untersuchung weiterer rezenter Aufsammlungen, viele gemacht von iranischen Wissenschaftlern und Wissenschaftlerinnen, und von Material aufbewahrt vorwiegend in Turku, Helsinki und London, sowie die Auswertung weiterer Literatur haben viele Ergänzungen zur Kenntnis der Flechtenflora Irans gebracht. Die Ergebnisse werden in einer revidierten Liste präsentiert, welche 645 Taxa (590 lichenisierte und 55 lichenikole und verwandte Fungi) umfasst. Davon sind 242 Ergänzungen zur 2004 publizierten Liste. Zwei Neukombinationen und Lectotypifizierungen, für *Aspicilia persica* und *A. straussii*, wurden vorgenommen.

Evaluation of literature and collections made by Iranian researchers (SEAWARD et al. 2004) resulted in a list of 396 species of lichenized fungi and 8 species of lichenicolous or allied fungi for Iran; of these, 97 species were new for Iran, while some species not confirmed by recent collections had to be considered as doubtful. This preliminary checklist, including an outline of the historical background to lichenological studies in Iran and a comprehensive bibli-

ography, provided a useful foundation on which to build our knowledge of the Iranian lichen flora. Its publication stimulated lichenologists worldwide to draw our attention to earlier unworked collections (see below) and for Iranian lichenologists to extend their activities. We therefore felt that a further checklist was necessary, even though it appears only four years after the first.

Revisions to that checklist incorporated below are based on extensive work by the authors on further material provided by A. A. MAASSOUMI, M. HAJI MONIRI ANBARAN and the third author, and on a detailed examination of collections made by P. FURSE in 1964 and by the Hull University Expedition in 1968, now housed in the Natural History Museum in London (BM), by Reino ALAVA in 1972 and 1974, now housed in the Turku University Herbarium (TUR), by Pertti UOTILA in 1972, now housed in the Botanical Museum of the University of Helsinki (H) and by Per WENDELBO in 1959, now housed in the University of Bergen Herbarium (BG). Some important records relating to a visit to NW Iran by J. VONDRÁK in May 2007 have also been incorporated. Records from earlier published sources (e.g. RABENHORST 1871; GYELNIK 1931; POELT 1966a, 1966b; AHTI 1966; LAMB 1963, ESSLINGER 1977; SCHNEIDER 1979; POELT & LEUCKERT 1991; LITTERSKI & AHTI 2004) containing references to Iranian lichens have been found or were drawn to our attention and these, together with recent publications have been incorporated into the following checklist.

The checklist is based mainly on published records, but reference is made wherever possible to herbaria containing material to support these sources; to date, the following herbaria have been consulted: B, BG, BYU, BM, CBFS, DUKE, F, FUNH, H, NMW, O, TARI, TNS, TSB, TUR and UPS and the personal herbaria of M. SOHRABI (herb. SOHRABI) and M. R. D. SEAWARD (MRDS); previously unpublished records are provided for many taxa. However, it should be noted that further collections in some of these and other herbaria have yet to be examined.

It should be noted that inclusion of a species in this checklist does not automatically mean that it occurs with certainty in Iran. The list is largely compiled from published records, often of considerable age. These are sometimes based on outdated taxonomic concepts and include mistakes. Several of the listed taxa are unexpected or rarely reported, and in need of confirmation. However, this requires two conditions: 1. availability of herbarium vouchers; 2. presence of a monographic treatment for the group, based on modern characters and valid for the study region. While in some fortunate cases Iranian specimens were included in recent monographic revisions and provide now very valuable baseline material for the study of the lichen flora of Iran, in other cases no vouchers were made and it will probably forever remain unclear if the indicated species has occurred in Iran. Since in potentially problematic cases vouchers or modern treatments are often missing, no effort has been made to trace and investigate vouchers for these, or to set apart the more unlikely records. Conse-

quently the list contains numerous, more or less obvious, erroneous records. Only taxa confirmed by recent specimens can be considered as reliably recorded.

The infraspecific taxa used in older literature records to indicate slight deviations of specimens seem mostly of little taxonomic relevance. With growing knowledge it has become more practicable to distinguish between taxonomically significant and insignificant characters and in modern revisions these infraspecific taxa are either raised to species level or left unused. In the present list they have been treated provisionally as synonyms, when recent monographs do not indicate otherwise.

Key: Accepted taxa are in bold; synonyms used in published Iranian lichen records (not in bold) are provided; **L** = literature sources; **U** = previously unpublished records; \* = taxon additional to those listed in SEAWARD et al. (2004) – this reference is cited only under those taxa including new records; [**LF**] = lichenicolous fungus; [**F**] = other non-lichenized fungus.

\**Abrothallus caerulescens* KOTTE [**LF**] - **L**: SOHRABI & ALSTRUP (2007: electronic suppl.).

*Acarospora anatolica* H.MAGN. - **L**: SZATALA (1940: 524), (1957: 121).

*Acarospora bella* (NYL.) JATTA - **L**: SZATALA (1940: 524) & (1957: 121) as var. *raegeoti*.

*Acarospora bullata* ANZI - **L**: MÜLLER (1892: 155) as *Placodium microphthalmum*; STEINER (1910: 220) as *A. microphthalmum*; MAGNUSSON (1929: 360); SZATALA (1940: 524), (1957: 123); RIEDL (1979: 220); GOLUBKOVA (1981: 151), (1983: 127), (1988: 119).

*Acarospora cervina* A.MASSAL. - **L**: MÜLLER (1892: 154) as *Placodium cervinum*, (1892: 155) as var. *percaenum* and as f. *larvata*; STEINER (1910: 216) & (1916: 29) as *Acarospora percaena*, incl. f. *larvata*; MAGNUSSON (1929: 247); SZATALA (1940: 524) as f. *normalis* and as f. *larvata*, (1940: 525) as f. *leucospora* & f. *percaena* (1957: 122) also as f. *larvata*, f. *mammata*, f. *normalis* & f. *percaena*; BARKHALOV (1975: 127); GOLUBKOVA (1988: 95); SEAWARD et al. (2004: 544); SOHRABI (2005a: 105), (2005b: 77); MONIRI et al. (2005: 56); WASSER & NEVO (2005: 48) as *A. glaucocarpa* var.; SOHRABI & SIPMAN (2007: 88); CALATAYUD et al. (2007: 130).

*Acarospora coeruleoalba* J.STEINER **L**: STEINER (1910: 219) as var. *concreta*; MAGNUSSON (1929: 210); SZATALA (1940: 525), (1957: 122).

*Acarospora compacta* H.MAGN. **L**: SZATALA (1940: 525), (1957: 122); LAMB (1963: 3); GOLUBKOVA (1988: 85).

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- Acarospora elbursensis* H.MAGN. L: SZATALA (1940: 526), (1957: 123); LAMB (1963: 3); GOLUBKOVA (1988: 100).
- Acarospora fuscata* (SCHRAD.) TH.FR. - L: OXNER (1946: 82); SZATALA (1957: 123); GOLUBKOVA (1988: 103).
- Acarospora glaucocarpa* (ACH.) KÖRB. L: OXNER (1946: 83); BARKHALOV (1975:127); WASSER & NEVO (2005: 48) as *A. glaucocarpa* var. *conspersa*. U: KORDESTAN: 3 km SE of Bijar, c. 1850 m, on limestone rock, 11 Aug. 1968, Hull. Univ. Expedition [BM].
- Acarospora heufleriana* KÖRB. L: OXNER (1946: 82); GOLUBKOVA (1981: 141), (1983: 129, 161), (1988: 66).
- Acarospora laqueata* STIZENB. - L: SOHRABI (2005a: 105), (2005b: 77); SOHRABI & SIPMAN (2007: 88).
- \**Acarospora lavicola* J.STEINER U: RAZAVI KHORASAN: Zoshk towards Kang, 2200 m, on siliceous slate, 26 March 2003, HAJI MONIRI 1553 [MRDS 114049].
- Acarospora macrospora* (HEPP ex A.MASSAL.) BAGL. L: SZATALA (1957: 123); GOLUBKOVA (1988: 110).
- \**Acarospora modenensis* H.Magn. U: RAZAVI KHORASAN: 11 km on the road from Torbat-e Heydariyeh to Mashhad, 1730 m, 3 May 2003, MAAS-SOUMI, SOHRABI & SAFAVI 2372 [TARI, TSB].
- Acarospora murorum* A.MASSAL. - L: SZATALA (1957: 123); SEAWARD et al. (2004: 545).
- Acarospora nodulosa* (DUFOUR) HUE - L: VĚZDA (1978, Lich. Sel. Exs. 1561).
- Acarospora ochracea* (MÜLL.ARG.) H.MAGN. L: MÜLLER (1892: 155) as *Placodium cervinum* var. *ochraceum*; MAGNUSSON (1929: 249) as "*Acarospora cervina* var. *ochracea*" [probably *Aspicilia* sp.].
- Acarospora placentae* (EHRENB. ex NYL.) HUE - L: MÜLLER (1892: 155) as *Placodium interruptum* var. *nudum*; STEINER (1910: 218) as *Acarospora interrupta* var. *nuda*; MAGNUSSON (1929: 359); SZATALA (1940: 526), (1957: 124); GOLUBKOVA (1988: 118).
- \**Acarospora reagens* ZAHLBR. - L: WASSER & NEVO (2005: 51) as *A. nodulosa* var. U: GOLESTAN: Gorgan, Ag-galla-Inchaboron, around Allagol marsh, 50-200 m, on *Diploschistes diacapsis*, 2 Jan 2004, SOHRABI 1805 [F, herb. SOHRABI].
- \**Acarospora schleicheri* (ACH.) A.MASSAL. - L: GOLUBKOVA (1983: 135).
- Acarospora stappiana* (MÜLL.ARG.) HUE L: MÜLLER (1892: 154) as *Placodium stappianum*; MAGNUSSON (1929: 110); SZATALA (1940: 526), (1957: 121); WEBER

- (1968: 28); GOLUBKOVA (1983: 127); STEINER & POELT (1984: 566); GOLUBKOVA (1988: 75); SEAWARD et al. (2004: 545); MONIRY et al. (2005: 56).
- Acarospora strigata* (NYL.) JATTA - L: MÜLLER (1892: 155) as *Placodium interruptum*; MAGNUSSON (1929: 208); SZATALA (1940: 527); MAGNUSSON (1940: 74); SZATALA (1957: 123); RIEDL (1979: 220); GOLUBKOVA (1988: 87); SEAWARD et al. (2004: 545); MONIRY et al. (2005: 56); SOHRABI & SIPMAN (2007: 88). U: KORDESTAN: Bijar, c. 2000 m, on limestone, 8 Aug. 1968, Hull Univ. Expedition [BM].
- Acarospora subpruinata* J. STEINER - L: STEINER (1910: 219); MAGNUSSON (1929: 266); SZATALA (1957: 123); GOLUBKOVA (1988: 97). - U: KORDESTAN: Bijar, c. 1950 m, on limestone rock, 8 Aug. 1968, Hull Univ. Expedition [BM].
- Acarospora veronensis* A. MASSAL. - L: SZATALA (1957: 123); GOLUBKOVA (1988: 83).
- Acrocordia gemmata* (ACH.) A. MASSAL. - L: BUHSE (1860: 244) as *Verrucaria alba*; SZATALA (1957: 107) as *Arthopyrenia alba*; BARKHALOV (1975: 122) as *Acrocordia alba* and as *A. sphaeroides*; SEAWARD et al. (2004: 545).
- \**Anamylopsora pulcherrima* (VAIN.) TIMDAL U: NORTH KHORASAN: Ashkhaneh towards Golestan Forest, Nargesli, 2450 m, on calcareous rock, 15 March 2005, HAJI MONIRI 1908 [MRDS 114078]. RAZAVI KHORASAN: Chenaran, Akhlamad Valley, 1600 m, on calcareous rock, 17 Sept. 2002, HAJI MONIRI 1516 [MRDS 114086]. WEST AZERBAIJAN: Bazargan, SW of Bazargan Dedovly village, 1750 m, on stone, 10 Aug. 2002, SOHRABI & ALIZADEH 698 [B, TARI], 2409 [B, TARI].
- Anaptychia ciliaris* (L.) KÖRB. ex A. MASSAL. - L: BUHSE (1860: 241) as *Parmelia ciliaris*; SZATALA (1957: 153); WEBER (1964: 7); BARKHALOV (1975: 134); SOHRABI (2005a: 105), (2005b: 77). - U: NORTH KHORASAN: Ashkhaneh towards Golestan, Negesli, 2450 m, March 2005, HAJI MONIRI 1901a, 1901b [MRDS 113629, 113630].
- Anaptychia crinalis* (SCHRAD.) VĚZDA - L: BUHSE (1860: 241) as *Parmelia ciliaris crinalis*; SZATALA (1957: 153) as *A. ciliaris* var. *crinalis*; BARKHALOV (1975: 134) as *A. ciliaris* var. *crinalis*; SOHRABI (2005a: 105), (2005b: 77).
- \**Anaptychia desertorum* (RUPR.) POELT - L: SZATALA (1940: 533) as *Physcia muscigena* f. *lenta*; OXNER (1946: 84); SZATALA (1957: 153) as *Physcia caucasica*; POELT (1966b: 132); POELT & WUNDER (1970: 461); SEAWARD et al. (2004: 546) as *Anaptychia ulotrichoides*; SOHRABI (2005a: 105), (2005b: 77) as *A. ulotrichoides*; MONIRY et al. (2005: 56) as *A. ulotrichoides*; SOHRABI & SIPMAN (2007: 88) as *A. ulotrichoides*. U: EAST AZERBAIJAN: Jolfa, Hadishahr, Daran to Asiabkharabeh waterfall, 1200 m, on calcareous rocks, 2 June 2001,

- SOHRABI 1241 [UPS, herb. SOHRABI]. MAZANDARAN: Amol, Larijan, on roadside calcareous rocks, 4 June 2002, SOHRABI & PASHA 2612 [UPS, herb. SOHRABI]. NORTH KHORASAN: Salehabad road, Derazaab, Zaloo Mt, 10 April 2004, HAJI MONIRI 1731, 1738 [MRDS 114090, 113221]. RAZAVI KHORASAN: Gonabad, c. 21 km towards Ghaen, 1460 m, on calcareous rocks, 1 May 2003, MAASSOUMI, SOHRABI & SAFAVI 2304 [B, TARI].
- Anaptychia elbursiana* (SZATALA) POELT L: SZATALA (1940: 532) as *Physcia grisea* var. *elbursiana*, (1957: 152) as *Physcia elbursiana*; POELT (1966b: 132); POELT & WUNDER (1970: 461); VĚZDA (1974, Lich. Sel. Exs. 1224). - U: HAMDAN: foothills above Gholi-Abad, c. 60 km N of Hamadan, 1800 m, 7 July 1974, ALAVA 14745-c [TUR, sub *Aspicilia hispida*], 14749 [TUR]. KORDESTAN: Bijar, c. 2000 m, on limestone cliff, 12 Aug. 1968, Hull Univ. Expedition [BM].
- \**Anaptychia mereschkowskii* (TOMIN) KULAKOV U: RAZAVI KHORASAN: Gonabad, c. 21 km towards Ghaen, 1460 m, on calcareous rocks, 1 May 2003, MAASSOUMI, SOHRABI & SAFAVI 2304 [B, TARI].
- Anaptychia roemeri* POELT - L: SEAWARD et al. (2004: 546); MONIRY et al. (2005: 56). - U: RASAVI KHORASAN: between Torghabeh & Noghondar, 1450 m, on moss over calcareous soil, 1 May 2003, HAJI MONIRI 1624 [MRDS 113216].
- Anaptychia setifera* MERESCHK. ex RÄSÄNEN - L: GYELNIK (1931: 166) as *A. kaspica*; SZATALA (1957: 153) as *A. kaspica*; LAMB (1963: 29) as *A. kaspica*; SEAWARD et al. (2004: 546); SOHRABI & SIPMAN (2007: 88). - U: NORTH KHORASAN: Ashkhaneh towards Golestan Forest, Nargesli, 2450 m, on *Pyrus boissierianal* BOISS. & BUHSE, 15 March 2005, HAJI MONIRI 1897 [MRDS 114085].
- Anema decipiens* (A.MASSAL.) FORSELL - L: SZATALA (1940: 522), (1957: 110).
- Anema nummularium* (DURIEU & MONT.) NYL. - L: STEINER (1896: 437); SZATALA (1957: 110).
- \**Arthonia calcicola* NYL. U: ZANJAN: Qeydar, c. 35 km SW of Soltaniyeh, 1980-2200 m, rocky hillsides, 2 July 1974, ALAVA 14613 [TUR].
- Arthonia cinnabarina* (DC.) WALLR. - L: VĚZDA (1978, Lich. Sel. Exs. 1508); SEAWARD et al. (2004: 546); SOHRABI & SIPMAN (2007: 88).
- Arthonia depressula* J.STEINER - L: STEINER (1896: 442); SZATALA (1957: 107) as *Allarthonia depressula*.
- \**Arthonia dispersa* (SCHRAD.) NYL. U: MAZANDARAN: c. 5 km S of Mahmudabad, c. 5 m, on trunk of roadside *Salix*, 8 Aug. 1972, UOTILA 19253 [H].
- \**Arthonia endlicheri* (GAROV.) OXNER - L: SOHRABI & ORANGE (2006: 101).

- \**Arthonia galactinaria* LEIGHT. [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Arthonia intexta* ALMQ. [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Arthonia molendoi* (FRAUENF.) R.SANT. [LF] - U: ARDABIL: Nir Valley, SW of Ilanjuq, 1790 m, on *Caloplaca biatorina*, 3 May 2007, VONDRÁK [CBFS JV5639]. KORDESTAN: 3 km SE of Bijar, 1850 m, 11 Aug. 1968, Hull Univ. Expedition [BM]. WEST AZERBAIJAN: Shirin Bolagh, Lake Urmia, 1290 m, on *Caloplaca biatorina* on calcareous rock, 9 May 2007, VONDRÁK [CBFS JV5460, MRDS 114446].
- \**Arthonia muscigena* TH.FR. - L: SOHRABI & SIPMAN (2007: 88).
- \**Arthonia nideri* (J.STEINER) CLAUZADE, DIEDERICH & CL. ROUX [LF] - U: WEST AZERBAIJAN: Shirin Bolagh, Lake Urmia, 1290 m, on *Caloplaca transcaspica* on calcareous rock, 9 May 2007, VONDRÁK [CBFS JV5461, MRDS 114447].
- Arthonia radiata* (PERS.) ACH. - L: SZATALA (1957: 107) as var. *astroidea*; BARKHALOV (1975: 123); SEAWARD et al. (2005: 546).
- Arthonia ruderella* NYL. - L: SZATALA (1957: 107) as *Allarthonia ruderella*.
- \**Arthonia varians* (DAVIES) NYL. [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Arthopyrenia rhypona* (ACH.) A.MASSAL. [F] - L: BUHSE (1860: 244) as *Verrucaria rhypona aterrima*; SZATALA (1957: 107).
- Arthothelium spectabile* FLOT. ex A.MASSAL. - L: SEAWARD et al. (2004: 547).
- \**Arthrorhaphis aeruginosa* R.SANT. & TØNSBERG [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Aspicilia aschabadensis* (J.STEINER) MERESCHK. L: STEINER (1910: 227) as *Sphaerothallia aschabadensis*; SZATALA (1957: 130) as *Lecanora aschabadensis*.
- Aspicilia caesiascens* PISÚT - L: VĚZDA (1979, Lich. Sel. Exs. 1602).
- Aspicilia calcarea* (L.) KÖRB. L: STEINER (1896: 439) as *Lecanora calcarea* var. *concreta*; STEINER (1910: 224) as *Lecanora calcarea* var. *rauca* (nom. illeg.); SZATALA (1957: 126); BARKHALOV (1975: 127); SEAWARD et al. (2004: 547). U: NORTH KHORASAN: Ashkhaneh towards Golestan Forest, Darkesh, 1415 m, on calcareous rock, 29 March 2005, HAJI MONIRI 1995 [MRDS 114083].
- Aspicilia candida* (ANZI) HUE - L: SZATALA (1940: 527), (1957: 127); SEAWARD et al. (2004: 547); MONIRY et al. (2005: 56).

- \**Aspicilia cernohorskyana* (CLAUZADE & VĚZDA) ROUX - U: SOUTH KHORASAN: 18 km from Ghaen to Birjand, 1930 m, on rocks, 1 May 2003, MAASSOUMI, SOHRABI & SAFAVI 2311 [B, TARI].
- Aspicilia cheresina* (MÜLL.ARG.) HUE - L: STEINER (1896: 439) as *Lecanora cheresina*; STEINER (1910: 231) as *L. cheresiana* var. *granuligera* and as *L. microspora* & var. *punctulata*; SZATALA (1957: 128) also as *L. microspora* & var. *granuligera*, var. *astroidea* & var. *punctulata*.
- Aspicilia cinerea* (L.) KÖRB. - L: MÜLLER (1892: 157) as *Lecanora cinerea* var. *alba*; SZATALA (1957: 126) as *Aspicilia cinerea* var. *alba*; BARKHALOV (1975: 127); SOHRABI & SIPMAN (2007: 88).
- Aspicilia contorta* (HOFFM.) KREMP. L: SZATALA (1957: 127) as *A. viridescens*; SEAWARD et al. (2004: 547); SOHRABI & SIPMAN (2007: 88). U: ARDABIL: Namin, near Giladeh, 1350 m, on lime-rich outcrops, 4 May 2007, VONDRÁK [CBFS JV5843].
- Aspicilia contorta* ssp. *hoffmanniana* S.EKMAN & FRÖBERG - L: MÜLLER (1892: 157) as *Lecanora hoffmannii*; SZATALA (1957: 127) as *A. contorta* var. *hoffmannii*; SEAWARD et al. (2004: 547).
- Aspicilia coronata* (A.MASSAL.) B. DE LESD. - L: SZATALA (1940: 527), (1957: 127); DYANAT-NEJAD & KERAMEDINI (1993: 38); SEAWARD et al. (2004: 547).
- \**Aspicilia cupreogrisea* (TH.FR.) HUE U: MAZANDARAN: Ramsar, Javaherdeh, 2000 m, 21 Aug. 2002, MAASSOUMI 615 [B, TARI].
- Aspicilia desertorum* AUCT. L: KREMPELHUBER (1869: 603) as *Lecanora desertorum*; STEINER (1910: 224) as *Lecanora calcarea* var. *sphaerothallina*; SZATALA (1940: 527) also as *A. sphaerothallina*; OXNER (1946: 83); SZATALA (1957: 127) as *A. sphaerothallina*, (1957: 129) as *Sphaerothallia desertorum*; BARKHALOV (1975: 127); RIEDL (1979: 220); SEAWARD et al. (2004: 547). - U: KORDESTAN: Bijar, 2000 m, on limestone cliff, 12 Aug. 1968, Hull Univ. Expedition [BM]. THE-RAN: Nazarabad, 6 March 1973, SOJÁK [BM].
- Aspicilia esculenta* (PALL.) FLAGEY - L: EVERS-MANN (1825: 357) as *Lecanora esculenta*; GÖBEL (1830) as *Parmelia esculenta*; HUE (1892: 156) as *Lecanora esculenta*; STEINER (1910: 224) as *L. esculenta*; SZATALA (1957: 130) as *Sphaerothallia esculenta*; GOLUBKOVA (1983: 186). A forthcoming revision of the *Aspicilia esculenta* group by one of us (MS) suggests that all reports are erroneous and concern *A. desertorum*.
- Aspicilia excrescens* (J.STEINER) SZATALA L: STEINER (1910: 223) as *Lecanora calcarea* var. *excrescens*; SZATALA (1957: 126); RIEDL (1979: 220).



*Aspicilia farinosa* (FLÖRKE) ARNOLD - L: STEINER (1910: 224) as *Lecanora farinosa*; SZATALA (1957: 127, 136) as *Squamaria farinosa*, incl. var. *rauca*; SEAWARD (2004: 547); SOHRABI & SIPMAN (2007: 88).

*Aspicilia ferruginea* (J.STEINER) SZATALA - L: SZATALA (1957: 127).

\**Aspicilia hispida* MERESCHK. U: HAMADAN: foothills above Gholi-Abad, c. 60 km N of Hamadan, 1800 m, 7 July 1974, ALAVA 14745-c [TUR, sub *Anaptychia elbursiana*], 14749 [TUR].

\**Aspicilia intermutans* (NYL.) ARNOLD - L: BARKHALOV (1975: 127). - U: WEST AZERBAIJAN: Lake Urmia, c. 2 km N of Saraydeh, 1280 m, on base-rich siliceous rock, 7 May 2007, VONDRÁK [CBFS JV5824].

*Aspicilia jussufii* (LINK) MERESCHK. - L: RABENHORST (1871: 179) as *Chlorangium jussufii*.

\**Aspicilia lazarenkoi* OXNER - U: RAZAVI KHORASAN: Zoshk towards Kang, 2200 m, on slate, 26 March 2003, HAJI MONIRI 1582 [MRDS 113308].

\**Aspicilia oxneriana* O.B.BLUM - L: SOHRABI (2005a: 105) as *A. emiliae* TOMIN in error; SOHRABI (2005b: 77); SOHRABI & SIPMAN (2007: 89).

*Aspicilia persica* (MÜLL.ARG.) SOHRABI **comb. nov.** - **Basionym:** *Placodium persicum* MÜLL.ARG., *Hedwigia* **31**: 154. 1892; *Squamaria persica* (MÜLL.ARG.) SZATALA, *Ann. Hist.-Nat. Mus. Natl. Hung.*, ser. 2, **8**: 135. 1957. - **Lectotype** (designated here): Kuh Totschal, STAPF 1892 [Iran, Tehran: north of Tehran, Tochal mountain, 1700-2700 m.] (G 00110033!).

POELT (1958) indicated that the type consists of two different species of *Aspicilia*. This was confirmed by one of us (MS) and the specimen fitting best the original description is selected here as the lectotype. It is distinguished by a positive K-reaction (yellow to red) for the cortex and medulla, while the other species is K-. The lichenicolous fungus *Endococcus rugulosus* NYL. is present on the lectotype.

*Aspicilia polychroma* (ANZI) NYL. - L: SZATALA (1940: 527), (1957: 127).

*Aspicilia polychromoides* (J.STEINER) HUE L: STEINER (1910: 230) as *Lecanora polychromoides*, incl. f. *rubescens*; SZATALA (1940: 527), (1957: 127) incl. f. *rubescens*.

*Aspicilia straussii* (J.STEINER) SOHRABI **comb. nov.** - **Basionym:** *Lecanora fruticulosa* var. *straussii* J.STEINER, *Ann. Mycol.* **8**: 228. 1910; *Sphaerothallia straussii* (J.STEINER) SZATALA, *Ann. Hist.-Nat. Mus. Natl. Hung.*, ser. 2, **8**: 129. 1957; *Sphaerothallia straussii* (J. STEINER) FOLLMANN & CRESPO, *Anal. Inst. Bot. Cavanilles* **31**: 331. 1974 **comb. superf.** **Lectotype** (designated here): Khoh i se-

fid khane, Th. Strauss [?1908-1910; Iran, Markazi Province, mountains between Arak and Khoramabad] (H!).

*Aspicilia subcalcarea* (MÜLL.ARG.) SZATALA - L: SZATALA (1957: 127).

*Aspicilia trachytica* (A.MASSAL.) ARNOLD L: STEINER (1916: 32) as *Lecanora reticulata* var. *trachytica*; SZATALA (1957: 126).

*Aspicilia vagans* OXNER - L: CRUM (1993: 303).

\**Bacidia fraxinea* LÖNNR. U: GOLESTAN: Kordkooy, 5 km towards Radkan, 300-1800 m, mixed forest, 28 Jan. 2003, MAASSOUMI & SAFAVI 2011 [B, TARI]. MAZANDARAN: Sari, between Vanamak & Sarta, 400-1000 m, in broadleaf forest, 20 Dec. 2003, MAASSOUMI 2813 [B, TARI]; Tonekabon, She-hezar towards Lireh-sar, 400 m, in forest, 28 March 2003, MAASSOUMI 2121 [B, TARI], 2123 [B, TARI].

*Bacidia laurocerasi* (DELISE ex DUBY) ZAHLBR. - L: SZATALA (1940: 523) & (1957: 116) as *Bacidia atrogrisea*.

\**Bacidia polychroa* (TH.FR.) KÖRB. - U: GILAN: Asalem-Khalkhal road, Talesh, 1150 m, on Acer, 5 May 2007, VONDRÁK [CBFS JV5796].

*Bacidia rubella* (HOFFM.) A.MASSAL. - L: SEAWARD et al. (2004: 548).

*Bacidia subacerina* NYL. ex VAIN. - L: VĚZDA (1978, Lich. Sel. Exs. 1517).

*Bacidia tenax* (KREMP.) SZATALA - L: RABENHORST (1871: 178) as *Scoliciosporum tenax*; SZATALA (1957: 116).

*Bactrospora dryina* (ACH.) A.MASSAL. - L: SEAWARD et al. (2004: 548).

*Bellemerea cupreoatra* (NYL.) CLAUZADE & CL.ROUX - L: STEINER (1910: 222) as *Lecanora cupreoatra*; SZATALA (1940: 527) as *Aspicilia cupreoatra*; OXNER (1946: 83) as *A. cupreoatra*; SZATALA (1957: 126) as *A. cupreoatra*; BARKHALOV (1975: 127) as *A. cupreoatra*.

*Biatorrella ochrophora* (NYL.) ARNOLD - L: SOHRABI (2005a: 106), (2005b: 77).

*Bryoria capillaris* (ACH.) BRODO & D.HAWKSW. - L: SZATALA (1957: 140) as *Alectoria cana*; RAHNAMA et al. (2005: 69).

*Bryoria* cf. *fuscescens* (GYELN.) BRODO & D.HAWKSW. L: BUHSE (1860: 240) as *Bryopogon jubatus* Link; SZATALA (1957: 140) as *Alectoria jubata*; BARKHALOV (1975: 130) as *Alectoria jubata*.

\**Bryoria nadvornikiana* (GYELN.) BRODO & D.HAWKSW. - L: SOHRABI & ALSTRUP (2007: electronic suppl.).

\**Buellia badia* (FR.) A.MASSAL. - L: SOHRABI & ALSTRUP (2007: electronic suppl.).

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- \**Buellia disciformis* (FR.) MUDD - L: BUHSE (1860: 243) as *Lecidea parasema* y *saprophila*; SZATALA (1957: 148) as *Buellia disciformis* var. *saprophila*; BARKHALOV (1975: 132).
- Buellia meiosperma* (NYL.) MÜLL.ARG. - L: STEINER (1916: 38) as *B. subdisciformis* var. *meiosperma*; SZATALA (1957: 149) as *B. subdisciformis* var. *meiosperma*.
- Buellia retrovertens* TUCK. - L: WEBER (1964: 7).
- Buellia subalbula* (NYL.) MÜLL.ARG. - L: RIEDL (1979: 220).
- \**Buellia subdisciformis* (LEIGHT.) VAIN. U: ARDABIL: Namin, near Giladeh, 1350 m, on lime-rich rock, 4 May 2007, VONDRÁK [CBFS JV5703].
- Buellia zoharyi* GALUN - L: SEAWARD et al. (2004: 258).
- \**Calicium quercinum* PERS. - L: BARKHALOV (1975: 123).
- Caloplaca aegyptiaca* (MÜLL.ARG.) J.STEINER [syn. *C. circumalbata* (DELISE) WUNDER] - L: STEINER (1895: 438, 445) & (1910: 238) as *Caloplaca variabilis* var. *candida*, (1896: 439) as *C. interveniens*, (1910: 238) as *C. aegyptiaca* var. *inspersa*; SZATALA (1940: 530, 531) as *Placodium inspersum*, (1957: 143) as *P. aegyptiacum* incl. var. *ochraceum* and as *P. inspersum*, (1957: 144) as *P. interveniens* and as *P. variabile* var. *candidum*; WUNDER (1974: 56, 61, 64) as *Caloplaca circumalbata*; RIEDL (1979: 220) as *C. aegyptiaca*.
- \**Caloplaca albopruinosa* (ARNOLD) H.OLIVIER U: WEST AZERBAIJAN: on calcareous rock, Shirin Bolagh, Lake Urmia, 1290 m, on calcareous rock, 9 May 2007, VONDRÁK [CBFS JV5339].
- Caloplaca alociza* (A.MASSAL.) MIG. L: STEINER (1910: 238) as *C. variabilis* f. *acrustacea*; SZATALA (1957: 144) as *Placodium variabile* var. *acrustaceum*; PURVIS et al. (1992: 145); SEAWARD et al. (2004: 549); MONIRY et al. (2005: 56); WASSER & NEVO (2005: 87). U: WEST AZERBAIJAN: Shirin Bolagh, Lake Urmia, 1290 m, on limestone outcrop, 9 May 2007, VONDRÁK [CBFS JV5579].
- Caloplaca aurantia* (PERS.) HELLB. - L: MÜLLER (1892: 153) as *Amphiloma aurantium*; STEINER (1896: 438, 445); SZATALA (1957: 145) as *Gasparrinia aurantia*; SOHRABI & SIPMAN (2007: 89).
- Caloplaca biatorina* (A.MASSAL.) J.STEINER - L: STEINER (1910: 239) also as var. *pusilloides*; STEINER (1910: 240), (1916: 37) as *Caloplaca biatorina* var. *sympecta*; SZATALA (1940: 531) & (1957: 145) as *Gasparrinia biatorina*; SZATALA (1940: 531) & (1957: 146) as *Gasparrinia biatorina* var. *sympecta*; SZATALA (1954: 137) as *G. biatorina* var. *centrifuga*, (1957: 145) as *G. biatorina* var. *centrifuga*, (1957: 146) as *Gasparrinia gyalolechioides* and as *Gasparrinia biatorina* var. *pusilloides*; RIEDL (1979: 220); SEAWARD et al. (2004: 549). - U: ARDABIL: Nir Valley, SW of Ilan-juq, 1790 m, 3 May 2007, on siliceous rock, VONDRÁK [CBFS JV5640]. KOR-

- DESTAN: Bijar, 2000 m, on limestone cliff, 12 Aug. 1968, Hull Univ. Expedition [BM]. WEST AZERBAIJAN: Shirin Bolagh, Lake Urmia, 1290 m, on volcanic rock, 6 May 2007, VONDRÁK [CBFS JV5460, MRDS 114446 sub *Arthonia molendoi*].
- Caloplaca bullata* (MÜLL.ARG.) ZAHLBR. - L: MÜLLER (1892: 156) as *Callospisma bullatum*; SZATALA (1957: 144) as *Placodium bullatum*; WUNDER (1974: 120) as *Caloplaca variabilis* var. *bullata*. - U: WEST AZERBAIJAN: c. 2 km N of Saraydeh, Lake Urmia, 1280 m, on base-rich siliceous rock, 7 May 2007, VONDRÁK [CBFS JV5556].
- \**Caloplaca canariensis* (FOLLMANN & POELT) BREUSS - U: WEST AZERBAIJAN: peninsula between Aq Gonbad & Gamichi, Lake Urmia, 1370 m, on volcanic rock, 6 May 2007, VONDRÁK [CBFS JV5569].
- Caloplaca cerina* (EHRH. ex HEDW.) TH.FR. - L: OXNER (1946: 83); SZATALA (1940: 530) as var. *ehrharti*; SZATALA (1957: 142) as *Placodium cerinum*, incl. var. *cyanoleprum*, f. *dispersum* and f. *flavum*; BARKHALOV (1975: 131), (1975: 132) as *Caloplaca stillicidiorum*; SOHRABI (2005a: 106), (2005b: 77); SEAWARD et al. (2004: 549); SOHRABI & SIPMAN (2007: 89). U: GILAN: Asalem-Khalkhal road, Talesh, c. 1640 m, on *Fagus orientalis* Lipsky, 6 May 2007, VONDRÁK [CBFS JV5612].
- Caloplaca chalybeia* (FR.) MÜLL.ARG. - L: SEAWARD et al. (2004: 549); MONIRY et al. (2005: 56).
- \**Caloplaca chrysojeta* (VAIN. ex RÄSÄNEN) DOMBR. L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Caloplaca chrysophthalma* DEGEL. U: ARDABIL: Asalem-Khalkhal road, Hashtpar, 1640 m, on *Fagus orientalis*, 6 May 2007, VONDRÁK [CBFS JV5565].
- \**Caloplaca cirrhochroa* (ACH.) TH.FR. L: ZOKAEI (2003: 145). U: ARDABIL: Asalem-Khalkhal road, Khalkhal, 1900 m, on base-rich siliceous rock, 6 May 2007, VONDRÁK [CBFS JV5589].
- \**Caloplaca conversa* (KREMP.) JATTA U: ARDABIL: near Giladeh, Namin, 1350 m, on base-rich siliceous rock, 4 May 2007, VONDRÁK [CBFS JV5553]. GILAN: Asalem-Khalkhal road, Hashtpar, c. 1640 m, on siliceous stones & pebbles, 6 May 2007, VONDRÁK [CBFS JV5538].
- \**Caloplaca crenularia* auct. non (WITH.) LAUNDON U: ARDABIL: Asalem-Khalkhal road, Khalkhal, 1900 m, on siliceous rock, 6 May 2007, VONDRÁK [CBFS JV5608]. GILAN: Talesh, near Khotbeh Sara, 30 m, on coastal base-rich siliceous outcrops, 5 May 2007, VONDRÁK [CBFS JV5724].

- \**Caloplaca crenulatella* (NYL.) H.OLIVIER - U: ARDABIL: near Giladeh, Namin, 1350 m, on base-rich rock, 4 May 2007, VONDRÁK [CBFS JV5584]. EAST AZERBAIJAN: Jofra, Daran to Asiabkharabeh waterfall, 1200-1300 m, on calcareous rocks, 21 May 2001, SOHRABI & REZA SOHRABI 1239 [KW, herb. SOHRABI]. WEST AZERBAIJAN: Peninsula between Aq Gonbad & Gamichi, Lake Urmia, 1280 m, on lime-rich rock, 8 May 2007, VONDRÁK [CBFS JV5682].
- Caloplaca deceptoria* (FLAGEY) J.STEINER - L: SZATALA (1957: 146) as *Gasparrinia deceptoria*.
- Caloplaca decipiens* (ARNOLD) BLOMB. & FORSELL - L: STEINER (1910: 239) as f. *corticola*, (1916: 37); SZATALA (1940: 531) as *Gasparrinia decipiens*; OXNER (1946: 83); SZATALA (1957: 145) as *G. decipiens* & f. *corticola*; BARKHALOV (1975: 132); PURVIS et al. (1992: 151); SEAWARD et al. (2004: 549); SOHRABI & SIPMAN (2007: 89). - U: ARDABIL: near Giladeh, Namin, 1350 m, on base-rich rock, 4 May 2007, VONDRÁK [CBFS JV5592]. KORDESTAN: Bijar, 1950 m, on limestone outcrop, 8 Aug. 1968, Hull Univ. Expedition [BM]. WEST AZERBAIJAN: Peninsula between Aq Gonbad & Gamichi, Lake Urmia, 1370 m, on lime-rich rock, 6 May 2007, VONDRÁK [CBFS JV5754].
- Caloplaca diphyodes* (NYL.) JATTA L: STEINER (1910: 238) as *C. variabilis* var. *lecideina*; SZATALA (1957: 144) as *Placodium variabile* var. *lecideinum*; WUNDER (1974: 89).
- \**Caloplaca erodens* TRETIACH & PINNA U: KORDESTAN: 3 km SE of Bijar, 1950 m, on limestone rock, 11 Aug. 1968, Hull Univ. Expedition [BM]. WEST AZERBAIJAN: Shirin Bolagh, Lake Urmia, 1290 m, on calcareous rock, 6 May 2007, VONDRÁK [CBFS JV5142 sub *Polysporina pusilla*].
- \**Caloplaca ferrugineoides* (NYL.) H.MAGN. - U: WEST AZERBAIJAN: Lake Urmia, coast W of Burachalu, 1280 m, on woody stems of *Artemisia* and *Astragalus*, 7 May 2007, VONDRÁK [CBFS JV5785].
- \**Caloplaca flavocitrina* (NYL.) H.OLIVIER [S.LAT.] - U: ARDABIL: near Giladeh, Namin, 1350 m, on base-rich rock, 4 May 2007, VONDRÁK [CBFS JV5568]. GILAN: Astara, coast near Haviq, on concrete, 5 May 2007, VONDRÁK [CBFS JV5800]. WEST AZERBAIJAN: Peninsula between Aq Gonbad & Gamichi, Lake Urmia, 1370 m, on lime-rich rock, 6 May 2007, VONDRÁK [CBFS JV5776].
- Caloplaca flavorubescens* (HUDS.) J.R.LAUNDON L: PURVIS et al. (1992: 151); SEAWARD et al. (2004: 550); SOHRABI & SIPMAN (2007: 89). - U: ARDABIL: Asalem-Khalkhal road, 1900 m, on shrub twigs, 6 May 2007, VONDRÁK [CBFS JV5535]. GILAN: river valley, Asalem-Khalkhal road, Hashtpar, 170 m, on *Swida*, 5 May 2007, VONDRÁK [CBFS JV5599].

- Caloplaca flavovirescens* (WULFEN) DALLA TORRE & SARNTH. var. *persica* SZATALA - L: MÜLLER (1892: 156) as *Callopisma aurantiacum* var. *erythrellum*; SZATALA (1940: 531), (1954: 137) & (1957: 143) as *Placodium velanum* var. *persicum*; SEAWARD et al. (2004: 550). - U: ARDABIL: near Giladeh, Namin, 1350 m, on base-rich siliceous rock, 4 May 2007, VONDRÁK [CBFS JV5537].
- \**Caloplaca fuscoatroides* J.STEINER U: KORDESTAN: 20 km SW of Bijar, 2250 m, on pumice cliff, 17 Aug. 1968, Hull Univ. Expedition [BM]. HAMA-DAN: N-facing slopes above Takht Mt, 2150-2250 m, 5 July 1974, ALAVA 14724 [TUR, sub *Lecidea atrobrunnea*].
- \**Caloplaca grimmiae* (NYL.) H.OLIVIER [LF] - U: WEST AZERBAIJAN: c. 2 km N of Saraydeh, Lake Urmia, 1280 m, on *Candelariella vitellina* on siliceous rock, 7 May 2007, VONDRÁK [CBFS JV5595].
- \**Caloplaca haematites* (ST-AMANS) ZWACKH - L: SOHRAÏI & SIPMAN (2007: 89).
- Caloplaca holocarpa* (HOFFM.) A.E.WADE - L: STEINER (1896: 438) as *C. pyracea* var. *pyrithroma*; SZATALA (1940: 531) as *C. pyracea*, (1957: 143) as *Placodium pyraceum*, incl. var. *pyrithromum*, (1957: 143) as *P. pyraceum* var. *muscolica*; BARKHALOV (1975: 132) as *Caloplaca pyracea*; PURVIS et al. (1992: 153); SEAWARD et al. (2004: 550); SOHRAÏI & SIPMAN (2007: 89). - U: WEST AZERBAIJAN: Lake Urmia, peninsula between Aq Gonbad & Gamichi, 1370 m, on siliceous rock, 6 May 2007, VONDRÁK [CBFS JV5784].
- \**Caloplaca hungarica* H.MAGN. - U: GILAN: Asalem, Talesh, on *Cerasus* in old orchard, c. 40 m, 5 May 2007, VONDRÁK [CBFS JV5723].
- \**Caloplaca inconnexa* (NYL.) ZAHLBR. U: ARDABIL: near Giladeh, Namin, 1350 m, on base-rich rock, 4 May 2007, VONDRÁK [CBFS JV5574]. WEST AZERBAIJAN: Shirin Bolagh, Lake Urmia, 1290 m, on calcareous rock, 9 May 2007, VONDRÁK [CBFS JV5444].
- \**Caloplaca interfulgens* (NYL.) J.STEINER - U: WEST AZERBAIJAN: Lake Urmia, Shirin Bolagh, 1290 m, on calcareous rock, 9 May 2007, VONDRÁK [CBFS JV5777].
- Caloplaca lactea* (A.MASSAL.) ZAHLBR. - L: MÜLLER (1892: 156) as *C. pyraceum* var. *lacteum*; SZATALA (1957: 142) as *Placodium lacteum*; RIEDL (1979: 220); WASSER & NEVO (2005: 103).
- Caloplaca lacteoides* NAV.-ROS. & HLADUN U: GOLESTAN: c. 20 km from Eslamabad to Ashkane, 615 m, on calcareous rock, 21 Jan. 2003, MAASSOUMI & SAFAVI 1954 [B, TARI]. WEST AZERBAIJAN: Lake Urmia, Shirin Bolagh, 1290 m, on limestone outcrop, 9 May 2007, VONDRÁK [CBFS JV5715].

- \**Caloplaca lobulata* (FLÖRKE) HELLB. L: BARKHALOV (1975: 132); SOHRABI & SIPMAN (2007: 89).
- Caloplaca luteoalba* (TURNER) TH.FR. L: SZATALA (1957: 142) as *Placodium luteoalbum*; PURVIS et al. 1992: 154; SEAWARD et al. (2004: 550); SOHRABI (2005b: 77); WASSER & NEVO (2005: 104).
- Caloplaca marmorata* (BAGL.) JATTA - L: SZATALA (1940: 531) as *C. lactea* var. *laetior*; (1957: 142) as *Placodium lacteum* f. *laetior*; NAVARRO-ROSINÉS & HLA-DUN (1996: 163); WASSER & NEVO (2005: 105). - U: WEST AZERBAIJAN: Lake Urmia, Shirin Bolagh, 1290 m, on calcareous rock, 9 May 2007, VONDRÁK [CBFS JV5778].
- \**Caloplaca mogoltanica* S.KONDR. & KUDRATOV U: WEST AZERBAIJAN: Lake Urmia, W of Burachalu, 1280 m, on base-rich siliceous rock, 7 May 2007, VONDRÁK [CBFS JV5690].
- Caloplaca nideri* J.STEINER - L: STEINER (1910: 239); SZATALA (1957: 146) as *Gasparrinia nideri*.
- Caloplaca persica* (J.STEINER) M.STEINER & POELT - L: STEINER (1910: 241) as *Xanthoria polycarpoides* var. *persica*, (1916: 37) as *X. polycarpoides* var. *persica*; SZATALA (1957: 148); STEINER & POELT (1982: 168, 173); SOHRABI (2005a: 106), (2005b: 78); SOHRABI & SIPMAN (2007: 89). - U: KORDESTAN: Bijar, c. 1850 m, on *Prunus*, 12 Aug. 1968, Hull Univ. Expedition [BM].
- \**Caloplaca pollinii* (A.MASSAL.) JATTA - U: GILAN: Asalem, Hashtpar, 10 m, on *Cerasus* in old orchard, 5 May 2007, VONDRÁK [CBFS JV5597].
- Caloplaca polycarpoides* (J.STEINER) M.STEINER & POELT - L: STEINER (1910: 241) as *Xanthoria polycarpoides*; SZATALA (1957: 148) as *X. polycarpoides*; STEINER & POELT (1982: 169, 175); SEAWARD et al. (2004: 55); SOHRABI (2005b: 78); SOHRABI & SIPMAN (2007: 89). U: ARDABIL: river valley N of Khalkhal, 1680 m, on *Populus*, 6 May 2007, VONDRÁK [CBFS JV5541].
- \**Caloplaca pyracea* (ACH.) TH.FR. - U: ARDABIL: river valley, SW of Ilanjuq, Nir, 1790 m, on shrub twigs, 3 May 2007, VONDRÁK [CBFS JV5548]. GILAN: Asalem-Khalkhal road, Hashtpar, 1640 m, on *Fagus orientalis*, 6 May 2007, VONDRÁK [CBFS JV5545].
- Caloplaca salicina* (SCHRAD.) SZATALA - L: SZATALA (1957: 143) as *Placodium salicinum*.
- Caloplaca saxicola* (HOFFM.) NORDIN [S.LAT.] - L: MÜLLER (1892: 153) as *Amphiloma murorum* var. *gyalolechioides*, var. *miniaturum* & var. *obliteratum*; MÜLLER (1892: 153) as *A. murorum* var. *aurantiacum*; OXNER (1946: 83) as *Caloplaca tegularis*; SZATALA (1957: 146) as *Gasparrinia miniata*, incl. f. *obliterata*; SZATALA (1957: 146) as *G. murorum* f. *aurantia*; BARKHALOV (1975: 132) as *Caloplaca*

- murorum* and as *C. tegularis*; ZOKAEI & ABADI (2000: 7); ZOKAEI (2003: 141). - U: ARDABIL: Asalem-Khalkhal road, Khalkhal, 1900 m, on base-rich siliceous rock, 6 May 2007, VONDRÁK [CBFS JV5571]. KORDESTAN: Bijar, c. 2750 m, on limestone cliff, 12 Aug. 1968, Hull Univ. Expedition [BM]. WEST AZERBAIJAN: Peninsula between Aq Gonbad & Gamichi, Lake Urmia, 1370 m, on lime-rich rock, 6 May 2007, VONDRÁK [CBFS JV5756].
- \**Caloplaca schistidii* (ANZI) ZAHLBR. U: KORDESTAN: Bijar, c. 1850 m, on rock in dry stream, 12 Aug. 1968, Hull Univ. Expedition [BM]. ZANJAN: hills above Dashti, Qeydar, c. 35 km SW of Soltaniyeh, 2200-2600 m, 3 July 1974, ALAVA 14669 [TUR].
- \**Caloplaca schoeferi* POELT - U: RAZAVI KHORASAN: between Torbat-e Heydariyeh & Mashhad, around Robot-e Sefid, 1740 m, on rocks, 3 May 2003, MAASSOUMI, SOHRABI & Safaavi 2385 [B, TARI].
- \**Caloplaca soralifera* VONDRÁK & HROUZEK - U: ARDABIL: Khalkhal, Asalem-Khalkhal road, 1900 m, on nutrient-rich siliceous outcrop, 6 May 2007, VONDRÁK [CBFS JV5681].
- \**Caloplaca sororicida* M.STEINER & POELT [LF] - U: WEST AZERBAIJAN: Shirin Bolagh, Lake Urmia, 1290 m, on *Caloplaca transcaspica* on calcareous rock, 9 May 2007, VONDRÁK [CBFS JV5428, MRDS 114445].
- \**Caloplaca stillicidiorum* (VAHL) LYNGE - U: ARDABIL: Asalem-Khalkhal road, Khalkhal, 1900 m, on base-rich siliceous rock, 6 May 2007, VONDRÁK [CBFS JV5546]. WEST AZERBAIJAN: peninsula between Aq Gonbad and Gamichi, Lake Urmia, 1370 m, on mosses on base-rich siliceous rock, 6 May 2007, VONDRÁK [CBFS JV5602].
- \**Caloplaca subpallida* H.MAGN. [syn. *C. oxfordensis* FINK ex J.HEDRICK] U: ARDABIL: river valley SW of Ilanjuq, Nir, 1790 m, on siliceous rock, 3 May 2007, VONDRÁK [CBFS JV5606]. WEST AZERBAIJAN: N of Aq Gonbad, Lake Urmia, 1290 m, on base-rich siliceous rock, 8 May 2007, VONDRÁK [CBFS JV5428, MRDS 114445].
- \**Caloplaca subsoluta* (NYL.) ZAHLBR. [syn. ? *C. irrubescens* (ARNOLD) ZAHLBR.] - U: ARDABIL: Asalem-Khalkhal road, Khalkhal, 1900 m, on base-rich siliceous rock, 6 May 2007, VONDRÁK [CBFS JV5610]. GILAN: Salsal ruin, Lisar, Hashtpar, 30 m, on siliceous stone, 4 May 2007, VONDRÁK [CBFS JV5581].
- Caloplaca teicholyta* (ACH.) J.STEINER - L: SEAWARD et al. (2004: 550); SOHRABI & SIPMAN (2007: 89). - U: WEST AZERBAIJAN: Lake Urmia, c. 2 km N of Saraydeh, 1280 m, on base-rich siliceous rock, 7 May 2007, VONDRÁK [CBFS JV5802].



- \**Caloplaca thuringiaca* SÖCHTING & STORDEUR - U: ARDABIL: river valley, N of Khalkhal, 1680 m, on *Astragalus*, 6 May 2007, VONDRÁK [CBFS JV5536]. WEST AZERBAIJAN: c. 2 km N of Saraydeh, Lake Urmia, 1280 m, on shrub twigs, 7 May 2007, VONDRÁK [CBFS JV5558].
- Caloplaca trachyphylla* (TUCK.) ZAHLBR. - L: ZOKAEI & KHAZAI (1999: 91); SEAWARD et al. (2004: 550). - U: ARDABIL: Valley N of Khalkhal, 1680 m, on siliceous rock, 6 May 2007, VONDRÁK [CBFS JV5741]. KORDESTAN: Bijar, 2000 m, at base of limestone cliff, 12 Aug. 1968, Hull Univ. Expedition [BM]. WEST AZERBAIJAN: Lake Urmia, c. 2 km N of Saraydeh, 1280 m, on base-rich siliceous rock, 7 May 2007, VONDRÁK [CBFS JV5734].
- Caloplaca transcaspica* (NYL.) ZAHLBR. - L: MAGNUSSON (1940: 136) as *Caloplaca paulsenii*; WUNDER (1974: 94) as *Caloplaca paulsenii*; SEAWARD et al. (2004: 550); MONIRY et al. (2005: 56); SOHRABI & SIPMAN (2007: 89). - U: WEST AZERBAIJAN: Shirin Bolagh, Lake Urmia, 1290 m, on calcareous rock, 9 May 2007, VONDRÁK [CBFS JV5428, MRDS 114445 sub *C. sororicida*, 114447 sub *Arthonia nideri*].
- \**Caloplaca ulcerosa* COPPINS & P.JAMES - U: GILAN: Astara, coast near Haviq, on *Populus*, 5 May 2007, VONDRÁK [CBFS JV5699].
- Caloplaca variabilis* (PERS.) MÜLL.ARG. L: MÜLLER (1892: 156) as *Callopisma variabile*; STEINER (1896: 438); SZATALA (1957: 144) as *Placodium paepalostomum* & *P. variabile*; WUNDER (1974: 113); BARKHALOV (1975: 132); RIEDL (1979: 220); PURVIS et al. (1992: 158); WASSER & NEVO (2005: 111). - U: WEST AZERBAIJAN: Lake Urmia, coast W of Burachalu, 1280 m, on base-rich siliceous rock, 7 May 2007, VONDRÁK [CBFS JV5695].
- Caloplaca velana* (A.MASSAL.) DU RIETZ - L: MÜLLER (1892: 156) as *Callopisma aurantiacum*; SZATALA (1957: 143) as *Placodium velanum*, incl. var. *placidium*.
- Caloplaca xantholyta* (NYL.) JATTA - L: SEAWARD et al. (2004: 551).
- \**Caloplaca xerica* POELT & VĚZDA - U: ARDABIL: river valley SW of Ilanjuq, Nir, 1790 m, on base-rich siliceous rock, 3 May 2007, VONDRÁK [CBFS JV5607]. WEST AZERBAIJAN: Bandar-e-Rahmanlu, Lake Urmia, 1290 m, on hard, base-rich soil, 8 May 2007, VONDRÁK [CBFS JV5552].
- Candelaria concolor* (DICKS.) STEIN - L: WEBER (1964: 5); SEAWARD et al. (2004: 551); SOHRABI & SIPMAN (2007: 89).
- \**Candelariella antennaria* RÄSÄNEN U: WEST AZERBAIJAN: c. 2 km N of Saraydeh, Lake Urmia, 1280 m, on shrub twigs, 7 May 2007, VONDRÁK [CBFS JV5559].

*Candelariella aurella* (HOFFM.) ZAHLBR. - L: MÜLLER (1892: 151) as *Candelaria subsimilis*; STEINER (1910: 237) as *Candelariella subsimilis* incl. f. *alpina*; OXNER (1946: 83); SZATALA (1940: 530), (1957: 139) also as var. *decolorans*; BARKHALOV (1975: 129); RIEDL (1979: 220); SEAWARD et al. (2004: 551); MONIRY et al. (2005: 56); SOHRABI & SIPMAN (2007: 89). - U: RAZAVI KHORASAN: Zoshk towards Kang, 2200 m, on plant debris, 26 March 2003, HAJI MONIRI 1606 [MRDS 113215].

*Candelariella oleifera* H.MAGN. - L: SEAWARD et al. (2004: 551).

*Candelariella placodizans* (NYL.) H.MAGN. - L: SZATALA (1957: 139).

\**Candelariella plumbea* POELT & VĚZDA - U: LORESTAN: slopes of river valley near Dorud, 58 km W of Aligudarz on road to Kali Kuh, 2300 m, 14 June 1974, ALAVA 14563-a [TUR].

\**Candelariella rhodax* POELT & VĚZDA - U: FARS: Bolhayat Pass, between Shiraz & Kazeroun, 1730 m, on flat calcareous rock, 6 Nov. 2003, MAASSOUMI & SAFAVI 2720 [B, TARI]. NORTH KHORASAN: Bujnourd, towards Sisab station, 1070 m, on calcareous rock, 3 May 2003, MAASSOUMI, SOHRABI & SAFAVI 2423 [B, TARI]; Gonabad, c. 21 km towards Ghaen, 1460 m, on calcareous rocks, 1 May 2003, MAASSOUMI, SOHRABI & SAFAVI 2297 [B, TARI]. WEST AZERBAIJAN: Lake Urmia, peninsula between Aq Gonbad & Gamici, 1370 m, on lime-rich rock, 6 May 2007, VONDRÁK [CBFS JV5755].

*Candelariella unilocularis* AÛCT. non (ELENKIN) NIMIS - L: SZATALA (1940: 530) as *C. aurella* var. *unilocularis* (1957: 139) as *C. aurella* var. *unilocularis*. U: KORDESTAN: Bijar, 1850 m, on *Prunus*, 12 Aug. 1968, Hull Univ. Expedition [BM].

*Candelariella vitellina* (HOFFM.) MÜLL.ARG. L: BARKHALOV (1975: 129); SEAWARD et al. (2004: 551); SOHRABI (2005a: 106), (2005b: 78); SOHRABI & SIPMAN (2007: 89). - U: KORDESTAN: Bijar, 2000 m, at base of limestone cliff, 12 Aug. 1968, Hull Univ. Expedition [BM].

*Candelariella xanthostigma* (ACH.) LETTAU - L: OXNER (1946: 83); BARKHALOV (1975: 129) as *C. vitellina* var. *xanthostigma*; WASSER & NEVO (2005: 120).

\**Catapyrenium cinereum* (PERS.) KÖRB. - L: SOHRABI & ALSTRUP (2007: electronic suppl.).

*Catillaria chalybeia* (BORRER) A.MASSAL. - L: SZATALA (1940: 523) as *Thalloidima rechingeri*, (1957: 117) as *T. rechingeri*; TIMDAL (1991: 128); SOHRABI & ALSTRUP (2007: electronic suppl.).

*Catillaria detractula* (NYL.) H.OLIVIER - L: STEINER (1896: 440) as *Lecania detractula*; SZATALA (1957: 138) as *L. detractula*.

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- \**Catillaria nigroclavata* (NYL.) SCHULER U: GILAN: Talish, towards Marain village, 1123 m, 2 Sept. 2002, SAFAVI & SOHRABI 1095b [B, TARI].
- Cercidospora epipolytropa* (MUDD) ARNOLD [LF] L: STEINER (1896: 445); HAFELLNER & JOHN (2006: 161) as *indet.*
- \**Cercidospora macrospora* (ULOTH) HAFELLNER & NAV.-ROS. [LF] U: KORDESTAN: Bijar, c. 2000 m, 12 Aug. 1968, Hull Univ. Expedition [BM].
- \**Cetraria islandica* (L.) ACH. - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Cetraria steppae* (SAVICZ) KÄRNEFELT - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Cetrelia cetrarioides* (DUBY) W.L.CULB. & C.F.CULB. - L: SOHRABI et al. (2007: 22).
- Cetrelia olivetorum* (NYL.) W.L.CULB. & C.F.CULB. L: SEAWARD et al. (2004: 552); SOHRABI et al. (2007: 22).
- \**Chaenotheca furfuracea* (L.) TIBELL - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Chrysothrix candelaris* (L.) J.R.LAUNDON - L: SEAWARD et al. (2004: 552).
- Cladonia awasthiana* AHTI & UPRETI L: SEAWARD et al. (2004: 552); AHTI & SOHRABI (2006: 140); AWASTHI (2007: 87).
- Cladonia caespiticia* (PERS.) FLÖRKE - L: SEAWARD et al. (2004: 552); LITTERSKI & AHTI (2004: 210); AHTI & SOHRABI (2006: 140).
- \**Cladonia cariosa* (ACH.) SPRENG. - L: AHTI & SOHRABI (2006: 140).
- \**Cladonia chlorophaea* (FLÖRKE ex SOMMERF.) SPRENG. U: NORTH KHORASAN: Ashkhaneh towards Golestan forest, Darkesh, 1130 m, March 2005, HAJI MONIRI 2021 [MRDS 113642].
- \**Cladonia coniocraea* (FLÖRKE) SPRENG. L: RAHNAMA et al. (2005: 74) as *C. conicraea* [sic]; AHTI & SOHRABI (2006: 140).
- Cladonia convoluta* (LAM.) ANDERS - L: BUHSE (1860: 242) as *C. alvicornis endiviaefolia*; SZATALA (1957: 118) as *C. foliacea* var. *convoluta*; BARKHALOV (1975: 126); LITTERSKI & AHTI (2004: 211); AHTI & SOHRABI (2006: 141). - U: MAZANDARAN: near Mahmudabad, 21 Mar 1964, FURSE [BM].
- Cladonia farinacea* (VAIN.) A.EVANS - L: SEAWARD et al. (2004: 552); AHTI & SOHRABI (2006: 141).
- \**Cladonia fimbriata* (L.) FR. - L: AHTI & SOHRABI (2006: 141).

- Cladonia foliacea* (HUDS.) WILLD. - L: SZATALA (1957: 118) as var. *alcicornis*; WEBER (1964: 4); SEAWARD et al. (2004: 552); AHTI & SOHRABI (2006: 141).
- Cladonia furcata* (HUDS.) SCHRAD. L: SZATALA (1957: 118); WEBER (1964: 5); BARKHALOV (1975: 126) as f. *foliosa*; SEAWARD et al. (2004: 552); AHTI & SOHRABI (2006: 141); SOHRABI & SIPMAN (2007: 89).
- \**Cladonia magyarica* VAIN. - L: LITTERSKI & AHTI (2004: 214) [erroneous, record not in Iran] - U: EAST AZERBAIJAN: 4 km SW of Kalibar, Galadarasi, 1750-2500 m, on soil & mosses, 19 Aug. 2005, SOHRABI 4553 [H, herb. SOHRABI]. GILAN: Arbustan, Yehlach, 1937, LINDSAY [BM].
- Cladonia pocillum* (ACH.) GROGNOT - L: SZATALA (1957: 118) as var. *pocillum*; BARKHALOV (1975: 126); SOHRABI (2005a: 106), (2005b: 78); AHTI & SOHRABI (2006: 142); SOHRABI & SIPMAN (2007: 89).
- Cladonia pyxidata* (L.) HOFFM. - L: SZATALA (1957: 118); BARKHALOV (1975: 126); SEAWARD et al. (2004: 552); AHTI & SOHRABI (2006: 142). U: GOLESTAN: Gorgan, Ziarat, 1532 m, April 2005, HAJI MONIRI 2028 [MRDS 113641].
- Cladonia ramulosa* (WITH.) J.R.LAUNDON - L: SEAWARD et al. (2004: 552); AHTI & SOHRABI (2006: 142).
- Cladonia rangiferina* (L.) F.H.WIGG. - L: BUHSE (1860: 242) as *C. rangiferina vulgaris*; SZATALA (1957: 118) [doubtful record, see AHTI & SOHRABI (2006: 142)].
- Cladonia rangiformis* HOFFM. - L: SZATALA (1940: 524) as var. *nivea*, (1957: 118) as var. *muricata* & var. *nivea*; BARKHALOV (1975: 126); SEAWARD et al. (2004: 552); LITTERSKI & AHTI (2004: 214); AHTI & SOHRABI (2006: 142); SOHRABI & SIPMAN (2007: 89). - U: MAZANDARAN: Chalus, Caspian Sea coast, 13 April 1963, Bowles Scholarship Bot. Expedition [BM]. NORTH KHORASAN: Ashkhaneh towards Golestan, Negesli, 2450 m, March 2005, HAJI MONIRI 1904 [MRDS 113631].
- \**Cladonia rei* SCHAEER. L: RIAHI & VALADBEIGI (2005: 41); AHTI & SOHRABI (2006: 143).
- Cladonia subrangiformis* SANDST. - L: SZATALA (1940: 524) & (1957: 118) as *C. subrangiformis*; BARKHALOV (1975: 126); VĚZDA (1978, Lich. Sel. Exs. 1524) as *C. klementii*; SEAWARD et al. (2004: 552) as *C. furcata* subsp. *subrangiformis*; AHTI & SOHRABI (2006: 143).
- \**Cladonia subulata* (L.) F.H.WIGG. - L: AHTI & SOHRABI (2006: 143).
- \**Cladonia symphycarpa* (FLÖRKE) FR. - L: AHTI & SOHRABI (2006: 143).
- \**Clypeococcum cladonema* (WEDD.) D.HAWKSW. [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).

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- Collema auriforme* (WITH.) COPPINS & J.R.LAUNDON - L: SEAWARD et al. (2004: 553); SOHRABI (2005a: 106), (2005b: 78); MONIRY et al. (2005: 56); SOHRABI & SIPMAN (2007: 89).
- Collema crispum* (HUDS.) F.H.WIGG. - L: SZATALA (1940: 522) as *C. cheileum* var. *graniforme* & var. *hyporrhizum*; SZATALA (1957: 111); SEAWARD et al. (2004: 553); SOHRABI & SIPMAN (2007: 89).
- Collema cristatum* (L.) WEBER ex F.H.WIGG. - L: SZATALA (1940: 522) as *C. multifidum* var. *jacobeaeifolium*, SZATALA (1957: 111) as *C. cristatum* var. *marginale*; BARKHALOV (1975: 124) as *C. cristatum* var. *marginale*; SEAWARD et al. (2004: 553); WASSER & NEVO (2005: 133); SOHRABI & SIPMAN (2007: 89). - U: ARDABIL: Namin, near Giladeh, 1350 m, on base-rich siliceous rock, 4 May 2007, VONDRÁK [CBFS JV5757].
- Collema flaccidum* (ACH.) ACH. L: SEAWARD et al. (2004: 553). U: GOLASTAN: Ashkhaneh towards Gorgan, Ziarat, 1532 m, April 2005, HAJI MONIRI 2035 [MRDS 113632].
- Collema furfuraceum* (ARNOLD) DU RIETZ - L: SEAWARD et al. (2004: 553).
- Collema fuscovirens* (WITH.) J.R.LAUNDON - L: WEBER (1964: 4) as *C. tunaeforme*; SOHRABI (2005a: 106), (2005b: 78); SOHRABI & SIPMAN (2007: 89).
- \**Collema occultatum* BAGL. - U: MAZANDARAN: Ramsar, Javaherdeh, 2000 m, 21 Aug. 2002, MAASSOUMI 608 [B, TARI].
- \**Collema polycarpon* HOFFM. ssp. *corcyrense* (ARNOLD) PIŠÚT U: ZANJAN: hills above Dashti, Qeydar, c. 35 km SW of Soltaniyeh, 2200-2600 m, 3 July 1974, ALAVA 14656 [TUR].
- Collema polycarpon* HOFFM. ssp. *polycarpon* - L: SEAWARD et al. (2004: 553).
- Collema subflaccidum* DEGEL. - L: WEBER (1964: 3) as *C. subfurvum*; SEAWARD et al. (2004: 553). - U: GILAN: Asalem-Khalkhal road, Talesh, 500 m, on *Cerasus*, 5 May 2007, VONDRÁK [CBFS JV5705].
- Collema tenax* (Sw.) ACH. - L: RABENHORST (1871: 177) as *C. molybdinum*; SZATALA (1940: 522) as *C. hydrocharum* var. *stygioides*, (1957: 111); WEBER (1964: 4); BARKHALOV (1975: 124); RIEDL (1979: 220); ZOKAEI & ABADI (2000: 8); SEAWARD et al. (2004: 553); JAFARI et al. (2004: 274); SOHRABI & SIPMAN (2007: 89). U: KORDESTAN: Bijar, c. 1850 m, on limestone cliff, 8 Aug. 1968, Hull Univ. Expedition [BM]. - U: ARDABIL: Valley SW of Ilanjuq, Nir, 1790 m, on soil and mosses, 3 May 2007, VONDRÁK [CBFS JV5817].
- \**Dactylospora saxatilis* (SCHAER.) HAFELLNER [LF] L: SOHRABI & ALSTRUP (2007: electronic suppl.).

- Dermatocarpon aegyptiacum* (MÜLL.ARG.) ZAHLBR. L: STEINER (1896: 444) as *Verrucula aegyptiaca*; SZATALA (1957: 104) as *Placidium aegyptiacum*. [This species may not fit in the genus *Dermatocarpon* as currently understood. A re-examination of the type is required to establish its generic affinity].
- Dermatocarpon desertorum* TOMIN - L: VĚZDA (1980, Lich. Sel. Exs. 1724) pr.p. = ? *Placidium squamulosum* see BREUSS (1998: 666), pr.p. = ? *P. semaforonense* see BREUSS (1998: 665).
- \**Dermatocarpon intestiniforme* (KÖRB.) HASSE - L: BUHSE (1860: 243) as *Endocarpon miniatum* b. *complicatum*; MÜLLER (1892: 158); SZATALA (1957: 106); BARKHALOV (1975: 122); DYANAT-NEJAD & KERAMEDINI (1993: 38) as *Dermatocarpon miniatum* var. *complicatum*; SEAWARD et al. (2004: 553) as *D. miniatum* var. *complicatum*; MONIRY et al. (2005: 56) as *D. miniatum* var. *complicatum*. - U: NORTH KHORASAN: Ashkhaneh towards Goleštan Forest, Nale-e biaab, 1130 m, on calcareous rock, 30 March 2005, HAJI MONIRI 2017 [MRDS 114088]. TEHRAN: Mt Elburz, c. 2000 m, on acid rock, 8 May 1977, SOJÁK [BYU].
- \**Dermatocarpon luridum* (WITH.) J.R.LAUNDON - L: DYANAT-NEJAD & KERAMEDINI (1993: 38) as *D. weberi*.
- Dermatocarpon miniatum* (L.) W.MANN L: BUHSE (1860: 243) as *Endocarpon miniatum*; STEINER (1916: 25); SZATALA (1957: 105), (1957: 106) as var. *pruinosum*; WEBER (1964: 3); BARKHALOV (1975: 122); DYANAT-NEJAD & KERAMEDINI (1993: 38); MEHRABIAN & MIRZAI (1996: 61); ZOKAEI & KHAZAI (1999: 91); ZOKAEI & ABADI (2000: 8); SEAWARD et al. (2004: 553); MONIRY et al. (2005: 56).
- Dermatocarpon miniatum* var. *cirsodes* (ACH.) ZAHLBR. L: SEAWARD et al. (2004: 553); MONIRY et al. (2005: 56).
- \**Dermatocarpon moulinsii* (MONT.) ZAHLBR. L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Dermatocarpon velleum* ZSCHACKE - L: SEAWARD et al. (2004: 554); SOHRABI & SIPMAN (2007: 89).
- Dermatocarpon verruculosum* (MÜLL.ARG.) ZAHLBR. - L: MÜLLER (1892: 159) as *Endopyrenium verruculosum*; MAGNUSSON (1940: 25); SZATALA (1940: 521), (1957: 105) as *Placidium verruculosum*; SEAWARD et al. (2004: 554). [This species seems not to fit in the genus *Dermatocarpon* as currently understood. A re-examination of the type is required to establish its generic affinity].
- Dimelaena oreina* (ACH.) NORMAN L: STEINER (1910: 243) as *Rinodina oreina*; SZATALA (1940: 532) as *R. hueana*, (1957: 151) as *Placothallia hueana* & *P. oreina*; BARKHALOV (1975: 133) as *Rinodina oreina*; SHEARD (1977: 104, 107); ZOKAEI

- (2002: 1, 5) [picture shows a different lichen]; ZOKAEI (2003: 141); OBERMAYER et al. (2004: 337); SEAWARD et al. (2004: 554).
- Diploschistes actinostomus*** (PERS.) ZAHLBR. L: STEINER (1916: 26); SZATALA (1957: 108); BARKHALOV (1975: 124).
- Diploschistes candidissimus*** (KREMP.) ZAHLBR. L: STEINER (1896: 441) as *D. actinostomus* var. *calcareus*; SZATALA (1957: 109) as *D. calcareus*; BARKHALOV (1975: 124) as *D. calcareus*.
- Diploschistes diacapsis*** (ACH.) LUMBSCH - L: STEINER (1916: 25) as *D. albissimus*; REICHERT (1940: 176) as *D. steppicus*; SZATALA (1957: 109) as *D. albissimus* & *D. steppicus*, incl. var. *typica*; LAMB (1963: 229) as *D. steppicus*; VÉZDA (1978, Lich. Sel. Exs. 1560) as *D. steppicus*; RIEDL (1979: 220) as *D. albissimus*; SOHRABI (2005a: 106), (2005b: 78); SOHRABI & SIPMAN (2007: 89). - U: MAZANDARAN: Haraz valley, between Siah Bisheh and Emarat, c. 500 m, 29 April 1959, WENDELBO [BG], published by WEBER (1964: 3) as *D. scruposus*, teste H. Th. LUMBSCH.
- Diploschistes gypsaceus*** (ACH.) ZAHLBR. - L: MÜLLER (1892: 157) as *D. scruposus* var. *cretaceus*.
- Diploschistes muscorum*** (SCOP.) R.SANT. - L: WEBER (1964: 3) as *D. scruposus* var. *bryophilus*; JAFARI et al. (2004: 274).
- Diploschistes ocellatus*** (VILL.) NORMAN - L: LUMBSCH (1989: 181); SEAWARD et al. (2004: 554); WASSER & NEVO (2005: 145); SOHRABI & SIPMAN (2007: 89). - U: NORTH KHORASAN: Ashkhaneh towards Golestan, Darkeshishparan, 1100 m, March 2005, HAJI MONIRI 1951 [MRDS 113640].
- Diploschistes scruposus*** (SCHREB.) NORMAN L: BARKHALOV (1975: 124); SEAWARD et al. (2004: 554).
- Diplolepta alboatrum*** (HOFFM.) FLOT. - L: MÜLLER (1892: 158) as *Diplolepta alboatrum* var. *intermedium*; STEINER (1910: 242) as *Buellia epipolia*; SZATALA (1940: 532), (1957: 149) as *Diplolepta epipolium* and as *D. margaritatum*; WEBER (1964: 7) as *Buellia alboatra*; BARKHALOV (1975: 132) as *B. epipolia*; SEAWARD et al. (2004: 554). U: KORDESTAN: Bijar, 2000 m, on limestone outcrop, 8 Aug. 1968, Hull Univ. Expedition [BM].
- Diplolepta venustum*** KÖRB. - L: MÜLLER (1892: 158); STEINER (1910: 242) as *D. epipolium* var. *calcareum*; STEINER (1916: 38) as *Buellia epipolia* var. *venusta*; SZATALA (1957: 149) also as *Diplolepta epipolium* var. *calcareum*; SEAWARD et al. (2004: 554); SOHRABI (2005a: 106), (2005b: 78); MONIRY et al. (2005: 56); SOHRABI & SIPMAN (2007: 89).

- \**Echinothecium reticulatum* ZOPF [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Eiglera flavida* (HEPP) HAFELLNER - L: SZATALA (1957: 126) as *Aspicilia ochracea*.
- Endocarpon diffractellum* (NYL.) GUEIDAN & CL.ROUX - L: SZATALA (1954: 131) & (1957: 104) as *Placidium iranicum*; LAMB (1963: 567) as *Placidium iranicum*; BREUSS (1994: 17) as *Verrucaria fuscula* NYL.; SOHRABI & SIPMAN (2007: 91) as *Verrucaria fuscula* NYL.
- \**Endocarpon pallidum* ACH. - L: SOHRABI & ALSTRUP (2007: electronic suppl.) - U: GILAN: Talish, towards Marian village, 1123 m, 2 Sept. 2002, SAFAVI & SOHRABI 1092 [B, TARI].
- Endocarpon pusillum* HEDW. - L: OXNER (1946: 82); BARKHALOV (1975: 122); SEAWARD et al. (2004: 555); JAFARI et al. (2004: 274); MOÑIRY et al. (2005: 56).
- \**Endococcus perpusillus* NYL. [LF] L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Endococcus propinquus* (KÖRB.) D.HAWKSW. [LF] - WEST AZERBAIJAN: Lake Urmia, coast W of Burachalut, 1280 m, on *Rinodina epiianthina*, 7 May 2007, VONDRÁK [CBFS JV5806].
- Endococcus rugulosus* NYL. [LF] - L: STEINER (1896: 445) as *Tichothecium calcari-cola*.
- Enterographa hutchinsiae* (LEIGHT.) A.MASSAL. - L: SEAWARD et al. (2004: 555).
- \**Evernia mesomorpha* NYL. - U: GOLESTAN: Gorgan, Nahar-khoran to Ziyarat village, 450-500 m, on *Quercus*, 18 May 2001, SOHRABI 1995 [TNS, herb. SOHRABI].
- Evernia prunastri* (L.) ACH. L: SZATALA (1957: 140); BARKHALOV (1975: 130); SEAWARD et al. (2004: 555); SOHRABI (2005a: 106), (2005b: 78); RAHNAMA et al. (2005: 69); SOHRABI & SIPMAN (2007: 89).
- Farnoldia jurana* (SCHAER.) HERTEL - L: SEAWARD et al. (2004: 555); MONIRY et al. (2005: 56).
- Fellhanera bouteillei* (DESM.) VĚZDA - L: OXNER (1946: 82); SZATALA (1957: 116) as *Catillaria bouteillei*; BARKHALOV (1975: 125) as *C. bouteillei*.
- Flavoparmelia caperata* (L.) HALE - L: BUHSE (1860: 241) as *Parmelia caperata*; STEINER (1916: 35); SZATALA (1940: 530) as *P. caperata* var. *cylisphora*; SZATALA (1957: 140); WEBER (1964: 5); BARKHALOV (1975: 129); SEAWARD et al. (2004: 555); RAHNAMA et al. (2005: 73); RIAHI & VALADBEIGI (2005: 41); SOHRABI et al. (2007: 22); SOHRABI & SIPMAN (2007: 90).



- \**Flavopunctelia darrowii* (J.W.THOMSON) HALE L: HADJI MONIRI (2005: 35); SOHRABI et al. (2007: 22) [cited as doubtful].
- \**Flavopunctelia flaventior* (STIRT.) HALE - L: SOHRABI & JAMSHIDIKIA (2007: 5).
- \**Flavopunctelia soredica* (NYL.) HALE - L: SOHRABI & JAMSHIDIKIA (2007: 5).
- Fulgensia bracteata* (HOFFM.) RÄSÄNEN L: MÜLLER (1892: 153) as *Placodium fulgens* var. *bracteatum*; SZATALA (1957: 145); WEBER (1964: 7); JAFARI et al. (2004: 274).
- Fulgensia desertorum* (TOMIN) POELT - L: VĚZDA (1978), Lich. Sel. Exs. 1562); WESTBERG & KÄRNEFELT (1998: 517). - U: LURISTAN: 8 km W of Babazeyd, 9 April 1977, SOJÁK [BYU].
- Fulgensia fulgens* (SW.) ELENKIN L: OXNER (1946: 83); ZOKAEI (2003: 141) as *Caloplaca fulgens*; JAFARI et al. (2004: 274); SOHRABI & SIPMAN (2007: 90). - U: WEST AZERBAIJAN: Lake Urmia, coast near Govarchin Qalech, 1270 m, on calcareous soil, 10 May 2007, VONDRÁK [CBFS JV5717].
- Fulgensia fulgida* (NYL.) SZAT. - L: SEAWARD et al. (2004: 555).
- Fulgensia subbracteata* (NYL.) POELT - L: SEAWARD et al. (2004: 555); JAFARI et al. (2004: 274); MONIRY et al. (2005: 56).
- \**Fuscopannaria leucophaea* (VAHL) P.M.JØRG. L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Gloeoheppia turgida* (ACH.) GYELN. L: MÜLLER (1892: 151) as *Heppia turgida*; SZATALA (1957: 112) as *H. turgida*; SEAWARD et al. (2004: 556); SCHULTZ (2007: 293).
- Glypholecia persica* J.STEINER - L: STEINER (1910: 221); MAGNUSSON (1929: 376); SZATALA (1957: 124).
- Glypholecia scabra* (PERS.) MÜLL.ARG. L: MÜLLER (1892: 156); STEINER (1916: 30); OXNER (1946: 83); SZATALA (1940: 527), (1957: 124) also as var. *candidissima*; GOLUBKOVA (1988: 122); SEAWARD et al. (2004: 556); MONIRY et al. (2005: 56); SOHRABI & SIPMAN (2007: 90).
- \**Gonohymenia nigritella* (LETTAU) HENSSEN - U: WEST AZERBAIJAN: N of Aq Gonbad, Lake Urmia, 1290 m, on base-rich siliceous rock, 8 May 2007, VONDRÁK [CBFS JV5542]; c. 15 km SE of Maku, 1000 m, valley with rock outcrops, 19 April 1972, UOTILA 15658 [H].
- \**Gyalecta truncigena* (ACH.) HEPP - U: GILAN: Asalem-Khalkhal road, Hashtpar, 1640 m, on *Fagus orientalis*, 6 May 2007, VONDRÁK [CBFS JV5614].
- Gyalectidium caucasicum* (ELENK. & WORON.) VĚZDA - L: FERRARO et al. (2001: 328).

- Graphis analoga* (NYL.) ZAHLBR. - L: SZATALA (1940: 522) & (1957: 108) as *Graphina analoga*.
- Graphis scripta* (L.) ACH. L: BUHSE (1860: 243) as *G. scripta limitata*; SZATALA (1940: 521) as var. *varia*, (1957: 108) incl. f. *limitata*; BARKHALOV (1975: 123); SEAWARD et al. (2004: 556); SOHRABI & SIPMAN (2007: 90).
- Heppia despreauxii* (MONT.) TUCK. - L: SEAWARD et al. (2004: 556).
- Heppia hepaticella* MÜLL.ARG. - L: MÜLLER (1892: 152); SZATALA (1957: 111).
- Heppia lobulata* MÜLL.ARG. - L: MÜLLER (1892: 152); STEINER (1896: 437); SZATALA (1957: 112).
- Heppia myriospora* MÜLL.ARG. - L: MÜLLER (1892: 152); SZATALA (1957: 111).
- Heppia solorinoides* (NYL.) NYL. L: VĚZDA (1978, Lich. Sel. Exs. 1553) as *H. reticulata*; material belongs in part to *Placidium tenellum*, see BREUSS (1998: 667); EGEA (1989: 56) as *Heppia reticulata*; HENSSEN (1994: 72); SEAWARD et al. (2004: 556).
- Hyperphyscia adglutinata* (FLÖRKE) H.MAYRHOFFER & POELT - L: SEAWARD et al. (2004: 556); RIAHI & VALADBEIGI (2005: 41); SOHRABI & SIPMAN (2007: 90).
- \**Hypogymnia austerodes* (NYL.) RÄSÄNEN - L: SOHRABI et al. (2007: 23).
- \**Hypogymnia physodes* (L.) NYL. - L: SOHRABI et al. (2007: 23).
- \**Hypogymnia vittata* (ACH.) PARRIQUE - L: SOHRABI et al. (2007: 23).
- Immersaria usbekica* (HERTEL) M.BARBERO, NAV.-ROS. & CL.ROUX - L: HERTEL (2001: 103); STEINER (1910: 216) misidentified as *Lecidea atrobrunnea*.
- \**Intralichen christiansenii* (D.HAWKSW.) D.HAWKSW. & M.S.COLE [LF] U: WEST AZERBAIJAN: Lake Urmia, c. 2 km N of Saraydeh, 1280 m, on *Caloplaca* cf. *epiphyta*, 7 May 2007, VONDRÁK [CBFS JV5697].
- Lecania brachyspora* MÜLL.ARG. - L: MÜLLER (1892: 157); SZATALA (1957: 137).
- \**Lecania cyrtella* (ACH.) TH.FR. - U: MAZANDARAN: c. 2 km E of Mahmudabad, 0-25 m, sand dunes near coastal road, 28 April 1972, KUKKONEN 5589 [H].
- \**Lecania dubitans* (NYL.) A.L.SM. L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Lecania fuscella* (SCHAER.) A.MASSAL. - L: SOHRABI & SIPMAN (2007: 90).
- Lecania koerberiana* J.LAHM - L: STEINER (1910: 237); SZATALA (1940: 529), (1957: 138); BARKHALOV (1975: 129); SEAWARD et al. (2004: 557); WASSER & NEVO (2005: 169).

- Lecania nylanderiana* A.MASSAL. - L: SZATALA (1940: 529) as var. *ochracea*, (1957: 138) also as var. *ochracea*.
- Lecania ochronigra* J.STEINER - L: STEINER (1910: 236), SZATALA (1957: 137).
- Lecania rechingeriana* SZATALA L: SZATALA (1940: 529), (1957: 138); LAMB (1963: 289).
- Lecania subcaesia* (NYL.) B. DE LESD. L: SZATALA (1957: 137); STEINER (1896: 440) as *L. albariella* var. *subcaesia*.
- Lecania triseptata* (VAIN.) ZAHLBR. - L: STEINER & POELT (1987: 137); SOHRABI & SIPMAN (2007: 90).
- Lecania turicensis* (HEPP) MÜLL.ARG. - L: STEINER (1896: 440, 445) as *L. albariella*; SZATALA (1957: 137) as *L. albariella*; SOHRABI & SIPMAN (2007: 90).
- Lecanora agardhiana* ACH. - L: MÜLLER (1892: 157) as *L. agardhianoides*; SZATALA (1957: 131) also as var. *microstygma*; SEAWARD et al. (2004: 557); MONIRY et al. (2005: 56). - U: WEST AZERBAIJAN: Lake Urmia, Shirin Bolagh, 1290 m, on limestone outcrop, 9 May 2007, VONDRÁK [CBFS JV5798].
- \**Lecanora albellula* (NYL.) TH.FR. L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Lecanora albula* (NYL.) HUE - L: DYANAT-NEJAD & KERAMEDINI (1993: 38).
- Lecanora allophana* (ACH.) RÖHL. - L: SZATALA (1957: 133) incl. *L. subfuscata* f. *geographica*; BARKHALOV (1975: 127); SOHRABI & SIPMAN (2007: 90).
- Lecanora argentata* (ACH.) MALME - L: BUHSE (1860: 242) as *Lecanora subfusca vulgaris*; SZATALA (1957: 132) as *L. subfuscata*; BARKHALOV (1975: 128) as *L. subfuscata*; SEAWARD et al. (2004: 557); SOHRABI & SIPMAN (2007: 90).
- Lecanora argopholis* (ACH.) ACH. L: WEBER (1964: 5) as *L. frustulosa* var. *argopholis*. U: EAST AZERBAIJAN: c. 20 km NW of Miyaneh, 1720 m, rock outcrop, 20 April 1972, UOTILA 15683 [H]. KORDESTAN: 20 km SW of Bijar, 2250 m, on pumice cliff, 17 Aug. 1968, Hull Univ. Expedition [BM]. THE-RAN: c. 6 km NE of Ab-e-Ali, Tehran-Amol road, 2320 m, wet meadow near snow-line, 27 April 1972, UOTILA 15901, 15908 [H]. WEST AZERBAIJAN: c. 15 km SE of Maku, Bazargan-Tabriz road, 1000 m, on rock outcrops, 19 April 1972, UOTILA 15659, 15664 [H].
- Lecanora bolcana* POLLINI - L: STEINER (1910: 236) as *L. garovaglii* var. *diffRACTA*; SZATALA (1957: 134) as *Squamaria garovaglii* var. *diffRACTELLA*. - U: GILAN: Asalem-Khalkhal road, Talesh, 1640 m, on siliceous stones and pebbles, 6 May 2007, VONDRÁK [CBFS JV5573].

- Lecanora campestris* (SCHAER.) HUE - L: SEAWARD et al. (2004: 557). - U: ARDABIL: near Giladeh, Namin, 1350 m, on base-rich siliceous rock, 4 May 2007, VONDRÁK [CBFS JV5567]. GILAN: Talesh, coast near Khotbeh Sara, 30 m, on base-rich siliceous outcrops, 5 May 2007, VONDRÁK [CBFS JV5740].
- \**Lecanora carpinea* (L.) VAIN. - L: SOHRABI & ALSTRUP (2007: electronic suppl.); U: GILAN: Talish, towards Marian village, 1123 m, 2 Sept. 2002, SAFAVI & SOHRABI 1095 [B, TARI].
- Lecanora chlarotera* NYL. - L: SEAWARD et al. (2004: 557).
- Lecanora concolor* RAMOND L: STEINER (1916: 33); SZATALA (1957: 135) as *Squamaria concolor*.
- \**Lecanora conferta* (FR.) GROGNOT - L: ZOKAEI (2002: 1, 4) [picture shows a different lichen]; ZOKAEI (2003: 141).
- Lecanora crenulata* auct. - L: MÜLLER (1892: 157) as *L. caesioalba*; STEINER (1910: 232), (1916: 31); SZATALA (1940: 528), (1957: 131); SEAWARD et al. (2004: 557); MONIRY et al. (2005: 56); SOHRABI & SIPMAN (2007: 90). - U: KORDESTAN: Bijar, c. 1900 m, on limestone, 8 Aug. 1968, Hull Univ. Expedition [BM].
- Lecanora dispersa* (PERS.) SOMMERF. - L: STEINER (1910: 232); OXNER (1946: 83); SZATALA (1940: 528); (1957: 131); WEBER (1964: 5); BARKHALOV (1975: 128); SEAWARD et al. (2004: 558); SOHRABI (2005b: 78); SOHRABI & SIPMAN (2007: 90).
- Lecanora dispersella* J. STEINER - L: SZATALA (1940: 528); (1957: 131).
- Lecanora dispersoareolata* (SCHAER.) LAMY - L: MÜLLER (1892: 154) as *Placodium dispersoareolatum*; STEINER (1916: 33); SZATALA (1957: 135) as *Squamaria dispersoareolata*.
- Lecanora flotoviana* SPRENG. L: MÜLLER (1892: 157); SOHRABI (2005a: 106), (2005b: 78); SOHRABI & SIPMAN (2007: 90).
- Lecanora garovaglii* (KÖRB.) ZAHLBR. - L: STEINER (1910: 236), incl. f. *fissa*; SZATALA (1940: 528) as *Squamaria garovaglii* var. *pruinosa*, (1957: 134 & 135) as *S. garovaglii* incl. var. *pruinosa* & f. *fissa*; BARKHALOV (1975: 128) as *Placodium garovaglii*; SEAWARD et al. (2004: 558); SOHRABI & SIPMAN (2007: 90). - U: KORDESTAN: 20 km SW of Bijar, 2250 m, on pumice cliff, 17 Aug. 1968, Hull Univ. Expedition [BM].
- Lecanora hagenii* (ACH.) ACH. - L: MÜLLER (1892: 151, 157); STEINER (1910: 232) as var. *congregata*; SZATALA (1940: 528) as var. *congregata*; OXNER (1946: 83); SZATALA (1957: 132) incl. var. *coerulescens* & var. *congregata*; SOHRABI (2005a: 106); SOHRABI & SIPMAN (2007: 90). U: KORDESTAN: Bijar, 1850 m, on *Prunus*, 12 Aug. 1968, Hull Univ. Expedition [BM].

- Lecanora horiza* (ACH.) LINDS. - L: SEAWARD et al. (2004: 558).
- Lecanora marginata* (SCHAER.) HERTEL & RAMBOLD L: BUHSE (1860: 243) as *Lecidea elata*; SZATALA (1940: 522) as *L. iranica*; SZATALA (1957: 116) as *L. elata*, incl. var. *marginata*; SEAWARD et al. (2004: 558); MONIRY et al. (2005: 56).
- Lecanora meridionalis* H.MAGN. L: SZATALA (1940: 528) as *L. chlarona*, (1957: 133).
- \**Lecanora reagens* NORMAN - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Lecanora riparia* (FLOT.) SZATALA - L: SZATALA (1940: 529) as *Squamaria riparia*, (1957: 134) as *S. riparia*.
- \**Lecanora rupicola* (L.) ZAHLBR. L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Lecanora swartzioides* NYL. - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Lecanora symmicta* (ACH.) ACH. L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Lecanora thysanophora* R.C.HARRIS - L: SEAWARD et al. (2004: 559). U: MAZANDARAN: Lavij, near Nour, 800 m, on bark, 2 April 2002, SOHRABI & MOFID 1019 [NMW].
- Lecanora umbrina* (ACH.) A.MASSAL. var. *subnigricans* VAIN. L: SZATALA (1957: 132); BARKHALOV (1975: 128).
- Lecanora usbekica* POELT - L: SEAWARD et al. (2004: 559). U: KORDESTAN: Bijar, 2000 m, on limestone cliff, 8 Aug. 1968, Hull Univ. Expedition [BM].
- \**Lecanora xanthostoma* FRÖBERG U: WEST AZERBAIJAN: Lake Urmia, c. 2 km N of Saraydeh, 1280 m, on siliceous rock, 7 May 2007, VONDRÁK [CBFS JV5725].
- Lecidea atrobrunnea* (RAMOND ex LAM. & DC.) SCHAER. - L: MÜLLER (1892: 157) as var. *grandiuscula*; SZATALA (1957: 113); BARKHALOV (1975: 125); DYANAT-NEJAD & KERAMEDINI (1993: 38). U: HAMADAN: N-facing slopes above Takht Mt, 2150-2250 m, 5 July 1974, ALAVA 14724 [TUR, sub *Caloplaca fuscoatroides*].
- Lecidea fuscoatra* (L.) ACH. - L: SEAWARD et al. (2004: 559).
- Lecidea plana* (J.LAHM in KÖRB.) NYL. - L: SZATALA (1957: 114) as *L. latypea*, incl. f. *ochracea*.
- Lecidea subbrunnea* J.STEINER - L: STEINER (1910: 215); SZATALA (1957: 115).
- \**Lecidea syncarpa* ZAHLBR. U: KORDESTAN: 20 km SW of Bijar, 2250 m, on pumice cliff, 17 Aug. 1968, Hull Univ. Expedition [BM].

*Lecidea tessellata* FLÖRKE - L: MÜLLER (1892: 157) as *L. spilota*; STEINER (1910: 214) as *L. persica*; SZATALA (1940: 523) as *L. persica*, (1957: 115) also as *L. persica*; HERTEL (1977: 283, 285); SEAWARD et al. (2004: 560). - U: KORDESTAN: 3 km SE of Bijar, c. 1850 m, on limestone rock, 11 Aug. 1968, Hull Univ. Expedition [BM].

\**Lecidella asema* (NYL.) KNOPH & HERTEL - U: RAZAVI KHORASAN: c. 70 km on the road from Neishabur, Kashmar, Chelpoo village, 1830 m, 30 April 2003, MAASSOUMI, SOHRABI & SAFAVI 2231 [TARI, TSB].

\**Lecidella carpathica* KÖRB. - L: SOHRABI & ALSTRUP (2007: electronic suppl.). - U: RAZAVI KHORASAN: c. 15 km N of Quchan, 1650-1700 m, E slope of ravine, 1 Aug. 1972, UOTILA 18983 [H sub *Lecanora muralis*]. WEST AZERBAIJAN: Lake Urmia, coast N of Aq Gonbad, 1290 m, on base-rich siliceous rock, 8 May 2007, VONDRÁK [CBFS JV5797].

*Lecidella elaeochroma* (ACH.) M. CHOISY L: BÜHSE (1860: 243) as *Lecidea parasema limitata*; STEINER (1916: 27) as *L. parasema*; SZATALA (1940: 523) as *L. olivacea* f. *elaeochroma* & f. *limitata*, (1957: 113) as *L. elaeochroma*, (1957: 114) as *L. parasema* incl. f. *limitata* & f. *euphoroides*; BARKHALOV (1975: 125) as *L. glomerulosa*; SEAWARD et al. (2004: 560); SOHRABI & SIPMAN (2007: 90).

*Lecidella euphorea* (FLÖRKE) HERTEL - L: SZATALA (1957: 114) as *Lecidea euphorea* incl. f. *decussata*.

*Lecidella patavina* (A. MASSAL.) KNOPH & LEUCKERT - L: STEINER (1910: 213) as *Lecidea enteroleuca* var. *epipolioides*, (1916: 27) as *L. enteroleuca* var. *elbursensis*; SZATALA (1957: 113) as *L. epipolioides*, (1957: 114) as *L. epipolioides* var. *elbursensis*; HERTEL (1970: 55) as *Lecidella spitsbergensis*; KNOPH (1990: 119 & 127).

\**Lecidella stigmatea* (ACH.) HERTEL & LEUCKERT - L: SOHRABI & ALSTRUP (2007: electronic suppl.). U: EAST AZERBAIJAN: W of Seyah Chaman, c. 20 km NW of Miyaneh, 1720 m, rock outcrop, 20 April 1972, UOTILA 15688 [H].

*Leciographa insidens* J. STEINER [LF] - L: STEINER (1896: 442).

*Lempholemma polyanthes* (BERNH.) MALME - L: SEAWARD et al. (2004: 560).

\**Lepraria crassissima* (HUE) LETTAU - L: SOHRABI & ORANGE (2006: 102).

\**Lepraria diffusa* (J.R. LAUNDON) KUKWA L: SOHRABI & ORANGE (2006: 102); SOHRABI & SIPMAN (2007: 90).

\**Lepraria lobificans* NYL. L: SOHRABI & ORANGE (2006: 102); SOHRABI & SIPMAN (2007: 90).

\**Lepraria membranacea* (DICKS.) VAIN. L: DYANAT-NEJAD & KERAMEDINI (1993: 38); MEHRABIAN & MIRZAI (1996: 61).

- \**Lepraria vouauxii* (HUE) R.C.HARRIS - L: SOHRABI & ORANGE (2006: 102); SOHRABI & SIPMAN (2007: 90). U: MAZANDARAN: Amol, 600-900 m, on moss on shady trees, 3 Jan. 2004, SOHRABI & MOFID 2787 [NMW]. NORTH KHORASAN: Ashkhaneh towards Golestan Forest, Nale-e biaab, 1130 m, on mosses, 30 March 2005, HAJI MONIRI 2019 [MRDS 114059].
- Leprocaulon microscopicum* (VILL.) GAMS ex D.HAWKSW. L: SEAWARD et al. (2004: 560).
- \**Leptogium burnetiae* C.W.DODGE L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Leptogium cyanescens* (RABENH.) KÖRB. - L: SEAWARD et al. (2004: 560).
- Leptogium gelatinosum* (WITH.) J.R.LAUNDON L: SOHRABI & ALSTRUP (2007: electronic suppl.). - U: MAZANDARAN: Mazandaran-Chalus, roadside forest, 450-600 m, on soil, 20 July 2004, SOHRABI 9106 [MRDS 113116].
- Leptogium hildenbrandii* (GAROV.) NYL. L: SEAWARD et al. (2004: 560). U: NORTH KHORASAN: Ashkhaneh towards Golestan Forest, Nargesli, 2450 m, on mosses, 15 March 2005, HAJI MONIRI 1889 [MRDS 114077].
- Leptogium lichenoides* (L.) ZAHLBR. - L: WEBER (1964: 4); SEAWARD et al. (2004: 560); SOHRABI & SIPMAN (2007: 90).
- Leptogium minutissimum* (FLÖRKE) FR. - L: WEBER (1964: 3).
- Leptogium saturninum* (DICKS.) NYL. L: SZATALA (1957: 111); BARKHALOV (1975: 124); SEAWARD et al. (2004: 560); SOHRABI & SIPMAN (2007: 90).
- Leptogium teretiusculum* (WALLR.) ARNOLD - L: SEAWARD et al. (2004: 560).
- Leptogium turgidum* (ACH.) CROMB. - L: SEAWARD et al. (2004: 561).
- Leptorhaphis atomaria* (ACH.) SZATALA [LF] - L: BUHSE (1860: 244) as *Verrucaria punctiformis*  $\gamma$  *atomaria*; SZATALA (1957: 106) as *Arthopyrenia atomaria*.
- \**Lichenoconium pyxidatae* (OUDEM.) PETR. & SYDOW [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Lichenoconium usneae* (ANZI) D.HAWKSW. [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Lichenostigma cosmopolites* HAFELLNER & CALATAYUD [LF] L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Lichenostigma rugosum* G.THOR [LF] - L: THOR (1985: 272); SOHRABI & ALSTRUP (2007: electronic suppl.).

- \**Lichenostigma subradians* HAFELLNER, CALATAYUD & NAV.-ROS. [LF] U: WEST AZERBAIJAN: c. 2 km N of Saraydeh, Lake Urmia, 1280 m, on *Acarospora* sp. on siliceous rock, 7 May 2007, VONDRÁK [CBFS JV5586].
- \**Lichenostigma svandae* VONDRÁK & ŠOUN [LF] U: WEST AZERBAIJAN: Khvoy, airport, 1180 m, on *Acarospora cervina*, 2 May 2007, VONDRÁK [CBFS JV5689].
- Lichinella algerica* (J. STEINER) P. MORENO & EGEE L: SZATALA (1957: 109) as *Gonohymenia algerica*; RIEDL (1979: 220) as *G. algerica*; WASSER & NEVO (2005: 203).
- Lichinella iodopulchra* (COUDERC ex CROZALS) P. MORENO & EGEE - L: MÜLLER (1892: 151) as *Omphalaria pulvinata schleicheri*; SZATALA (1957: 110) as *Thyrea pulvinata* and as *T. pulvinata* var. *schleicheri*; SEAWARD et al. (2004: 560).
- \**Lichinella nigritlella* (LETTAU) P. MORENO & EGEE U: WEST AZERBAIJAN: c. 15 km SE of Maku, 1000 m, valley with rock outcrops, 19 April 1972, UOTILA 15658 [H].
- Lobaria pulmonaria* (L.) HOFFM. L: SZATALA (1957: 112) as *Sticta pulmonaria*; BARKHALOV (1975: 124); SEAWARD et al. (2004: 561).
- \**Lobaria scrobiculata* (SCOP.) DC. L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Lobothallia alphoplaca* (WAHLENB.) Hafellner - L: SEAWARD et al. (2004: 561); SOHRABI & SIPMAN (2007: 90).
- \**Lobothallia praeradiosa* (NYL.) HAFELLNER U: ESFAHAN: c. 9 km from Khansar to Daran, 2650 m, calcareous rocks, 3 Nov. 2003, MAASSOUMI & SAFAVI 2608 [B, TARI], 2610 [TARI]. FARS: Bolhayat Pass, between Shiraz & Kazaroun, 1730 m, on flat calcareous rock, 6 Nov. 2003, MAASSOUMI & SAFAVI 2721 [B, TARI]. KORDESTAN: Bijar, 2000 m, at base of limestone cliff, 12 Aug. 1968, Hull Univ. Expedition [BM]. WEST AZERBAIJAN: between Bazargan & Boralan, along road to Mt Ararat, 1400 m, 10 Aug. 2002, SOHRABI & ALIZADEH 691 [B, TARI].
- Lobothallia radiosa* (HOFFM.) HAFELLNER - L: MÜLLER (1892: 154) as *Placodium radiosum*; STEINER (1910: 234) as *Lecanora circinata* var. *rauca*; SZATALA (1957: 136) as *Squamaria radiosa* f. *subfarinosa*; BARKHALOV (1975: 128) as *Placodium radiosum*; RIEDL (1979: 220) as *Lecanora radiosa*. - U: KORDESTAN: 20 km SW of Bijar, 2250 m, on pumice cliff, 17 Aug. 1968, Hull Univ. Expedition [BM].
- \**Marchandiomyces aurantiacus* (LASCH) DIEDERICH & ETAYO [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).



- Melanelixia glabra* (SCHAER.) O.BLANCO et al. - L: OXNER (1946: 83) as *Parmelia glabra*; SZATALA (1957: 139) as *P. glabra*; AHITI (1966: 49) as *P. glabra*; BARKHALOV (1975: 129) as *P. glabra*; ESSLINGER (1977: 69) as *P. glabra*; SEAWARD et al. (2004: 561) as *Melanelia glabra*; SOHRABI (2005a: 106) & (2005b: 78) as *M. glabra*; SOHRABI et al. (2007: 24; SOHRABI & SIPMAN (2007: 90).
- Melanelixia subargentifera* (NYL.) O.BLANCO et al. L: SEAWARD et al. (2004: 561) as *Melanelia subargentifera*; SOHRABI (2005a: 106) & (2005b: 78) as *Melanelia subargentifera*; SOHRABI et al. (2007: 24); SOHRABI & SIPMAN (2007: 90). - U: NORTH KHORASAN: Ashkhaneh towards Golestan Forest, Nargesli, 2450 m, on *Mespilus germanica* L., 15 March 2005, HAJI MONIRI 1902 [MRDS 114080].
- \**Melanelixia subaurifera* (NYL.) O.BLANCO et al. - L: SOHRABI et al. (2007: 25).
- \**Melanohalea elegantula* (ZAHLEBR.) O.BLANCO et al. L: SOHRABI et al. (2007: 25); SOHRABI & SIPMAN (2007: 90).
- Melanohalea exasperata* (DE NOT.) O.BLANCO et al. - L: STEINER (1910: 237) as *Parmelia aspidota* var. *persica*; SZATALA (1940: 530), (1957: 139) as *P. aspidota* var. *persica*; BARKHALOV (1975: 129) as *P. exasperata*; SEAWARD et al. (2004: 561) as *Melanelia exasperata*; SOHRABI et al. (2007: 25); SOHRABI & SIPMAN (2007: 90).
- Melanohalea exasperatula* (NYL.) O.BLANCO et al. L: WEBER (1964: 6) as *Parmelia exasperatula*; SEAWARD et al. (2004: 561) as *Melanelia exasperatula*; SOHRABI et al. (2007: 25).
- Melanohalea infumata* (NYL.) O.BLANCO et al. - L: SEAWARD et al. (2004: 561) as *Melanelia infumata*; SOHRABI (2005b: 78) as *M. infumata*; SOHRABI et al. (2007: 25); SOHRABI & SIPMAN (2007: 90).
- \**Melaspilea arenacea* (ACH.) REDINGER - U: ARDABIL: Namim, near Giladeh, 1350 m, on base-rich siliceous rock, 4 May 2007, VONDRÁK [CBFS JV5750].
- Melaspilea gibberulosa* (ACH.) ZWACKH [F] - L: BUHSE (1860: 243) as *Opegrapha varia* var. *déformis*; SZATALA (1957: 108).
- Milospium graphideorum* (NYL.) D.HAWKSW. [LF] L: SEAWARD et al. (2004: 561).
- Muellerella lichenicola* (SOMMERF. ex FR.) D.HAWKSW. [LF] - L: STEINER (1896: 445) as *Tichothecium erraticum*. - U: ARDABIL: Asalem-Khalkhal road, Khalkhal, 1900 m, on *Caloplaca flavovirescens*, 6 May 2007, VONDRÁK [CBFS JV5616].
- Muellerella pygmaeum* (KÖRB.) D.HAWKSW. [LF] - L: STEINER (1896: 445) as *Tichothecium pygmaeum*.

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- \**Muellerella pygmaeum* var. *athallina* (MÜLL.ARG.) TRIEBEL [LF] [syn. *M. erratica* (A.MASSAL.) HAFELLNER & V.JOHN] U: WEST AZERBAIJAN: Lake Urmia, c. 2 km N of Saraydeh, 1280 m, on *Aspicilia* sp., 7 May 2007, VONDRÁK [CBFS JV5638].
- \**Muellerella ventosicola* (MUDD) D.HAWKSW. [LF] L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Mycobilimbia carneoalbida* (MÜLL.ARG.) VITIK. et al. - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Mycobilimbia lurida* (ACH.) HAFELLNER & TÜRK - L: SEAWARD et al. (2004: 561); SOHRABI (2005b: 78); SOHRABI & SIPMAN (2007: 90). - U: KORDESTAN: Bijar, c. 2000 m, at base of limestone cliff, 12 Aug. 1968, Hull Univ. Expedition [BM]. NORTH KHORASAN: Ashkhaneh towards Golestan Forest, Nale-e-biaab, 1130 m, on soil, 30 March 2005, HAJI MONIRI 2014 [MRDS 114087], 2016 [MRDS 114089].
- \**Mycobilimbia tetramera* (DE NOT.) VITIK. et al. - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Myelochroa aurulenta* (TUCK.) ELIX & HALE L: SEAWARD et al. (2004: 561); RIAHI & VALADBEIGI (2005: 42); SOHRABI et al. (2007: 26).
- Neocatapyrenium rhizinosum* (MÜLL.ARG.) BREUSS - L: SEAWARD et al. (2004: 561).
- Nephroma parile* (ACH.) ACH. - L: SEAWARD et al. (2004: 562).
- Nephroma resupinatum* (L.) ACH. - L: SEAWARD et al. (2004: 562).
- Opegrapha atra* PERS. L: SZATALA (1940: 521), (1957: 107); BARKHALOV (1975: 123); SEAWARD et al. (2004: 562).
- \**Opegrapha culmigena* LIBERT [LF] L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Opegrapha varia* PERS. - L: BUHSE (1860: 243) as *O. varia* var. *hebraica*; SZATALA (1957: 108) as *O. diaphora* var. *signata*; BARKHALOV (1975: 123) as *O. diaphora*; SEAWARD et al. (2004: 562); SOHRABI & SIPMAN (2007: 90). U: MAZANDARAN: Haraz valley, above Siah Bisheh, c. 600 m, 14 April 1959, WENDELBO [BG].
- Opegrapha vermicellifera* (KUNZE) J.R.LAUNDON - L: SEAWARD et al. (2004: 562); SOHRABI & SIPMAN (2007: 90).
- Opegrapha vulgata* (ACH.) ACH. - L: SEAWARD et al. (2004: 562).
- \**Pachyphiale fagicola* (HEPP) ZWACKH - L: SOHRABI & ALSTRUP (2007: electronic suppl.).

- \**Parmelia saxatilis* (L.) ACH. - L: SOHRABI et al. (2007: 26).
- Parmelia sulcata* TAYLOR - L: SEAWARD et al. (2004: 562); RAHNAMA et al. (2005: 73); SOHRABI et al. (2007: 26); SOHRABI & SIPMAN (2007: 90).
- \**Parmeliella triptophylla* (ACH.) MÜLL.ARG. L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Parmelina quercina* (WILLD.) HALE - L: SZATALA (1957: 140) as *Parmelia quercina*; BARKHALOV (1975: 130) as *P. quercina*; SOHRABI et al. (2007: 26).
- Parmelina tiliacea* (HOFFM.) HALE - L: BUHSE (1860: 240) as *Parmelia tiliacea*; OXNER (1946: 83) as *P. scorteae*; BARKHALOV (1975: 130) as *P. scorteae*; SEAWARD et al. (2004: 562); SOHRABI (2005a: 106), (2005b: 78); SOHRABI et al. (2007: 26); SOHRABI & SIPMAN (2007: 90). U: NORTH KHORASAN: Ashkhaneh towards Golestan, Negesli, 2450 m, 15 March 2005, HAJI MONIRI 1894, 1901b [MRDS 113633, 113630 sub *Anaptychia ciliaris*].
- Parmotrema perlatum* (HUDS.) M.CHOISY - L: SZATALA (1940: 530) & (1957: 140) as *Parmelia trichotera* var. *typica*; BARKHALOV (1975: 130) as *P. trichotera*; SEAWARD et al. (2004: 562) as *Parmotrema chinense*; RIAHI & VALADBEIGI (2005: 41) as *P. chinense*; SOHRABI et al. (2007: 27).
- Peccania arabica* (MÜLL.ARG.) HENSSEN - L: MÜLLER (1892: 151) as *Omphalaria arabica*; SZATALA (1957: 110) as *Thyrea arabica*; SEAWARD et al. (2004: 563).
- Peccania coralloides* (A.MASSAL.) A.MASSAL. L: MÜLLER (1892: 151) as *Omphalaria coralloides*; SZATALA (1957: 110); RIEDL (1979: 220). - U: RAZAVI KHORASAN: Chenaran, Akhlamad Valley, 1600 m, 17 Sept. 2002, HAJI MONIRI 1509 [MRDS 113224]. WEST AZERBAIJAN: Lake Urmia, coast N of Aq Gonbad, 1290 m, on base-rich siliceous rock, 8 May 2007, VONDRÁK [CBFS JV5719].
- Peccania terricola* H.MAGN. L: SOHRABI (2005a: 107), (2005b: 78); SOHRABI & SIPMAN (2007: 90).
- Peltigera canina* (L.) WILLD. - L: WEBER (1964: 4); SEAWARD et al. (2004: 563).
- Peltigera horizontalis* (L.) WILLD. - L: SEAWARD et al. (2004: 563).
- Peltigera lepidophora* (NYL. ex VAIN.) BITTER L: SEAWARD et al. (2004: 563); SOHRABI & SIPMAN (2007: 90).
- \**Peltigera monticola* VITIK. U: NORTH KHORASAN: Ashkhaneh towards Golestan forest, Darkesh, 1130 m, March 2005, HAJI MONIRI 2010 [MRDS 113643]; Derazaab, Zaloo Mt, 1130 m, March 2005, HAJI MONIRI 1699 [MRDS 114030].

- \**Peltigera neckeri* MÜLL.ARG. - U: MAZANDARAN: Mazandaran-Chalus, roadside forest, on rock, 20 July 2004, SOHRABI 9145 [MRDS 113119].
- Peltigera polydactylon* (NECK.) HOFFM. - L: SEAWARD et al. (2004: 563).
- Peltigera ponojensis* GYELN. - U: RAZAVI KHORASAN: Chenaran, Akhلامad Valley, 1600 m, Sept. 2002, HAJI MONIRI 1514 [MRDS 114029].
- Peltigera praetextata* (FLÖRKE ex SOMMERF.) ZOPF L: SEAWARD et al. (2004: 563); RIAHI & VALADBEIGI (2004: 47, 48); SOHRABI & SIPMAN (2007: 90). U: GOLESTAN: Gorgan, Ziarat, 1532 m, April 2005, HAJI MONIRI 2038, 2040 [MRDS 113644, 113645]. MAZANDARAN: 10 km S of Chalus, Elburz Mountains, 23 July 1968, Hull Univ. Expedition [BM]; Haraz valley, Karehsang, c. 100 m, 6 May 1959, WENDELBO [BG], teste J. Miadlikowska.
- Peltigera rufescens* (WEISS) HUMB. L: SEAWARD et al. (2004: 563); SOHRABI (2005a: 107), (2005b: 78); SOHRABI & SIPMAN (2007: 90).
- Peltula obscurans* (NYL.) GYELN. - L: SEAWARD et al. (2004: 563).
- Pertusaria albescens* (HUDS.) M.CHOISY & WERNER - L: SOHRABI (2005a: 107), (2005b: 78); SOHRABI & SIPMAN (2007: 90).
- Pertusaria amara* (ACH.) NYL. - L: SZATALA (1957: 124) as *Pertusaria amara* var. *alnea*; BARKHALOV (1975: 127); SOHRABI & SIPMAN (2007: 90).
- \**Pertusaria excludens* NYL. - U: GOLESTAN: Ramian, towards Paghaleh village, Mt Ghalehmaran, 1000-2000 m, 31 May 2003, SOHRABI 517a [B, TARI].
- Pertusaria leptospora* NITSCHKE ex J.LAHM L: VĚZDA (1978, Lich. Sel. Exs. 1522).
- Pertusaria multipuncta* (TURNER) NYL. - L: VĚZDA (1978, Lich. Sel. Exs. 1521).
- Pertusaria pertusa* (WEIGEL) TUCK. - L: BUHSE (1860: 243) as *P. communis*; SZATALA (1957: 124); BARKHALOV (1975: 127); SOHRABI & SIPMAN (2007: 90).
- Pertusaria pustulata* (ACH.) DUBY - L: SZATALA (1940: 527), (1957: 124).
- Pertusaria trachythallina* ERICHS. - L: SEAWARD et al. (2004: 563).
- Phaeographis dendritica* (ACH.) MÜLL.ARG. L: SZATALA (1940: 522) & (1957: 108) as var. *sinensigrapha*; BARKHALOV (1975: 123) as var. *sinensigrapha*.
- \**Phaeophyscia chloantha* (ACH.) MOBERG - U: MAZANDARAN: Nour - Amol road, towards Lavji, 600-800 m, 2 June 2002, SOHRABI & MOFID 866 [UPS, herb. SOHRABI].
- Phaeophyscia ciliata* (HOFFM.) MOBERG - L: MÜLLER (1892: 151) as *Physcia obscura*, according to Szatala (1957); STEINER (1910: 244) as *P. obscura* var. *ulothrix*, according to Szatala (1957); SZATALA (1957: 152) as *P. ciliata*; BARK-

- HALOV (1975: 133) as *P. ciliata*; SEAWARD et al. (2004: 563); SOHRABI & SIPMAN (2007: 90).
- \**Phaeophyscia endococcina* (KÖRB.) MOBERG - U: EAST AZERBAIJAN: Jolfa, Hadishahr, Daran, 1500-2000 m, on calcareous rocks, 2 June 2001, SOHRABI 766 [UPS, herb. SOHRABI].
- Phaeophyscia endophoenicea* (HARM.) MOBERG - L: SEAWARD et al. (2004: 563); RIAHI & VALADBEIGI (2004: 47, 48); SOHRABI & SIPMAN (2007: 90).
- \**Phaeophyscia hirsuta* (MERESCHK.) ESSL. U: MAZANDARAN: Nour - Amol road, towards Lavji, 600-800 m, 2 June 2002, SOHRABI & MOFID 970, 982 [UPS, herb. SOHRABI].
- \**Phaeophyscia nigricans* (FLÖRKE) MOBERG - L: SOHRABI & SIPMAN (2007: 90).
- Phaeophyscia orbicularis* (NECK.) MOBERG - L: BUHSE (1860: 241) as *Parmelia obscura chloantha*, according to Szatala (1957); OXNER (1946: 84); SZATALA (1957: 152); BARKHALOV (1975: 133) as *Physcia orbicularis*; SOHRABI & SIPMAN (2007: 90). - U: GOLESTAN: Minodashat, on roadside *Acer*, 2003, SOHRABI & MOFID 1888, 1892 [UPS, herb. SOHRABI].
- Phaeophyscia sciastra* (ACH.) MOBERG - L: STEINER (1910: 243) as *Physcia lithotea*; SZATALA (1957: 153) as *P. sciastra*; BARKHALOV (1975: 134) as *P. sciastra*.
- \**Phaeosporobolus alpinus* R.SANT. ET AL. [LF] L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Phaeosporobolus usneae* D.HAWKSW. & HAFELLNER [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Phloeopeccania pulvinulina* J.STEINER - L: VĚZDA (1979, Lich. Sel. Exs. 1654) as *Pyrenopsis sojakii*; HENSSEN & JØRGENSEN (1990: 143); SCHULTZ et al. (2000: 195); SCHULTZ & BÜDEL (2005: 520).
- Phlyctis argena* (SPRENG.) FLOT. - L: SOHRABI (2005a: 107), (2005b: 78); SOHRABI & SIPMAN (2007: 90).
- \**Phoma caloplacae* D.HAWKSW. [LF] U: WEST AZERBAIJAN: c. 2 km N of Saraydeh, Lake Urmia, 1280 m, on *Caloplaca stillicidiorum*, 7 May 2007, VONDRÁK [CBFS JV5596].
- Physcia adscendens* (FR.) H.OLIVIER L: SEAWARD et al. (2004: 563; SOHRABI (2005a: 107), (2005b: 78); RAHNAMA et al. (2005: 74); SOHRABI & SIPMAN (2007: 90). - U: GOLESTAN: Gorgan, Naharjhoran forest park, c. 450 m, on *Quercus*, 18 Aug. 2000, SOHRABI 221 [UPS, herb. SOHRABI].
- Physcia aipolia* (EHRH. ex HUMB.) FÜRNR. - L: BUHSE (1860: 241) as *Parmelia stellaris aipolea*; SZATALA (1957: 152) incl. var. *acrita*; BARKHALOV (1975: 133); SEA-

- WARD et al. (2004: 564); SOHRABI (2005b: 78); SOHRABI & SIPMAN (2007: 90). - U: GOLESTAN: Kordkoy towards Radekan, 450-500 m, 18 June 2002, SOHRABI 1977 [UPS, herb. SOHRABI].
- Physcia albinea* (ACH.) NYL. - L: SZATALA (1940: 532), (1957: 152).
- Physcia biziana* (A.MASSAL.) ZAHLBR. - L: SEAWARD et al. (2004: 564); SOHRABI & SIPMAN (2007: 90). - U: EAST AZERBAIJAN: Jolfa, Siahroud, Kental Mt, 1200-1500 m, on twigs of shrubs, 12 June 2002, SOHRABI 1130 [UPS, herb. SOHRABI].
- Physcia caesia* (HOFFM.) FÜRNR. - L: BUHSE (1860: 241) as *Parmelia pulchella caesia*; MÜLLER (1892: 151); SZATALA (1957: 152); BARKHALOV (1975: 133); SOHRABI & SIPMAN (2007: 90). - U: MAZANDARAN: Amol, Larijan, towards Vana & Akha, on roadside calcareous rocks, 4 June 2002, SOHRABI & PASHA 2274 [UPS, herb. SOHRABI].
- \**Physcia clementei* (TURNER) LYNGE - L: SOHRABI & SIPMAN (2007: 90). - U: MAZANDARAN: Nour Amol road, towards Lavji, 600-800 m, 2 June 2002, SOHRABI & MOFID 966 [UPS, herb. SOHRABI].
- \**Physcia dimidiata* (ARNOLD) NYL. - L: SOHRABI & SIPMAN (2007: 90). - U: ESFAHAN: c. 9 km from Khansar to Daran, 2650 m, calcareous rocks, 3 Nov. 2003, MAASSOUMI & SAFAVI 2616 [B, TARI]. FARS: Behesht-e Gomshodeh, 1840 m, 5 Nov. 2003, MAASSOUMI & SAFAVI 2712 [B, TARI]. GOLESTAN: Toskaestan towards Saraliabad and Shah kuh, 1400-2000 m, 19 Oct. 2003, MAASSOUMI & YARMAND 2775 [B, TARI]. LORESTAN: Khoramabad, 10 km towards Alestar, Makhmal kuh, tang-a Shabikhum, 1350 m, 15 Nov. 2002, MAASSOUMI & SAFAVI 1705 [B, TARI].
- \**Physcia dubia* (HOFFM.) LETTAU L: SOHRABI & ALSTRUP (2007: electronic suppl.). - U: EAST AZERBAIJAN: Jolfa, Hadishahr, Daran, 1500-2000 m, on siliceous rocks, 2 June 2001, SOHRABI 680 [UPS, herb. SOHRABI]. KORDESTAN: Bijar, 2000 m, at base of limestone cliff, 12 Aug. 1968, Hull Univ. Expedition [BM].
- \**Physcia poeltii* FREY - L: SOHRABI & SIPMAN (2007: 90).
- Physcia stellaris* (L.) NYL. L: STEINER (1910: 244); OXNER (1946: 84); SZATALA (1957: 152) also as var. *rosulata*; BARKHALOV (1975: 134); SOHRABI & SIPMAN (2007: 90).
- Physcia tenella* (SCOP.) DC. L: OXNER (1946: 83) as *P. hispida*; BARKHALOV (1975: 133) as *P. hispida*; SEAWARD et al. (2004: 564); SOHRABI (2005a: 107), (2005b: 78); SOHRABI & SIPMAN (2007: 90).
- Physcia tribacia* (ACH.) NYL. - L: SZATALA (1940: 533), (1957: 152); BARKHALOV (1975: 134); SOHRABI (2005a: 107), (2005b: 78); SOHRABI & SIPMAN (2007: 90).

- \**Physconia detersa* (NYL.) POELT - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Physconia distorta* (WITH.) J.R.LAUNDON - L: OXNER (1946: 84) as *Physcia pulverulenta*; SZATALA (1957: 152) as *P. pulverulenta*; BARKHALOV (1975: 133, 134) as *P. pulverulenta* incl. var. *angustata* and var. *argyphaea*; SEAWARD et al. (2004: 564); SOHRABI (2005b: 78); SOHRABI & SIPMAN (2007: 90). - U: GOLESTAN: Ramian, towards Galeh Moran, 2 Jan. 2002, SOHRABI 1844 [UPS, herb. SOHRABI]. NORTH KHORASAN: Ashkhaneh towards Golestan, Darkesh, 1130 m, March 2005, HAJI MONIRI 2015 [MRDS 113634].
- \**Physconia enteroxantha* (NYL.) POELT - L: SOHRABI & ALSTRUP (2007: electronic suppl.). - U: EAST AZERBAIJAN: Jofa, Siahroud, Kental Mt, 1200-1500 m, on twigs of shrubs, 12 June 2002, SOHRABI 1156 [UPS, herb. SOHRABI].
- Physconia grisea* (LAM.) POELT - L: OXNER (1946: 84) as *Physcia grisea*; BARKHALOV (1975: 133) as *P. grisea*; SOHRABI (2005a: 107), (2005b: 78); SOHRABI & SIPMAN (2007: 90). [excl. *Physcia grisea* var. *iranica*, SZATALA (1940: 532); SZATALA (1957: 153) as *P. iranica*; POELT (1966b: 134) "a damaged specimen of *Phaeophyscia*"].
- \**Physconia grisea* ssp. *lilacina* (ARNOLD) POELT - U: WEST AZERBAIJAN: peninsula between Aq Gonbad and Gamichi, Lake Urmia, 1370 m, on base-rich siliceous rock, 6 May 2007, VONDRÁK [CBFS JV5600].
- \**Physconia muscigena* (ACH.) POELT - L: SOHRABI & ALSTRUP (2007: electronic suppl.) - U: EAST AZERBAIJAN: Jofa, Hadishahr, Daran towards Kiamakidagh, 1500-2000 m, on mossy siliceous rocks, 25 May 1999, SOHRABI 48, 77 [UPS, herb. SOHRABI]. GILAN: Talish, towards Marian village, 1123 m, 2 Sept. 2002, SAFAVI & SOHRABI 1077 [B, TARI], 1078a [B, TARI]. MAZANDARAN: Ramsar, Javaherdeh, 2000 m, 21 Aug. 2002, MAASSOUMI 577 [B, TARI]. WEST AZERBAIJAN: peninsula between Aq Gonbad and Gamichi, Lake Urmia, 1370 m, on base-rich siliceous rock, 6 May 2007, VONDRÁK [CBFS JV5561].
- Physconia perisidiosa* (ERICHSEN) MOBERG - L: SEAWARD et al. (2004: 564); SOHRABI (2005a: 107), (2005b: 78); SOHRABI & SIPMAN (2007: 90). - U: EAST AZERBAIJAN: Jofa, Hadishahr, Daran towards Kiamakidagh, 1500-2700 m, on moss over calcareous rocks, 2 June 2001, SOHRABI 539 [UPS, herb. SOHRABI]. MAZANDARAN: Nour, Roian Kojur, forest around Kodir, 2000 m, on soil & rocks, 4 April 2002, SOHRABI & MOFID 951 [UPS, herb. SOHRABI]. NORTH KHORASAN: Ashkhaneh towards Golestan, Negesli, 2450 m, March 2005, HAJI MONIRI 1928 [MRDS 113635].
- Placidium lachneum* (ACH.) B. DE LESD. - L: SZATALA (1957: 104) also as var. *pruinatum*; RIEDL (1979: 219) as *Dermatocarpon lachneum*; SOHRABI & SIPMAN (2007: 90).

*Placidium lacinulatum* (ACH.) BREUSS - L: BREUSS (1998: 664); SOHRABI & SIPMAN (2007: 90).

*Placidium pilosellum* (BREUSS) BREUSS - L: SEAWARD et al. (2004: 565); MONIRY et al. (2005: 56); SOHRABI & SIPMAN (2007: 90).

*Placidium rufescens* (ACH.) BREUSS - L: Rabenhorst (1871: 179) as *Endocarpon rufescens*; MÜLLER (1892: 158) as *Endopyrenium rufescens*; BARKHALOV (1975: 122) as *Dermatocarpon rufescens*; BREUSS (1990: 11) as *Catapyrenium rufescens*. - U: KORDESTAN: 3 km SE of Bijar, c. 1850 m, on limestone, 11 Aug. 1968, Hull Univ. Expedition [BM].

*Placidium semaforonense* (BREUSS) BREUSS L: BREUSS (1990: 114) as *Catapyrenium semaforonense*, (1998: 665); SEAWARD et al. (2004: 565). - U: KORDESTAN: Bijar, c. 2000 m, on limestone outcrop, 8 Aug. 1968, Hull Univ. Expedition [BM].

*Placidium squamulosum* (ACH.) BREUSS - L: MÜLLER (1892: 158) as *Endopyrenium hepaticum*, incl. var. *nigrata*; SZATALA (1957: 104) as *Placidium hepaticum*, incl. f. *nigratum*; BARKHALOV (1975: 122) as *Dermatocarpon hepaticum*; BREUSS (1990: 125) as *Catapyrenium squamulosum*, (1998: 666); SEAWARD et al. (2004: 565); SOHRABI & SIPMAN (2007: 90).

*Placidium tenellum* (BREUSS) BREUSS - L: BREUSS (1998: 667).

*Placocarpus schaeferi* (FR.) BREUSS - L: MÜLLER (1892: 158) as *Endopyrenium monstrosum*; SZATALA (1957: 105) as *Placidium monstrosum*; BARKHALOV (1975: 122) as *Dermatocarpon monstrosum*; SEAWARD et al. (2004: 565); SOHRABI & SIPMAN (2007: 90).

*Placopyrenium bucekii* (NADV. & SERVIT) BREUSS - L: SEAWARD et al. (2004: 566).

*Placynthium nigrum* (HUDS.) GRAY - L: SEAWARD et al. (2004: 566).

*Pleopsidium chlorophanum* (WAHLENB.) ZOPF - L: STEINER (1916: 29) as *Acarospora chlorophana*; SZATALA (1957: 121) as *A. chlorophana*; GOLUBKOVA (1988: 74) as *A. chlorophana*.

*Pleopsidium flavum* (BELLARDI) KÖRB. - L: MAGNUSSON (1929: 102) as *Acarospora oxytona*; SZATALA (1957: 121) as *A. oxytona*; GOLUBKOVA (1988: 73) as *A. oxytona*.

\**Pleopsidium gobiense* (H.MAGN.) HAFELLNER - L: REEB et al. (2007: 288); - U: EAST AZERBAIJAN: Jolfa, c. 17 km E of Hadishahr, 1770 m, 16 Sept. 2004, SOHRABI 603 [DUKE, herb. SOHRABI]. WEST AZERBAIJAN: Uromich, Serow, Neychalan, Mt Marmisho, 1600 m, 13 Aug. 2002, SOHRABI & EDISHO 821 [B, TARI].



- Pleurosticta acetabulum* (NECK.) ELIX & LUMBSCH - L: SEAWARD (1973: 477) as *Parmelia*; SOHRABI (2005a: 107), (2005b: 78); SOHRABI et al. (2007: 27); SOHRABI & SIPMAN (2007: 91). U: NORTH KHORASAN: Ashkhaneh towards Golestan, Negesli, 2450 m, March 2005, HAJI MONIRI 1942 [MRDS 113636].
- Polychidium muscicola* (SW.) S.GRAY - L: SEAWARD et al. (2004: 566).
- \**Polycoccum pulvinatum* (EITNER) R.SANT. [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Polysporina cyclocarpa* (ANZI) VĚZDA - U: ESFAHAN: E-facing limestone hills, 5 km W of Semrom, 2600-3000 m, 6 June 1974, ALAVA 14434 [TUR]. ZANJAN: hills above Dashti, Qeydar, c. 35 km SW of Soltaniyeh, 2200-2600 m, 3 July 1974, ALAVA 14659 [TUR].
- Polysporina pusilla* (ANZI) M.STEINER & VĚZDA [LF] - L: STEINER (1910: 216) as *Biatorella pusilla*; SZATALA (1957: 119) as *Sarcogyne pusilla*. - U: WEST AZERBAIJAN: Shirin Bolagh, Lake Urmia, 1290 m, on *Caloplaca alociza* on calcareous rock, 6 May 2007, VONDRÁK [CBFS JV5438, MRDS 114485].
- Polysporina simplex* (DAVIES) VĚZDA - L: MÜLLER (1892: 157) as *Lecidea simplex*; SZATALA (1957: 119) as *Sarcogyne simplex*; GOLUBKOVA (1988: 31).
- Polysporina urceolata* (ANZI) BRODO - L: STEINER (1910: 216) as *Biatorella urceolata*; SZATALA (1957: 119) as *Sarcogyne urceolata*; GOLUBKOVA (1988: 28).
- Porina aenea* (WALLR.) ZAHLBR. - L: SEAWARD et al. (2004: 566).
- Porpidia macrocarpa* (DC.) HERTEL & A.J.SCHWAB - L: SZATALA (1957: 115) as *Lecidea steriza*.
- \**Pronectria robergei* (MONT. & DESM.) LOWEN [LF] L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Protoblastenia rupestris* (SCOP.) J.STEINER - L: SEAWARD et al. (2004: 566).
- \**Protopannaria pezizoides* (WEBER) P.M.JØRG. & S.EKMAN - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Protoparmelia montagnei* (FR.) POELT & NIMIS - L: STEINER (1916: 31) as *Lecanora montagnei*; SZATALA (1957: 132) as *L. montagnei*.
- Protoparmelia placentiformis* (J.STEINER) POELT - L: STEINER (1910: 233) as *Lecanora placentiformis*; SZATALA (1940: 528) & (1957: 132) as *L. placentiformis*; POELT & LEUCKERT (1991: 59).
- Protoparmeliopsis muralis* (SCHREB.) M.CHOISY L: BUHSE (1860: 241) as *Lecanora muralis ochroleuca*; MÜLLER (1892: 153) as *Placodium saxicola* & var. *versicolor*; STEINER (1910: 234) & (1916: 33) as *Lecanora muralis* var. *versicolor*; (1910: 235) as var. *subversicolor*, incl. f. *verrucigera*; (1910: 236) as *L. albomargi-*

*nata*; SZATALA (1940: 528) as *Squamaria muralis* var. *elbursiana*, (1957: 134) as *S. muralis*, (1957: 135) as *S. albomarginata* & *S. versicolor*, (1957: 135) as *S. versicolor* var. *elbursiana*, (1957: 136) as *S. versicolor* var. *subversicolor*, incl. f. *verrucigera*; WEBER (1964: 5) as *Lecanora muralis*; BARKHALOV (1975: 128) as *Placodium murale*; RIEDL (1979: 220) as *Lecanora muralis* incl. var. *versicolor*; DYANAT-NEJAD & KERAMEDINI (1993: 38) as *L. muralis*; MEHRABIAN & MIRZAI (1996: 61) as *L. muralis*; ZOKAEI & KHAZAI (1999: 91) also as *Cetraria oakesiana* [see comment to next reference]; ZOKAEI (2002: 1, 3) as *Lecanora muralis*, (2002: 1, 6) as *Cetraria oakesiana* [picture shows *P. muralis*]; ZOKAEI (2003: 141) as *Lecanora muralis*; SOHRABI (2005a: 106) & (2005b: 78) as *L. muralis*; SEAWARD et al. (2004: 558) as *L. muralis*; MONIRY et al. (2005: 56) as *L. muralis*; SOHRABI & SIPMAN (2007: 91). - U: KORDESTAN: 20 km SW of Bijar, 2250 m, on pumice cliff, 17 Aug. 1968, Hull Univ. Expedition [BM]. RAZAVI KHORASAN: c. 15 km N of Quchan, 1550-1700 m, E slope of ravine, 1 Aug. 1972, UOTILA 18983 [H]. TEHRAN: c. 6 km NE of Ab-e-Ali, Tehran-Amol road, 2320 m, wet meadow near snow-line, 27 April 1972, UOTILA 15901 [H sub *L. argopholis*]. WEST AZERBAIJAN: c. 15 km SE of Maku, Bazargan-Tabriz road, 1000 m, on rock outcrops, 19 April 1972, UOTILA 15659 [H sub *L. argopholis*].

\**Protothelenella sphinctrinoides* (NYL.) MAYRHOFER & POELT L: SOHRABI & ALSTRUP (2007: electronic suppl.).

\**Psilolechia lucida* (ACH.) M.CHOISY L: SOHRABI & ALSTRUP (2007: electronic suppl.).

*Psora decipiens* (HEDW.) HOFFM. - L: MÜLLER (1892: 156); OXNER (1946: 82); SZATALA (1957: 116) as *Lecidea decipiens* incl. f. *dealbata*; WEBER (1964: 4) as *L. decipiens*; VĚZDA (1978, Lich. Sel. Exs. 1559) as *L. decipiens*; RIEDL (1979: 220); SEAWARD et al. (2004: 566) as *Psora decipiens* f. *dealbata*; JAFARI et al. (2004: 274); MONIRY et al. (2005: 56); SOHRABI & SIPMAN (2007: 91).

*Psora vallesiaca* (SCHAER.) TIMDAL - L: SEAWARD et al. (2004: 567). - U: RAZAVI KHORASAN: between Torghabeh & Noghondar, 1450 m, 20 July 2004, HAJI MONIRI 1625 [MRDS 113218]; Kalat, Gharesco Waterfall, 1050 m, on calcareous soil, 9 June 2003, HAJI MONIRI 1662 [MRDS 113213].

*Psoroma hypnorum* (VAHL) GRAY - L: SZATALA (1957: 112).

*Psorotichia frustulosa* ANZI - L: STEINER 1896: 437).

*Psorotichia lugubris* (A.MASSAL.) ARNOLD - L: STEINER (1896: 436), (1957: 110) as var. *buschirensis*; RIEDL (1979: 220).

*Psorula rufonigra* (TUCK.) G.SCHNEIDER L: SCHNEIDER (1979: 141); WEBER (1964: 4) as *Lecidea rufonigra*.

- Punctelia borreii* (SM.) KROG - L: BARKHALOV (1975: 129); SEAWARD et al. (2004: 567); RIAHI & VALADBEIGI (2005: 42); SOHRABI et al. (2007: 27).
- Punctelia subrudecta* (NYL.) KROG L: SZATALA (1957: 140) as *Parmelia dubia*; SEAWARD et al. (2004: 567); RIAHI & VALADBEIGI (2004: 47, 48); RAHNAMA et al. (2005: 73); SOHRABI et al. (2007: 27); SOHRABI & SIPMAN (2007: 91).
- Pyrenula chlorospila* ARNOLD L: SZATALA (1940: 521) as *P. nitidella* f. *chlorospila*; SZATALA (1957: 107).
- Pyrenula laevigata* (PERS.) ARNOLD - L: SEAWARD et al. (2004: 567); SOHRABI & SIPMAN (2007: 91).
- Pyrenula nitida* (WEIGEL) ACH. - L: SEAWARD et al. (2004: 567).
- Pyrenula subelliptica* (TUCK. in LEA) R.C.HARRIS - L: VĚZDA (1978, Lich. Sel. Exs. 1552) as *P. imperfecta*; HARRIS (1989: 101); SEAWARD et al. (2004: 567).
- Pyrgidium montellicum* (BELTR.) TIBELL - L: SEAWARD et al. (2004: 567).
- \**Raciborskiomyces peltigericola* (D.HAWKSW.) M.E.BURR [LF] L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Ramalina baltica* LETTAU - L: SEAWARD et al. (2004: 567).
- \**Ramalina calicaris* (L.) FR. - L: BARKHALOV (1975: 131).
- \**Ramalina canariensis* J.STEINER - L: SOHRABI & SIPMAN (2007: 91).
- Ramalina capitata* (ACH.) NYL. - L: SEAWARD et al. (2004: 567).
- Ramalina farinacea* (L.) ACH. - L: STEINER (1916: 36); SZATALA (1940: 530) as var. *gracilentata*, (1957: 140) incl. var. *gracilentata* and var. *phalerata*; SEAWARD et al. (2004: 567); RIAHI & VALADBEIGI (2005: 42); SOHRABI & SIPMAN (2007: 91). - U: GOLESTAN: Ashkhaneh towards Gorgan, Ziarat, 1532 m, April 2005, HAJI MONIRI 2030, 2031 [MRDS 113637, 113638]. MAZANDARAN: c. 30 km S of Amol, on *Crataegus*, 23 March 1964, FURSE [BM].
- \**Ramalina fraxinea* (L.) ACH. - L: SOHRABI (2005a: 107), (2005b: 78).
- Ramalina* cf. *nervulosa* (MÜLL.ARG.) DES ABB. L: SEAWARD et al. (2004: 567); RIAHI & VALADBEIGI (2005: 42).
- Ramalina pollinaria* (WESTR.) ACH. - L: BUHSE (1860: 240); SZATALA (1957: 141) incl. f. *cucullata*; BARKHALOV (1975: 131); SOHRABI (2005a: 107), (2005b: 78); SOHRABI & SIPMAN (2007: 91). U: EAST AZERBAIJAN: Jolfa-Khodaafirin, Missan, 1000-1500 m, 15 July 2001, SOHRABI 166 [TNS, herb. SOHRABI]. GOLESTAN: Gorgan to Aliabad, 250 m, on schist, 5 Sept. 2002, SOHRABI 1998A [TNS, herb. SOHRABI]; Ramian, Mt Galehmoren, c. 1000 m, 2 Jan. 2002, SOHRABI 1847 [TNS, herb. SOHRABI]; Kordkoy-Radkan, 450-600 m, on schist,

- 18 June 2002, SOHRABI 1957 [TNS, herb. SOHRABI]. MAZANDARAN: Nour, Roiyan, Kojdur to Kodir, 2000 m, 3 April 2002, SOHRABI 417, 477 [TNS, herb. SOHRABI].
- \**Ramalina polymorpha* (LILJ.) ACH. L: BARKHALOV (1975: 131); SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Ramalina roesleri* (SCHAER.) HUE - L: RIAHI & VALADBEIGI (2004: 46, 47).
- Ramalina siliquosa* (HUDS.) A.L.SM. - L: SZATALA (1957: 141) as *R. scopulorum*. [This is a seashore species unlikely to occur in Iran; cf. *R. polymorpha*].
- Ramalina sinensis* JATTA - L: SZATALA (1957: 141); WEBER (1964: 6); SEAWARD et al. (2004: 568); SOHRABI (2005b: 78); SOHRABI & SIPMAN (2007: 91). - U: EAST AZERBAIJAN: Jolfa towards Khodaafrin, Missan, 1000-1500 m, 15 July 2001, SOHRABI 157 [TNS, herb. SOHRABI]. GOLESTAN: Gorgan, Aliabbad towards Afratakh, 450-500 m, on schist, 5 Sept. 2002, SOHRABI 1997A [TNS, herb. SOHRABI]. MAZANDARAN: Nour, Roiyan, Kojdur-Kodir, 2000 m, 3 April 2002, SOHRABI 279 [TNS, herb. SOHRABI].
- Ramalina thrausta* (ACH.) NYL. - L: SZATALA (1957: 141).
- Rhizocarpon alpicola* (ANZI) RABENH. L: MÜLLER (1892: 158) as *R. geographicum* var. *alpicola*; SZATALA (1957: 117) as *Catocarpus oreites*.
- Rhizocarpon disporum* (NAEG. ex HEPP) MÜLL.ARG. L: MÜLLER (1892: 158); WEBER (1964: 4). - U: ARDABIL: Khalkhal, Asalem-Khalkhal road, 1900 m, on base-rich siliceous rock, 6 May 2007, VONDRÁK [CBFS JV5636].
- \**Rhizocarpon distinctum* TH.FR. - L: BARKHALOV (1975: 126).
- Rhizocarpon geminatum* KÖRB. - L: STEINER (1910: 216), (1916: 28) as *R. montagnei*; SZATALA (1940: 523) as *R. concretum*, (1957: 118) also as *R. montagnei*; BARKHALOV (1975: 126) as *R. concretum*; SEAWARD et al. (2004: 568); MONIRY et al. (2005: 56).
- Rhizocarpon geographicum* (L.) DC. - L: SZATALA (1957: 118); WEBER (1964: 4); BARKHALOV (1975: 126); DYANAT-NEJAD & KERAMEDINI (1993: 39); ZOKAEI & ABADI (2000: 9); SEAWARD et al. (2004: 568); SOHRABI (2005a: 107), (2005b: 78); MONIRY et al. (2005: 56); SOHRABI & SIPMAN (2007: 91). - U: NORTH KHORASAN: Salehabad-Derazaab, Zaloo Mt, 1838 m, on siliceous rock, 10 April 2004, HAJI MONIRI 1674 [MRDS 113219].
- Rhizocarpon lecanorinum* ANDERS - L: STEINER (1910: 216) as *R. geographicum* f. *lecanorinum*; SZATALA (1957: 118); MONIRY et al. (2005: 56).

- \**Rhizocarpon umbilicatum* (RAMOND) FLAGEY - L: ZOKAEI & KHAZAI (1999: 91); ZOKAEI & ABADI 2000: 9 [picture shows a different lichen]; ZOKAEI 2002: 1, 7 [picture shows a different lichen].
- Rhizocarpon viridiatrum* (WULFEN) KÖRB. - L: SZATALA (1940: 523), (1957: 118); SEAWARD et al. (2004: 568); MONIRY et al. (2005: 56).
- Rhizoplaca chrysoleuca* (SM.) ZOPF L: MÜLLER (1892: 153) as *Placodium rubinum*; OXNER (1946: 83) as *P. rubinum*; SZATALA (1957: 136) as *Squamaria rubina*; BARKHALOV (1975: 128) as *Placodium rubinum*; DYANAT-NEJAD & KERAMEDINI (1993: 39); MEHRABIAN & MIRZAI (1996: 61); SOHRABI (2005a: 107), (2005b: 78); SOHRABI & SIPMAN (2007: 91).
- Rhizoplaca melanophthalma* (RAMOND) LEUCKERT & POELT - L: MÜLLER (1892: 153) as *Placodium chrysoleucum* var. *opacum*; HUE (1892: 142) as *Lecanora melanophthalma*; STEINER (1916: 33) as *L. melanophthalma*, (1916: 34) as *L. melanophthalma* var. *obscura* f. *peltata*; SZATALA (1957: 136) as *Squamaria melanophthalma*; BARKHALOV (1975: 128) as *Placodium melanophthalmum*; LEUCKERT et al. (1976: 92, 93, 94, 119, 121); MCCUNE (1987: 11); DYANAT-NEJAD & KERAMEDINI (1993: 39); SEAWARD et al. (2004: 568); MONIRY et al. (2005: 56); SOHRABI & SIPMAN (2007: 91).
- Rhizoplaca peltata* (RAMOND) LEUCKERT & POELT - L: STEINER (1910: 236) as *Lecanora heteromorpha*, (1916: 33) as *L. heteromorpha*; SZATALA (1940: 529) as *Squamaria peltata* & f. *nigromarginata*; MAGNUSSON (1940: 122) as *Lecanora peltata*; OXNER (1946: 83) as *Placodium peltatum*; SZATALA (1957: 136) as *Squamaria peltata*, incl. f. *nigromarginata*; WEBER (1964: 5) as *Lecanora peltata*; POELT (1966a: 200) as *L. peltata*; VĚZDA (1974, Lich. Sel. Exs. 1217) as *Omphalodina peltata*; BARKHALOV (1975: 128) as *Placodium peltatum*; LEUCKERT et al. (1976: 95, 96, 97, 121, 122, 124, 126); POELT & OBERMAYER (1990: 277); SEAWARD et al. (2004: 568). U: WEST AZERBAIJAN: Lake Urmia, c. 2 km N of Saraydeh, 1280 m, on siliceous rock, 6 May 2007, VONDRÁK [CBFS JV5746].
- \**Rhizoplaca subdiscrepans* (NYL.) R.SANT. - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Rimularia insularis* (NYL.) RAMBOLD & HERTEL - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Rinodina archaea* (ACH.) ARNOLD - L: SZATALA (1940: 532) as *R. laevigata*, (1957: 149); BARKHALOV (1975: 132).
- Rinodina bischoffii* (HEPP) A.MASSAL. - L: STEINER (1896: 439), (1910: 242) as var. *convexula*; SZATALA (1940: 532) as var. *protuberans*; OXNER (1946: 83); SZATALA (1957: 150) also as var. *convexula*; SEAWARD et al. (2004: 568); MONIRY et al. (2005: 56); SOHRABI & SIPMAN (2007: 91). - U: WEST AZERBAIJAN: Lake Ur-

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mia, Shirin Bolagh, 1290 m, on calcareous rock, 9 May 2007, VONDRÁK [CBFS JV5780].

\**Rinodina calcarea* (ARNOLD) ARNOLD - U: WEST AZERBAIJAN: Shirin Bolagh, Lake Urmia, 1290 m, on limestone outcrop, 9 May 2007, VONDRÁK [CBFS JV5580].

*Rinodina dubyana* (HEPP) J.STEINER - L: MÜLLER (1892: 157) as *R. bischoffii* var. *aegyptiaca*; SZATALA (1940: 532) & (1957: 150) as *R. bischoffii* var. *leucomelas*; SZATALA (1957: 150) as *R. bischoffii* var. *aegyptiaca*.

\**Rinodina epiianthina* JATTA - U: WEST AZERBAIJAN: Lake Urmia, Bandar-e-Rahmanlu, 1290 m, on base-rich siliceous rock, 8 May 2007, VONDRÁK [CBFS JV5768].

*Rinodina exigua* (ACH.) GRAY - L: STEINER (1916: 38); SZATALA (1957: 150).

*Rinodina guzzinii* JATTA - L: STEINER (1910: 242) as *R. bischoffii* var. *ochrata*; SZATALA (1957: 150) as *R. bischoffii* var. *ochrata*; MAYRHOFER (1984: 418, 420).

*Rinodina immersa* (KÖRB.) ZAHLBR. - L: SZATALA (1940: 532), (1957: 150) incl. f. *perexigua*; MAYRHOFER (1984: 425); WASSER & NEVO (2005: 274); SOHRABI & SIPMAN (2007: 91).

\**Rinodina milvina* (WAHLENB.) TH.FR. - L: SOHRABI & ALSTRUP (2007: electronic suppl.).

\**Rinodina mucronatula* H.MAGN. - U: WEST AZERBAIJAN: Lake Urmia, peninsula between Aq Gonbad & Gamichi, 1280 m, on mosses over volcanic rock, 8 May 2007, VONDRÁK [CBFS JV5685].

\**Rinodina oxydata* (A.MASSAL.) A.MASSAL. - U: GILAN: Talesh, near Khotbeh Sara, 30 m, on coastal base-rich siliceous outcrops, 5 May 2007, VONDRÁK [CBFS JV5739].

*Rinodina pycnocarpa* H.MAGN. - L: MAYRHOFER (1984: 455).

\**Rinodina pyrina* (ACH.) ARNOLD L: SOHRABI & ALSTRUP (2007: electronic suppl.).

\**Rinodina septentrionalis* MALME U: GILAN: Asalem, Hashtpar, 10 m, on *Cerasus* in old orchard, 5 May 2007, VONDRÁK [CBFS JV5603].

*Rinodina straussii* J.STEINER L: STEINER (1910: 242); SZATALA (1957: 150); MAYRHOFER & POELT (1979: 145); MAYRHOFER (1984: 456, 458).

\**Rinodina teichophila* (NYL.) ARNOLD - U: GILAN: Talesh, near Khotbeh Sara, 30 m, on coastal base-rich siliceous outcrops, 5 May 2007, VONDRÁK [CBFS JV5821].

*Rinodina turfacea* (WAHLENB.) KÖRB. - L: SZATALA (1957: 151).

*Rinodinella controversa* (A.MASSAL.) H.MAYRHOFER & POELT - L: MÜLLER (1892: 157) as *Rinodina controversa*; SZATALA (1957: 150) as *R. controversa*.

\**Rosellinula frustulosae* (VOUAUX) R.SANT. [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).

*Sarcogyne clavus* (DC.) KREMP. L: WEBER (1964: 5); GOLUBKOVA (1988: 37); SOHRABI & SIPMAN (2007: 91).

*Sarcogyne polackiana* (MÜLL.ARG.) H.MAGN. - L: MÜLLER (1892: 157) as *Lecidea polackiana*; MAGNUSSON (1937: 103); SZATALA (1957: 119); GOLUBKOVA (1988: 36).

\**Sarcogyne privigna* (ACH.) A.MASSAL. - U: RAZAVI KHORASAN: Neishabur, Bozghan, Dahan-e Heidar, Protected Area, 1400 m, 30 April 2003, MAASSOUMI, SOHRABI & SAFAVI 2169 [TARI, TSB].

*Sarcogyne regularis* KÖRB. - L: STEINER (1896: 441) as *Biatorella pruinoso*; SZATALA (1957: 119); RIEDL (1979: 220); GOLUBKOVA (1988: 40); DYANAT-NEJAD & KERAMEDINI (1993: 39); SEAWARD et al. (2004: 569); SOHRABI & SIPMAN (2007: 91).

*Schismatomma decolorans* (TURNER & BORRER ex SM.) CLAUZADE & VÉZDA - L: SEAWARD et al. (2004: 569).

\**Scoliciosporum umbrinum* (ACH.) ARNOLD - L: SOHRABI & ALSTRUP (2007: electronic suppl.).

\**Seiophora contortuplicata* (ACH.) FRÖDÉN - L: SOHRABI & SIPMAN (2007: 91); HADJI MONIRI & SEAWARD (2005: 30) as *Teloschistes contortuplicatus*. - U: RAZAVI KHORASAN: N of Neishabour, Sarwelayat, 1400 m, 29 April 2002, HAJI MONIRI 1477 [MRDS 113217]; c. 20 km from Rivash to Kashmar, Shotor Rah Pass, 1800 m, on volcanic rocks, 30 April 2003, MAASSOUMI, SOHRABI & SAFAVI 2275 [B, TARI].

\**Seiophora lacunosa* (RUPR.) FRÖDÉN - L: HADJI MONIRI & SEAWARD (2005: 30) as *Teloschistes lacunosus*. U: NORTH KHORASAN: Salehabad-Derazaab, Zaloo Mt, 1838 m, 10 April 2004, HAJI MONIRI 1738; between Torghabeh & Noghondar, 1450 m, on twig, 1 May 2003, HAJI MONIRI 1738a [MRDS 113220].

\**Seiophora orientalis* FRÖDÉN - L: SOHRABI & SIPMAN (2007: 91).

*Solenopsora asperatula* (J.STEINER) ZAHLBR. L: STEINER (1896: 439) as *Lecania asperatula*; SZATALA (1957: 138).

*Solorina saccata* (L.) ACH. - L: SZATALA (1957: 112).

- \**Sphaerellothecium cladoniae* (ALSTRUP & ZHURB.) HAFELLNER [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Squamarina cartilaginea* (WITH.) P.JAMES - L: BUHSE (1860: 241) as *Lecanora crassa* b. *caespitosa*; MÜLLER (1892: 154) as *Placodium crassum*, (1892: 154) as *P. crassum* var. *deserti*, (1892: 154) as *P. crassum* var. *melaloma*; OXNER (1946: 83) as *P. crassum*; SZATALA (1957: 134) as *Squamaria crassa* var. *caespitosa*, incl. f. *melaloma*; BARKHALOV (1975: 128) as *Placodium crassum*; SEAWARD et al. (2004: 570); JAFARI et al. (2004: 274); MONIRY et al. (2005: 56); SOHRABI & SIPMAN (2007: 91).
- Squamarina concrescens* (MÜLL.ARG.) POELT - L: SEAWARD et al. (2004: 570).
- Squamarina gypsacea* (SM.) POELT - L: DYANAT-NEJAD & KERAMEDINI (1993: 39); SEAWARD et al. (2004: 570); SOHRABI (2005b: 78); SOHRABI & SIPMAN (2007: 91).
- Squamarina lentigera* (WEBER) POELT - L: STEINER (1916: 33) as *Lecanora lentigera*; SZATALA (1957: 134) as *Squamaria lentigera*, incl. var. *deserti*; WEBER (1964: 5) as *Lecanora lentigera*; VĚZDA (1974, Lich. Sel. Exs. 1216); RIEDL (1979: 220); SEAWARD et al. (2004: 570); MONIRY et al. (2005: 56). U: HORMOZGAN: Mt Kúh-e-Genú, 5 May 1977, SOJÁK [BYU].
- \**Squamarina stella-petraea* POELT - L: DYANAT-NEJAD & KERAMEDINI (1993: 39). U: NORTH KHORASAN: Bujnourd, Badranlou, towards Raz (Gholaman), 1220 m, 4 May 2003, MAASSOUMI, SOHRABI & SAFAVI 2440 [TARI, TSB].
- Staurolemma omphalarioides* (ANZI) P.M.JØRG. & HENSSEN - L: SEAWARD et al. (2004: 570).
- Staurothele ambrosiana* (A.MASSAL.) ZSCHACKE - L: STEINER (1916: 24); SZATALA (1957: 106) as *Endocarpon ambrosianum*.
- Staurothele clopima* (WAHLENB.) TH.FR. - L: MÜLLER (1892: 159); SZATALA (1940: 521) as *S. clopima* f. *protuberans*; SZATALA (1957: 106) as *Endocarpon clopimum*; BARKHALOV (1975: 122).
- \**Staurothele fissa* (TAYLOR) ZWACKH - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Staurothele hymenogonia* (NYL.) TH.FR. - L: SEAWARD et al. (2004: 570).
- Staurothele orbicularis* (A. MASSAL.) TH.FR. - L: STEINER (1910: 212) as var. *orientalis*; SZATALA (1957: 106) as var. *orientalis*.
- \**Stigmidium congestum* (KÖRB.) TRIEBEL [LF] L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Stigmidium fuscatae* (ARNOLD) R.SANT. [LF] L: SOHRABI & ALSTRUP (2007: electronic suppl.).



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- \**Stigmidium pumilum* (LETTAU) MATZER & HAFELLNER [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Stigmidium squamariae* (B. DE LESD.) CL.ROUX & TRIEBEL [LF] - L: ROUX & TRIEBEL (2005: 136).
- \**Stigmidium tabacinae* (ARNOLD) TRIEBEL [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Stigmidium xanthoparmeliarum* HAFELLNER [LF] L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Teloschistes chrysophthalmus* (L.) TH.FR. - U: GOLESTAN: Gorgan, Naharkhoran Forest Park, 450 m, 18 Aug. 2000, SOHRABI 5566 [KW, herb. SOHRABI].
- Tephromela atra* (HUDS.) HAFELLNER - L: WEBER (1964: 5) as *Lecanora atra*; SOHRABI & SIPMAN (2007: 91).
- \**Thelenella muscorum* (FR.) VAIN. L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Thrombium corticolum* J.STEINER - L: STEINER (1910: 212); SZATALA (1957: 103).
- Thrombium stereocarpum* J.STEINER - L: STEINER (1896: 444); MAGNUSSON (1940: 21); SZATALA (1957: 102).
- \**Thyrea confusa* HENSSEN - L: SOHRABI & SIPMAN (2007: 91). - U: RAZAVI KHORASAN: Chenaran, Akhlamad Valley, 1600 m, 17 Sept. 2002, HAJI MONIRI 1509 [MRDS 113224 sub *Peccania coralloides*]; c. 130 km towards Sabzevar from Shahrud, 1120 m, on rocks, 29 April 2003, MAASSOUMI, SOHRABI & SAFAVI 2147 [B, TARI]. WEST AZERBAIJAN: Uromieh Serow, Neychalan, Mt Marmisho, 1600 m, 13 Aug. 2002, SOHRABI & Edisho 820 [B, TARI].
- Toninia aromatica* (SM.) A.MASSAL. L: STEINER (1896: 441) as var. *acervulata*; SZATALA (1957: 116).
- \**Toninia athallina* (HEPP) TIMDAL U: WEST AZERBAIJAN: Lake Urmia, Shirin Bolagh, 1290 m, on sun-exposed calcareous rock, 9 May 2007, VONDRÁK [CBFS JV5772].
- Toninia candida* (WEBER) TH.FR. L: OXNER (1946: 82); SEAWARD et al. (2004: 571); MONIRY et al. (2005: 56); SOHRABI (2005b: 78); SOHRABI & SIPMAN (2007: 91). U: EAST AZERBAIJAN: Jolfa-Marand road, Daradiz, 800-1500 m, on calcareous soil, 30 March 2004, SOHRABI 3820a [O, herb. SOHRABI].
- Toninia cinereovirens* (SCHAER.) A.MASSAL. - L: SEAWARD et al. (2004: 571); SOHRABI (2005a: 107); SOHRABI & SIPMAN (2007: 91). U: ARDABIL: Asalem-Khalkhal road, Khalkhal, 1900 m, on base-rich siliceous rock, 6 May 2007, VONDRÁK [CBFS JV5609].

- Toninia diffracta* (A.MASSAL.) ZAHLBR. - L: ZOKAEI (2002: 1, 6) as *T. rosulata* [picture shows *T. diffracta*]; SEAWARD et al. (2004: 571); MONIRY et al. (2005: 56); SOHRABI & SIPMAN (2007: 91). - U: EAST AZERBAIJAN: Jolfa, S of Daran towards Kiamakidagh, 1500-2000 m, on calcareous rocks, 25 May 1999, SOHRABI 18 [O, herb. SOHRABI]. GOLESTAN: Gorgan, Aliabbad, towards Afrataket, 450-500 m, on soil, 12 May 2003, SOHRABI 2135, 2151 [O, herb. SOHRABI]. MAZANDARAN: Nour, Roian Kojur, forest around Kodir, 2000 m, on soil, 4 April 2002, SOHRABI & MOFID 905, 907 [O, herb. SOHRABI].
- \**Toninia opuntoides* (VILL.) TIMDAL - U: EAST AZERBAIJAN: Jolfa to Asiabkharabeh waterfall, 1200-1300 m, on calcareous rocks, 21 May 2001, SOHRABI & REZA SOHRABI, 949 [O, herb. SOHRABI]. MAZANDARAN: Nour, Roian Kojur, forest around Kodir, 2000 m, on soil & calcareous rocks, 4 April 2002, SOHRABI & MORFID 946, 949 [O, herb. SOHRABI].
- Toninia physaroides* (OPIZ) ZAHLBR. - L: SEAWARD et al. (2004: 571); MONIRY et al. (2005: 56).
- \**Toninia rosulata* (ANZI) H.OLIVIER - L: ZOKAEI & KHAZAI (1999: 91); ZOKAEI (2003: 141).
- \**Toninia ruginosa* (TUCK.) HERRE - U: EAST AZERBAIJAN: Jolfa, S of Daran, towards Kiamakidagh, 1500-2000 m, on calcareous rocks, 25 May 1999, SOHRABI 56 [O, herb. SOHRABI].
- Toninia sedifolia* (SCOP.) TIMDAL - L: MÜLLER (1892: 156) as *Thalloidima coeruleonigricans*; OXNER (1946: 82) as *Toninia coeruleonigricans*; SZATALA (1957: 116) as *Thalloedaema coeruleonigricans*; WEBER (1964: 4) as *Toninia coeruleonigricans*; BARKHALOV (1975: 126) as *T. coeruleonigricans*; RIEDL (1979: 220) as *T. coeruleonigricans*; TIMDAL (1991: 97); SEAWARD et al. (2004: 571); JAFARI et al. (2004: 274); MONIRY et al. (2005: 56). - U: EAST AZERBAIJAN: Jolfa, 5 km W of Siahroud, 1200-1500 m, on calcareous rocks, 21 May 2001, SOHRABI & REZA SOHRABI 1035, 1074 [O, herb. SOHRABI]. GOLESTAN: Gorgan, Inche towards Maravetapeh, 50-100 m, on soil, 2 Jan. 2004, SOHRABI 2048 [O, herb. SOHRABI]. RAZAVI KHORASAN: Kalat, Gharesco Waterfall, 1050 m, 9 July 2003, HAJI MONIRI 1662 [MRDS 113213 sub *Psora vallesiaca*].
- Toninia taurica* (SZATALA) OXNER - L: SOHRABI (2005a: 107), (2005b: 78); SOHRABI & SIPMAN (2007: 91). - U: EAST AZERBAIJAN: Jolfa, Siahroud, Kental Mt, 1200-1500 m, on soil, 12 June 2002, SOHRABI 1131 [O, herb. SOHRABI]. MAZANDARAN: Amol, Larijan, towards Vana & Akha, on calcareous soil, 4 June 2002, SOHRABI & PASHA 2240, 2248 [O, herb. SOHRABI]. RAZAVI KHORASAN: Chenaran, Akhlamad Valley, 1600 m, 17 Sept. 2002, HAJI MONIRI 1517 [MRDS 113222].

- \**Toninia tristis* (TH.FR.) TH.FR. - L: SOHRABI & ALSTRUP (2007: electronic suppl.).  
- U: EAST AZERBAIJAN: Jolfa, 5 KM W Siahroud, 1200-1500 m, 21 May 2001,  
on calcareous rocks, SOHRABI & REZA SOHRABI 1040 [O, herb. SOHRABI].
- Toninia weberi* TIMDAL - L: SZATALA (1954: 133) & (1957: 117) as *Thalloidima granulosa*; LAMB (1963: 701) as *T. granulosa*; TIMDAL (1991: 118).
- Tornabea scutellifera* (WITH.) J.R.LAUNDON - L: NIMIS & TRETACH (1997: 218); SEAWARD et al. (2004: 571); SOHRABI & SIPMAN (2007: 91). - U: NORTH KHORASAN: Ashkhaneh towards Golestan Forest, Nargesli, 1893 m, on *Crataegus pentagyna*, 15 March 2005, HAJI MONIRI 1893 [MRDS 114079]; Ashkhaneh towards Golestan Forest, Darkesh, 1415 m, on *Quercus castaneifolia*, 15 March 2005, HAJI MONIRI 1989 [MRDS 114082], 29 March 2005, HAJI MONIRI 1990 [MRDS 114081], 1993 [MRDS 114084].
- Trapelia coarctata* (SM.) M.CHOISY - L: SEAWARD et al. (2004: 572).
- \**Tremella ramalinae* DIEDERICH [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Umbilicaria aprina* NYL. - L: SEAWARD et al. (2004: 572).
- \**Umbilicaria cinerascens* (ARNOLD) FREY L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Umbilicaria cinereorufescens* (SCHAER.) FREY L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- Umbilicaria cylindrica* (L.) DELISE ex DUBY - L: STEINER (1916: 28) as *Gyrophora cylindrica* var. *tornata*; SZATALA (1957: 119) as *G. cylindrica* var. *tornata*.
- \**Umbilicaria decussata* (VILL.) ZAHLBR. L: DYANAT-NEJAD & KERAMEDINI (1993: 39)
- \**Umbilicaria freyi* CODOGNO ET AL. L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Umbilicaria hirsuta* (SW. ex WESTR.) HOFFM. - L: DYANAT-NEJAD & KERAMEDINI (1993: 40).
- \**Umbilicaria microphylla* (LAURER) A.MASSAL. - L: DYANAT-NEJAD & KERAMEDINI (1993: 40).
- \**Umbilicaria nylanderiana* (ZAHLBR.) H.MAGN. - L: DYANAT-NEJAD & KERAMEDINI (1993: 40).
- \**Umbilicaria polyphylla* (L.) BAUMG. - L: DYANAT-NEJAD & KERAMEDINI (1993: 40).

- \**Umbilicaria vellea* (L.) HOFFM. - L: BARKHALOV (1975: 127) as *Gyrophora vellea*; SOHRABI & ALSTRUP (2007: electronic suppl.).
- Usnea articulata* (L.) HOFFM. L: WEBER (1964: 7); SEAWARD et al. (2004: 572); RAHNAMA et al. (2005: 74). U: GOLESTAN: Ashkhaneh towards Gorgan, Ziarat, 1532 m, April 2005, HAJI MONIRI 2032 [MRDS 113639].
- \**Usnea cornuta* KÖRB. - U: GOLESTAN: Toskaestan towards Saraliabad & Shahkuh, 1400-2000 m, 19 Oct. 2003, MAASSOUMI & YARMAND 2769a [B].
- Usnea hirta* (L.) F.H.WIGG. - L: BUHSE (1860: 240) as *Usnea barbata* A. *campestris* and *Usnea barbata* b. *hirta*; SZATALA (1957: 141).
- Usnea laponica* VAIN. - L: SEAWARD et al. (2004: 572).
- Usnea subfloridana* STIRT. - L: BARKHALOV (1975: 131) as *Usnea comosa*.
- \**Verrucaria biatorinaria* ZEHETL. [LF] - U: WEST AZERBAIJAN: Lake Urmia, c. 2 km N of Saraydeh, 1280 m, on *Caloplaca biatorina*, 7 May 2007, VONDRÁK [CBFS JV5722].
- Verrucaria buschirensis* J.STEINER - L: STEINER (1896: 443); SZATALA (1957: 101); RIEDL (1979: 219).
- \**Verrucaria calciseda* DC. U: FARS: Bolhayat Pass, between Shiraz & Kazeroun, 1730 m, on flat calcareous rock, 6 Nov. 2003, MAASSOUMI & SAFAVI 2729 [B, TARI].
- Verrucaria compacta* (A.MASSAL.) JATTA - L: RIEDL (1979: 219) as *Dermatocarpon compactum*. - U: WEST AZERBAIJAN: Lake Urmia, Shirin Bolagh, 1290 m, on *Caloplaca transcaspica*, 9 May 2007, VONDRÁK [CBFS JV5764].
- Verrucaria crassa* (ANZI) JATTA - L: MÜLLER (1892: 158) as *Endopyrenium crassum*; SZATALA (1957: 105) as *Placidium crassum* [See BREUSS (1990: 141) regarding the taxonomic position of this taxon.]
- \**Verrucaria elegantaria* ZEHETL. [LF] - U: WEST AZERBAIJAN: Bandar-e-Rahmanlu, Lake Urmia, 1290 m, on *Xanthoria elegans* on siliceous rock, 8 May 2007, VONDRÁK [CBFS JV5604].
- Verrucaria fuscella* (TURNER) WINCH - L: SZATALA (1957: 102) as *V. glaucina*; SEAWARD et al. (2004: 572).
- Verrucaria lecideoides* TREVIS. - L: SEAWARD et al. (2004: 572).
- Verrucaria macrostoma* DUFOUR ex DC. - L: MÜLLER (1892: 159 as f. *nigrata*; SZATALA (1957: 102) as f. *nigrata*, (1957: 102).
- Verrucaria macrostoma* f. *furfuracea* B. DE LESD. - U: ARDABIL: Namin, near Giladeh, 1350 m, on lime-rich rock, 4 May 2007, VONDRÁK [CBFS JV5791].

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- Verrucaria marmorea* (SCOP.) ARNOLD L: SOHRABI (2005a: 107), (2005b: 78); SOHRABI & SIPMAN (2007: 91).
- Verrucaria minuta* (HEPP) ZSCHACKE - L: SZATALA (1957: 102) as *V. lecideoides* var. *minuta*.
- Verrucaria nigrescens* PERS. - L: MÜLLER (1892: 159); STEINER (1896: 437, 440, 443, 445); SZATALA (1957: 102); BARKHALOV (1975: 122); SEAWARD et al. (2004: 572); SOHRABI & SIPMAN (2007: 91).
- \**Verrucaria tristis* (A.MASSAL.) TREVIS. - L: SOHRABI & ALSTRUP (2007: electronic suppl.).
- \**Verrucaria viridula* (SCHRAD.) ACH. - U: KOHKILUYEHN: c. 35 km from Semirom to Yassuj, 1600 m, on conglomerate stones in *Quercus* woodland, 5 Nov. 2003, MAASSOUMI & SAFAVI 2679 [B, TARI].
- Xanthomendoza fallax* (HEPP) SØCHTING, KÄRNEFELT & S.KONDR. - L: SZATALA (1957: 147) as *Xanthoria substellaris*; SEAWARD et al. (2004: 573) as *Xanthoria fallax*.
- Xanthomendoza fulva* (HOFFM.) SØCHTING, KÄRNEFELT & S.KONDR. - L: SOHRABI (2005a: 107), (2005b: 78); SOHRABI & SIPMAN (2007: 91). - U: KORDESTAN: Bijar, 2000 m, on limestone cliff, 12 Aug. 1968, Hull Univ. Expedition [BM].
- \**Xanthomendoza ulophyllodes* (RÄSÄNEN) SØCHTING, KÄRNEFELT & S.KONDR. - L: SOHRABI & SIPMAN (2007: 91). - U: GILAN: Talish, towards Marian village, 1123 m, 2 Sept. 2002, SAFAVI & SOHRABI 1076d [B, TARI].
- \**Xanthoparmelia camtschadalis* (ACH.) HALE - L: SOHRABI et al. (2007: 27).
- Xanthoparmelia conspersa* (EHRH. ex ACH.) HALE - L: WEBER (1964: 6) as *Parmelia conspersa* (sensu lato); SOHRABI et al. (2007: 28).
- \**Xanthoparmelia delisei* (DUBY) O.BLANCO ET AL. - L: SOHRABI et al. (2007: 28). - U: EAST AZERBAIJAN: W of Seyah Chaman, c. 20 km NW of Miyaneh, 1720 m, rock outcrop, 20 April 1972, UOTILA 15681 [H]. WEST AZERBAIJAN: c. 15 km SE of Maku, 1000 m, valley with rock outcrops, 19 April 1972, UOTILA 15671 [H].
- \**Xanthoparmelia lineola* (E.C.BERRY) HALE L: ZOKAEI & KHAZAI (1999: 91) [Presence doubtful, not confirmed by SOHRABI et al. (2007)].
- \**Xanthoparmelia loxodes* (NYL.) O.BLANCO ET AL. - L: SOHRABI et al. (2007: 28). - U: HAMADAN: N-facing slopes above Takht Mt, 2150-2250 m, 5 July 1974 [TUR]. TEHRAN: Ostanemarkazi, c. 6 km NE of Ab-e-Ali, 2329 m, wet meadows near snowline, 27 April 1972, UOTILA 15897 [H].

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- Xanthoparmelia perrugata* (NYL.) O.BLANCO ET AL. L: SEAWARD et al. (2004: 561) as *Neofuscelia perrugata*; SOHRABI et al. (2007: 28).
- \**Xanthoparmelia pokornyi* (KÖRB.) HALE - L: SOHRABI et al. (2007: 28).
- \**Xanthoparmelia psoromifera* (HALE) HALE L: ZOKAEI & KHAZAI (1999: 91) [Presence doubtful, not confirmed by SOHRABI et al. (2007)].
- Xanthoparmelia pulla* (ACH.) O.BLANCO ET AL. L: STEINER (1916: 35) as *Parmelia prolixa*; SZATALA (1957: 139) as *P. prolixa*; WEBER (1964: 6) as *P. prolixa*; BARKHALOV (1975: 130) as *P. prolixa*; MONIRY et al. (2005: 56) as *Neofuscelia pulla*; SOHRABI et al. (2007: 28); SOHRABI & SIPMAN (2007: 91).
- \**Xanthoparmelia stenophylla* (ACH.) AHTI & D.HAWKSW. L: SOHRABI et al. (2007: 28). - U: GILAN: Talish, towards Marian village, 1123 m, 2 Sept. 2002, SAFAVI & SOHRABI 1075 [B, TARI], 1075b [B, TARI]. MAZANDARAN: Ramsar, Javaherdeh, 2000 m, 21 Aug. 2002, MAAŠSOUMI 572 [B, TARI], 594 [B, TARI], 609 [B, TARI]. WEST AZERBAIJAN: Bazargan, towards Dedovly village, SW of Bazargan, 1750 m, 10 Aug. 2002, SOHRABI & ALIZADEH 731 [B, TARI].
- \**Xanthoparmelia tinctoria* (MAHEU & GILLET) HALE - L: SOHRABI et al. (2007: 29).
- \**Xanthoparmelia verruculifera* (NYL.) O.BLANCO ET AL. - L: SOHRABI et al. (2007: 29).
- Xanthoria candelaria* (L.) TH.FR. - L: STEINER (1910: 242) as *X. lychnea*; OXNER (1946: 83); SZATALA (1957: 147); BARKHALOV (1975: 132).
- Xanthoria ectaneoides* (NYL.) ZAHLBR. L: SZATALA (1957: 147) as *X. parietina* var. *ectanea*).
- Xanthoria elegans* (LINK.) TH.FR. - L: MÜLLER (1892: 153) as *Amphiloma elegans*; STEINER (1910: 240) as *Caloplaca elegans*, incl. f. *tenuis*; SZATALA (1940: 531) as *Gasparrinia elegans*, (1940: 532) as *Gasparrinia elegans* var. *tenuis*; (1957: 147) also as var. *tenuis*; WEBER (1964: 7) as *Caloplaca elegans*; BARKHALOV (1975: 132) as *C. elegans*; DYANAT-NEJAD & KERAMEDINI (1993: 40); MEHRABIAN & MIRZAI (1996: 61); ZOKAEI & ABADI (2000: 10); SEAWARD et al. (2004: 573); MONIRY et al. (2005: 56); SOHRABI & SIPMAN (2007: 91). - U: ARDBADIL: river valley, SW of Ilanjuq, 1790 m, on dusty shrub twigs, 3 May 2007, VONDRÁK [CBFS JV5550].
- \**Xanthoria papillifera* (VAIN.) POELT - L: SOHRABI & SIPMAN (2007: 91).
- Xanthoria parietina* (L.) TH.FR. - L: BUHSE (1860: 241) as *Parmelia parietina vulgaris*; SZATALA (1957: 147), also as var. *ectanea*; WEBER (1964: 7); BARKHALOV (1975: 132); SEAWARD et al. (2004: 573); RAHNAMA et al. (2005: 69); SOHRABI (2005b: 78); SOHRABI & SIPMAN (2007: 91).

\**Xanthoria soreliata* (VAIN.) POELT U: ARDABIL: Namin, near Giladeh, 1350 m, on siliceous outcrop, 4 May 2007, VONDRÁK [CBFS JV5684]. MAZANDARAN: Ramsar, Javaherdeh, 2000 m, 21 Aug. 2002, MAASSOUMI 595 [B, TARI].

*Xanthoria steineri* LAMB - L: VĚZDA (1974, Lich. Sel. Exs. 1249); WASSER & NEVO (2005: 317).

*Xanthoria stiligera* GIRALT et al. - L: WASSER & NEVO (2005: 318).

\**Xanthoriicola physciae* (KALCHBR.) D.HAWKSW. [LF] - L: SOHRABI & ALSTRUP (2007: electronic suppl.).

\**Zwackhiomyces cervinae* CALATAYUD ET AL. [LF] - L: CALATAYUD et al. (2007: 130).

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