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Preliminary checklist of the lichen-forming and lichenicolous fungi of Castilla-La Mancha (Spain)

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Abstract. A preliminary checklist of lichen-forming and lichenicolous fungi of Castilla-La Mancha is presented. A total of 5064 records have been compiled from 204 publications. The number of taxa ascends to 832, of which 820 are species and 12 infraspecific taxa. Of these 763 are lichenized and 69 correspond to lichenicolous fungi.
Keywords. Lichens, checklist, lichen diversity, Castilla-La Mancha, Spain.

[es] Catálogo preliminar de los hongos liquenizados y liquenícolas de Castilla-La Mancha (España)

Resumen. Se presenta un catálogo preliminar de los hongos liquenizados y liquenícolas de Castilla-La Mancha. Se han recopilado un total de 5064 citas procedentes de 204 publicaciones. El número de taxa asciende a 832, de los cuales 820 son especies y 12 corresponden a rangos subespecíficos. De ellos, 763 están liquenizados y 69 corresponden a hongos liquenícolas.
Palabras clave. Líquenes, catálogo, diversidad liquénica, Castilla-La Mancha, España.

Introduction

Lichens have been traditionally understood as the symbiotic phenotype of the union of a heterotrophic fungus and an autotrophic partner, which may be a green algae and/or a cyanobacterium (Friedl and Büdel 2008). Recently the definition of lichen is being expanded to include other fungal species and the bacterial communities that are present in the thallus. Under this new definition lichens can be understood as self-sustaining ecosystems (Hawksworth and Grube 2020). They are a key element in ecosystem functioning. Lichens take part in soil formation, can contribute a substantial amount of biomass to the ecosystems, interact with many other organisms, are part of complex food webs and participate in the biogeochemical cycles (Seaward 2008). Besides, lichens are known to be outstanding bioindicators and are used in fields such as forest management (e.g. Sarrión and Burgaz 2003) or air quality assessment (e.g. Cislaghi and Nimis 1997). Because of this, coupled with the threats they face under global change (e.g. Allen and Lendemer, 2016) it is important to keep studying their diversity and distribution patterns.

In the Iberian Peninsula the study of lichen diversity gave rise to a comprehensive checklist of lichen-forming and lichenicolous fungi that compiled the species reported in more than 1,500 previous publications (Llimona and Hladun 2001). Since then checklists have been created for many of Spain's autonomous regions: Asturias (de la Torre Fernández and Fernández Ordoñez 2000), Madrid (Burgaz 2006), Castilla y León (Pérez-Ortega and Álvarez-Lafuente 2006a), Cantabria (Pérez-Ortega and Álvarez-Lafuente 2006b), Aragón (Etayo 2010) and Andalucía (Burgaz 2014). Checklists are also available for particular enclaves of other autonomous regions such as Galicia (Carballal and Paz-Bermúdez 2008), the Basque Country (Etayo and López de Silanes 2008), Valencia (Garrido-Benavent et al. 2013) or the Canary Islands (Hernández Padrón et al. 2019). Aragón et al. (2001) published a book on the macrolichens of Castilla-La Mancha. However, a checklist that includes the microlichens, as well as the lichenicolous fungi of the region has yet to be compiled.

Castilla-La Mancha is an autonomus region situated in the southern half of the Iberian Peninsula. With 79,461 km^2 it is the third largest autonomus region of the country, only surpassed by Andalucía and Castilla y León. The region has a complex orography, dominated by plateaus, moors and plains interspersed by mountain ranges. The seven main flat areas of the region (Aragón et al. 2001) are "La Alcarria" (situated in the center and west of the province of Guadalajara and north-east of Cuenca), "Parameras de Molina y Alto Tajo" (situated in the eastern part of

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Guadalajara), "Mesa de Ocaña-Tarancón" (situated in north-eastern Toledo and north-western Cuenca), "La Mancha" (expanding over the provinces of Ciudad Real, Albacete, Toledo and Cuenca), "Campo de Montiel" (situated in eastern Ciudad Real and western Albacete), "Campo de Hellín y Altiplano de Almansa" (extending along the Prebaetic System) and "los Llanos de Albacete y la Manchuela" (situated in Albacete). The relative uniformity of these areas is interrupted by the presence of five mountain ranges: The Central System, the Iberian System, the Baetic System, Sierra Morena and Montes de Toledo. Regarding its geology, Castilla-La Mancha harbors a great variety of substrates (Pillet 2007) which in the north and west (west of the provinces of Toledo and Ciudad Real and north of Guadalajara) are mostly siliceous, in the northeast and southeast (Cuenca, Guadalajara and Albacete) are mostly calcareous and in the center (all provinces) are mostly calcareous with an abundance of clays. This heterogeneous geomorphology coupled with an important variability of the climatic conditions and differences in antropic land use gives rise to a high diversity of landscape units (Pillet 2007). Among these are the forest systems, which are formed by different tree species: *Quercus faginea*, *Q. ilex* subsp. *ballota*, *Q. pyrenaica*, *Q. suber*, *Pinus halepensis*, *P. nigra*, *P. pinaster*, *P. pinea*, *P. sylvestris*, *Juniperus thurifera* and *Fagus sylvatica*.

Colmeiro (1867) was the first author to publish records of lichen-forming fungi in Castilla-La Mancha. Later studies carried out in the first half of the XX century (Navás 1901, 1904, Más Guindal 1902, Crespí 1930, Abbayes 1946) increased the number of taxa in the region, although only slightly, to a total of 37 taxa. It was not until the resurgence of Spanish lichenology in the 1970's that the first modern work dedicated to the lichens of Castilla-La Mancha appeared. This was the PhD thesis of Carballal (1973) which consisted of a checklist of 736 taxa of cryptogamic flora (i.e. briophytes, pteridophytes, algae, cyanobacteria and fungi, both lichenized and non lichenized) of the province of Guadalajara, with emphasis on the Alcarria region. It was later partially published as two lists of the epiphytic (Carballal 1976) and saxicolous (Carballal 1977) lichens of Guadalajara. Also in the 1970's appeared studies on the saxicolous communities of *Acarospora* (Crespo et al. 1976) and vagrant terricolous lichens (Crespo 1978). The 1980's saw a modest increase in the number of studies carried out in the region (Crespo and Barreno 1980, Egea and Llimona 1981, 1983, Crespo 1983, Egea 1984, 1989, Egea et al. 1985, Burgaz and Burgos 1987, Pedroño et al. 1987, Arroyo and Manrique 1988, 1989, Burgos and Burgaz 1988, Crespo and Atienza 1989, Sancho and Crespo 1989) and the description of two new species: *Caloplaca furax* Egea & Llimona and *Cetraria iberica* Crespo & Barreno. It was in the 1990's and 2000's when most of the studies were carried out and the majority of records were reported. Most of these studies are the works of Gregorio Aragón Rubio, Francisco José Sarrión Torres, Isabel Martínez Moreno and Ana Rosa Burgaz Moreno. It is also in this time period when the first studies centered in the lichenicolous fungi of the region are published (Calatayud and Barreno 1995a, b, Martínez and Hafellner 1998, Martínez 1999, 2002, Calatayud and Etayo 1999, van den Boom and Etayo 2000, Martínez et al. 2002, Sarrión et al. 2002, Atienza et al. 2003, Calatayud and Triebel 2003, Calatayud et al. 2004, Pérez-Ortega and Calatayud 2009). The 2010's saw a steep decrease in the number of studies and many of them dealt with various aspects of one or a few species, which is why the number records in that decade is remarkably smaller than in the previous ones.

Material and methods

The checklist is based on a literature review of 204 studies published on scientific journals or as books. PhD dissertations, technical reports and records from public or private herbaria were not considered. The nomenclature is based on Index Fungorum (www.indexfungorum.org), Mycobank (www.mycobank.org) and, to a lesser extent, in Llimona and Hladun (2001) and Burgaz et al. (2020). As a consequence, it does not necesarilly follow that proposed by Divakar et al. (2017) for the Parmeliaceae and allied groups. Information on the growth forms and most common substrates of the species was obtained from Nimis (2016) or, in the rare occasions in which a species was not present in Italy, from LIAS Light (liaslight.lias.net).

Results and discussion

The checklist compiled in the present paper is comprised of 832 taxa, of which 820 correspond to species and 12 to infraspecific ranks. 763 are lichen-forming fungi, while 69 are lichenicolous fungi. They belong to 14 classes, 41 orders and 80 families. The most prevalent classes are the Lecanoromycetes, Eurotiomycetes and Dothideomycetes. At the order level the most common are the Lecanorales, followed by the Caliciales, Peltigerales, Teloschistales, Pertusariales and Verrucariales. Finally, the best represented families are the Parmeliaceae, Physciaceae, Lecanoraceae, Teloschistaceae, Ramalinaceae and Cladoniaceae. The prevalence of the different classes, orders and families is rather similar across the five provinces (Figure 1). One exception is Guadalajara, who shows the highest proportion of the Parmeliaceae, Teloschistaceae and Cladoniaceae.

The province with more taxa is Ciudad Real (423), followed by Albacete (376), Toledo (364), Cuenca (357) and Guadalajara (354). The number of taxa in each province is not necessarily predicted by the number of records, which in total amount to

5064. The first province is Toledo (1173), followed by Ciudad Real (1124), Guadalajara (1027), Albacete (906) and Cuenca (824). Our knowledge of lichen diversity in the region could highly benefit from the compilation of the geographic locations of the records here reported, a task that was beyond the scope of the present study. This would make possible the undertaking of spatially explicit gap analyses simmilar to those carried out in the conservation of crop wild relatives (e.g. García et al. 2017), that may help us identify new promising sampling localities based on ecosystem type, climatic data, orography, etc.

As previously pointed out by Martínez et al. (2003), many of the studies carried out in the region are focused on epiphytic lichens. Studies specifically targeting saxicolous or terricolous species in the region are scarce (Crespo et al. 1976, Carballal 1977, Crespo 1978, Carballal and Giménez-Coral 1981, Egea and Llimona 1981, Aragón et al. 2006a, 2022, Prieto et al. 2006), and the relatively high prevalence of these groups (Figure 2) in some provinces (e.g. Albacete and Guadalajara) may be in fact an underestimation of their diversity. The recent study of Aragón et al. (2022) exemplifies the potential that an increased sampling effort in these poorly explored substrates can have in our knowledge of the lichen diversity in the region. They studied the terricolous communities of twenty localities in Montes de Toledo and discovered 14 new specie for Castilla-La Mancha and 32 that are new to Toledo and/or Ciudad Real.

Regarding growth forms, crustose species are the most common, followed by the foliose and fruticose. This is also the case in other autonomic checklists, like those of Castilla y León (Pérez-Ortega and Álvarez-Lafuente 2006a) and Cantabria (Pérez-Ortega and Álvarez-Lafuente 2006b). Their prevalence varies by province, with Cuenca having the highest proportion of lichenicolous fungi and Guadalajara of foliose and fruticose species combined (Figure 3). The relatively low number of crustose species in Guadalajara could be indicative of a poor knowledge of this group, as crustose lichens are generally the most abundant. Also, lichenicolous fungi are poorly studied in all provinces, similarly to other autonomous regions (Pérez-Ortega and Álvarez-Lafuente 2006a, b).

Taxa are alphabetically listed. After each taxon are listed the studies in which it has been reported, separated by province using the abbreviations Ab (Albacete), CR (Ciudad Real), Cu (Cuenca), Gu (Guadalajara) and To (Toledo). Ten species (*Caloplaca alnetorum*, *Lecidea exigua*, *Leptogium brebissonii*, *Leptogium coralloideum*, *Nevesia sampaiana*, *Ochrolechia dalmatica*, *Sclerophora pallida*, *Scutula igniarii*, *Scytinium fragrans* and *Toninia populorum*) have only been reported by Aragón et al. (2008). This study does not include information on the provinces in which the species were recorded and are here listed as "Unspecified". The remaining 211 species reported by Aragón et al. (2008) were also cited in other works, and have been omitted in order to not include the "Unspecified" category under them. Lichenicolous fungi are preceded with an *. Also, the original names reported in the referenced studies are depicted underneath each taxon (if different to the Index Fungorum current name).

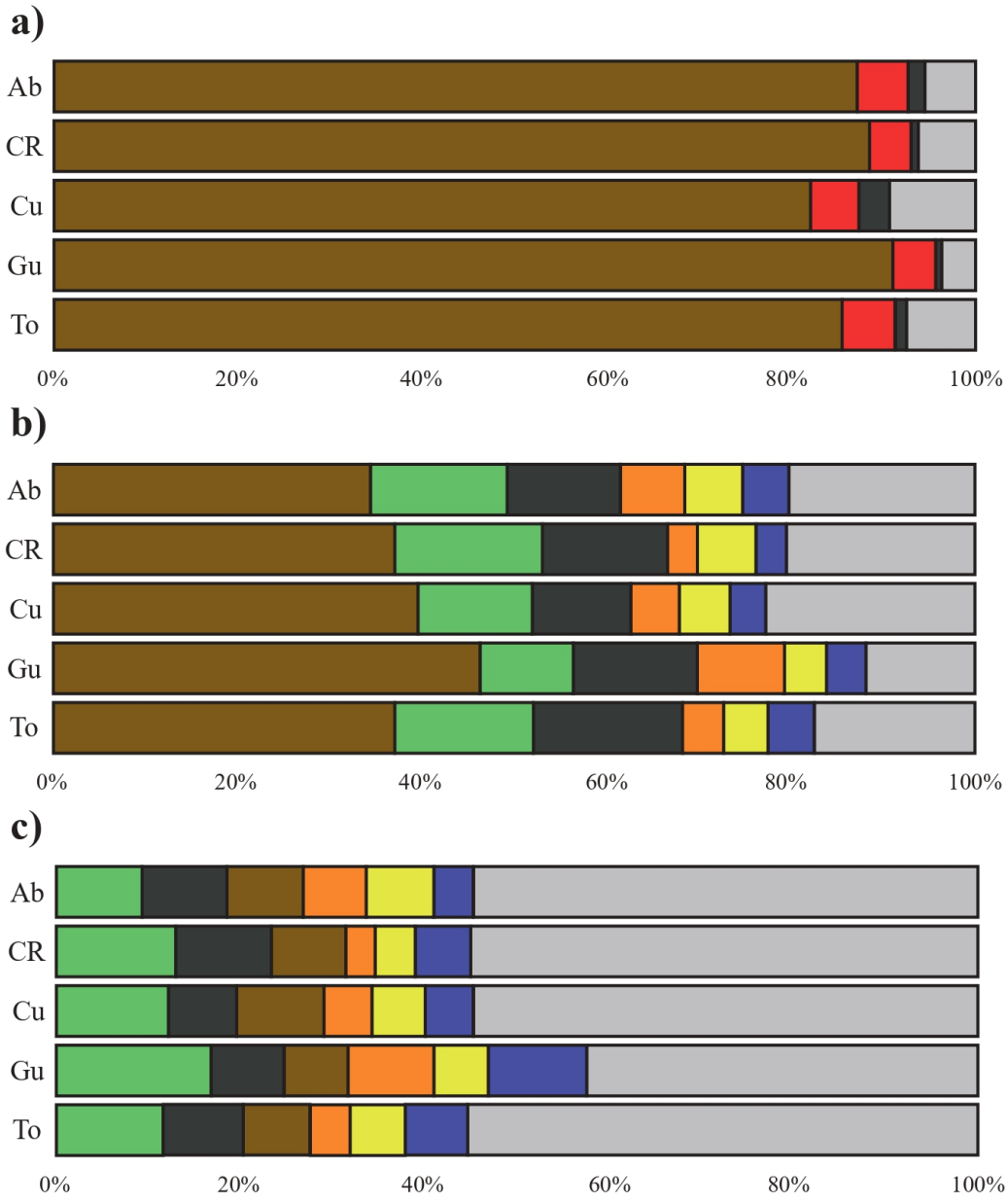

Figure 1. Taxonomic profiles of each province at the class, order and family levels, according to Mycobank. **a)** Class level: Lecanoromycetes (brown), Eurotiomycetes (red), Dothideomycetes (black) and other (grey). **b)** Order level: Lecanorales (brown), Caliciales (green), Peltigerales (black), Teloschistales (orange), Pertusariales (yellow), Verrucariales (blue) and other (grey). **c)** Family level: Parmeliaceae (green), Physciaceae (black), Lecanoraceae (brown), Teloschistaceae (orange), Ramalinaceae (yellow), Cladoniaceae (blue) and other (grey).

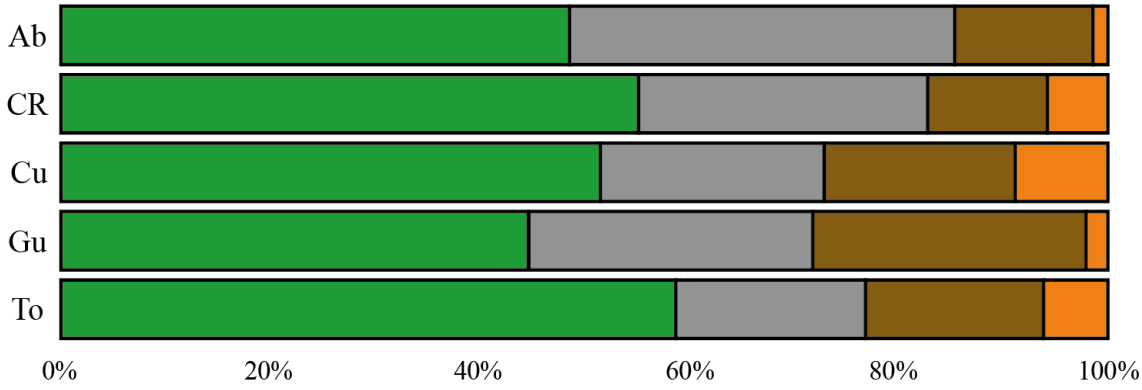

Figure 2. Prevalence of the different substrates in each province: epiphytic (green), saxicolous (grey), terricolous (brown) and lichenicolous (orange).

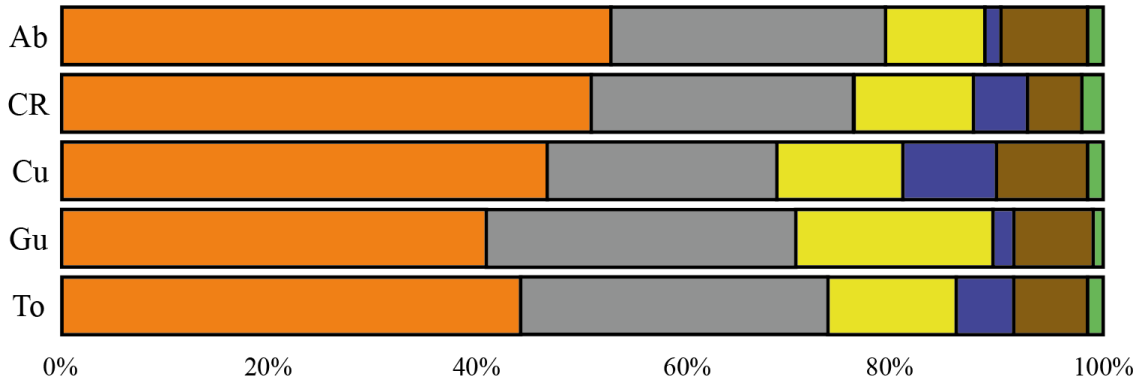

Figure 3. Prevalence of the different growth forms in each province: crustose (orange), foliose (grey), fruticose (yellow), lichenicolous (blue), squamulose (brown) and leprose (green).

Abrothallus acetabuli Diederich
Cu: Martínez et al. (2002).
Abrothallus cetrariae I. Kotte
Cu: Martínez et al. (2002).
Acarospora cervina A. Massal.
Gu: Carballal and Giménez-Coral (1981).
Acarospora epithallina H. Magn.
Ab: Egea and Llimona (1981), **CR**: Crespo et al. (1976), **Gu**: Crespo et al. (1976), **To**: Crespo et al. (1976), Vázquez and Burgaz (1996).
Acarospora fuscata (Ach.) Arnold
Ab: Egea and Llimona (1981), **CR**: Aragón et al. (2006a), **Cu**: Calatayud and Barreno (1993).
Acarospora glaucocarpa (Ach.) Arnold
Ab: Aragón and Martínez (2002a).
Acarospora hilaris (Dufour ex Nyl.) Arnold
Ab: Egea and Llimona (1981), **CR**: Crespo et al. (1976), Aragón et al. (2006a), Aragón and Giménez (2012), **Gu**: Crespo et al. (1976), **To**: Crespo et al. (1976), Vázquez and Burgaz (1996).
Acarospora impressula Th. Fr.
CR: Aragón et al. (2006a).
Acarospora macrospora (Hepp ex Nyl.) A. Massal. ex Bagl.
= *Acarospora murorum* A. Massal.
Ab: Aragón and Martínez (2002a).
Acarospora modenensis H. Magn.
CR: Aragón et al. (2006a).
Acarospora nitrophila H. Magn.
CR: Aragón et al. (2006a).
Acarospora nodulosa (Dufour) Hue
= *Acarospora nodulosa* var. *reagens* (Zahlbr.) Clauzade & Cl. Roux
Cu: Martínez et al. (2006), Concostrina-Zubiri et al. (2019).
Acarospora placodiiformis H. Magn.
Cu: Concostrina-Zubiri et al. (2019).
Acarospora scotica Hue
Ab: Egea and Llimona (1981), **CR**: Aragón et al. (2006a).
Acarospora umbilicata Bagl.
Ab: Egea and Llimona (1981), **Cu**: Calatayud and Barreno (1993).
Acolium inquinans (Sm.) A. Massal.
= *Cyphelium inquinans* (Sm.) Trevis.
Ab: Sarrión et al. (1999), Aragón and Martínez (1999), Martínez et al. (2003), Aragón et al. (2006b), Muñiz and Hladun (2011).
Acolium sessile (Pers.) Arnold
= *Cyphelium sessile* (Pers.) Trevis.
CR: Sarrión et al. (1999), Muñiz and Hladun (2011).
Acrocordia cavata (Ach.) R.C. Harris
Ab: Aragón and Martínez (1999), Martínez et al. (2003).
Agonimia allobata (Stizenb.) P. James
CR: Aragón and Sarrión (2003), Martínez et al. (2003), **To**: Aragón and Sarrión (2003).
Agonimia globulifera M. Brand & Diederich
CR: Aragón and Sarrión (2003), **To**: Aragón and Sarrión (2003).
Agonimia octospora Coppins & P. James
Ab: Aragón and Sarrión (2003), **CR**: Aragón and Sarrión (2003), Martínez et al. (2003), Aragón and Giménez (2012), Matos et al. (2015), **To**: Aragón and Sarrión (2003), Martínez et al. (2003), Aragón et al. (2004b).
Agonimia opuntiella (Buschardt & Poelt) Vězda
Ab: Aragón and Sarrión (2003), **CR**: Aragón and Sarrión (2003), Matos et al. (2015), Aragón et al. (2022), **To**: Aragón and Sarrión (2003).
Agonimia tristicula (Nyl.) Zahlbr.
CR: Aragón and Sarrión (2003), Matos et al. (2015), **Cu**: Martínez and Hafellner (1998), Martínez (1999), Martínez et al. (2002), Aragón and Sarrión (2003).
Alectoria jubata (L.) Ach.
Ab: Egea et al. (1985), **Gu**: Carballal (1976), Burgos and Burgaz (1988).
Alyxoria varia (Pers.) Ertz & Tehler
= *Opegrapha varia* Pers.
Ab: Aragón and Martínez (1999), **Cu**: Martínez et al. (2002).
Amandinea pelidna (Ach.) Fryday & Arcadia
= *Rhizocarpon obscuratum* (Ach.) A. Massal.
To: Vázquez and Burgaz (1996), Aragón and Martinez (1997).
Amandinea punctata (Hoffm.) Coppins & Scheid.
= *Buellia punctata* (Hoffm.) A. Massal.
Ab: Aragón and Martínez (1999), **CR**: Sarrión et al. (1993), Sarrión and Burgaz (1995), Aragón et al. (2006b, a), Matos et al. (2015), **Cu**: Martínez et

al. (2002), Aragón et al. (2006b), **Gu**: Aragón et al. (2006b), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b, 2006b).
Amygdalaria consentiens (Nyl.) Hertel
CR: Aragón et al. (2006a).
Anaptychia ciliaris (L.) Körb. ex A. Massal.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Aragón et al. (2001, 2004b, 2010), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Calatayud and Barreno (1993), Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Carballal (1976), Aragón et al. (2001), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993), Burgaz et al. (1994a), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b, 2015), Cardós et al. (2016, 2018).
Anthracocarpon virescens (Zahlbr.) Breuss
CR: Aragón et al. (2022), **Cu:** Prieto et al. (2010b).
Arctomia fascicularis (L.) Otálora & Wedin
= *Collema fasciculare* (L.) Weber ex F.H. Wigg.
Ab: Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), Martínez et al. (2003), Carvalho (2012), **CR**: Martínez et al. (2003), Aragón and Giménez (2012), Carvalho (2012), **Cu**: Martínez et al. (2002), Otálora et al. (2010b), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Martínez et al. (2003), Otálora et al. (2010b), Carvalho (2012).
Arthonia atra (Pers.) A. Schneid.
= *Opegrapha atra* Pers.
CR: Matos et al. (2015).
Arthonia didyma Körb.
Ab: Aragón et al. (2006b), **Cu**: Aragón et al. (2006b).
Arthonia punctiformis Ach.
Cu: Martínez et al. (2001, 2002).
Arthonia radiata (Pers.) Ach.
Ab: Egea et al. (1985), Aragón and Martínez (1999), **Cu**: Martínez et al. (2001, 2002), **Gu**: Burgos and Burgaz (1988).
****Arthonia urceolata*** (Elenkin) Clauzade, Diederich & Cl. Roux
Cu: Calatayud et al. (2004), **Gu**: Calatayud et al. (2004).
Aspicilia caecula (Ach.) Anzi
Ab: Egea and Llimona (1981), **Gu**: Carballal and Giménez-Coral (1981).
Aspicilia cinerea (L.) Körb.
Ab: Egea and Llimona (1981), **CR**: Crespo et al. (1976), Aragón et al. (2006a), **Cu**: Calatayud and Barreno (1993), **To**: Crespo et al. (1976), Vázquez and Burgaz (1996).
Aspicilia epiglypta (Norrl. ex Nyl.) Hue
Ab: Egea and Llimona (1981), Egea (1984).
Aspicilia fruticulosofoliacea (Elenkin) Sohrabi
= *Sphaerothallia fruticulosofoliacea* (Elenkin) Szatala
Gu: Crespo (1978), Aragón et al. (2001).
Aspicilia inornata Arnold
CR: Aragón et al. (2006a).
Aspicilia lignicola Hue
Cu: Martínez et al. (2001, 2002, 2003).
Aspiciliella cupreoglauca (B. de Lesd.) Zakeri, Divakar & Otte
Ab: Egea and Llimona (1981).
Aspiciliella intermutans (Nyl.) M. Choisy
Ab: Egea and Llimona (1981), Giralt (2001), **CR**: Aragón et al. (2006a), **To**: Garcia-Rowe and Saiz-Jimenez (1991), Vázquez and Burgaz (1996).
Athallia cerinella (Nyl.) Arup, Frödén & Søchting
= *Caloplaca cerinella* (Nyl.) Flagey
Gu: Burgos and Burgaz (1990).
Athallia holocarpa (Hoffm.) Arup, Frödén & Søchting
= *Caloplaca holocarpa* (Hoffm.) A.E. Wade
Ab: Egea et al. (1985), Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Aragón et al. (2006b, a), Matos et al. (2015), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Aragón et al. (1999, 2006b), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón et al. (2006b, 2015), Matos et al. (2015).
Athallia inconnexa (Nyl.) S.Y. Kondr. & L. Lokos
= *Caloplaca inconnexa* (Nyl.) Zahlbr.
Ab: Egea and Llimona (1981), Egea (1984), **Cu**: Aragón and Martínez (2002a).
Athallia vitellinula (Nyl.) Arup, Frödén & Søchting
= *Caloplaca vitellinula* (Nyl.) H. Olivier
Gu: Carballal (1976).
Bacidia absistens (Nyl.) Arnold
CR: Martínez et al. (2003), Aragón et al. (2004b).
Bacidia circumspecta (Norrl. & Nyl.) Malme
CR: Matos et al. (2015).
Bacidia friesiana (Hepp) Körb.
CR: Aragón et al. (2004b).
Bacidia iberica Aragón & I. Martínez
Ab: Aragón and Martínez (2003), Llop (2007), **Cu**: Aragón and Martínez (2003), **To**: Aragón and Martínez (2003).
Bacidia parathalassica Llop & Gómez-Bolea
Ab: Llop (2007).
Bacidia rosella (Pers.) De Not.
Ab: Egea et al. (1985), Aragón and Martínez (1999), Llop (2007), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Llop (2007).
Bacidia rubella (Hoffm.) A. Massal.
= *Bacidia luteola* (Ach.) Mudd
Ab: Egea et al. (1985), Aragón and Martínez (1999), Llop (2007), **CR:** Matos et al. (2015), **Cu**: Martínez et al. (2001, 2002), **Gu**: Rowe and Espinosa Roji (1996), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b), Llop (2007), Cardós et al. (2016, 2018).
Bacidina phacodes (Körb.) Vězda
Ab: Llop (2007).
Baeomyces rufus (Huds.) Rebent.
CR: Aragón and Giménez (2012), Burgaz (2015a), Aragón et al. (2022), **Gu**: Burgaz (2015a), **To**: Burgaz (2015a).
Bagliettoa calciseda (DC.) Gueidan & Cl. Roux
= *Verrucaria calciseda* DC.

Gu: Carballal and Giménez-Coral (1981).
Bagliettoa parmigera (J. Steiner) Vězda & Poelt
= *Verrucaria parmigera* J. Steiner
Gu: Carballal and Giménez-Coral (1981).
Bellicidia incompta (Borrer) Kistenich, Timdal, Bendiksby & S. Ekman
= *Bacidia incompta* (Borrer) Anzi
Cu: Martínez et al. (2001, 2002, 2003), Llop (2007).
Biatora vernalis (L.) Fr.
Cu: Martínez and Hafellner (1998), Martínez (1999), Martínez et al. (2002).
Bilimbia lobulata (Sommerf.) Hafellner & Coppins
= *Myxobilimbia lobulata* (Sommerf.) Hafellner
Ab: Aragón and Martínez (2002a).
Bilimbia sabuletorum (Schreb.) Arnold
= *Mycobilimbia sabuletorum* (Schreb.) Hafellner
Ab: Martínez and Hafellner (1998), Martínez (1999), Aragón and Martínez (1999, 2002a), **Cu**: Martínez and Hafellner (1998,) Martínez (1999), Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Martínez and Hafellner (1998), Martínez (1999).
Blastenia crenularia (With.) Arup, Søchting & Frödén
= *Caloplaca crenularia* (With.) J.R. Laundon
= *Caloplaca festiva* (Ach.) Zwackh
Ab: Egea and Llimona (1981), Egea (1984), **Cu**: Calatayud and Barreno (1993).
Blastenia ferruginea (Huds.) A. Massal.
= *Caloplaca aurantiaca* (Lightf.) Th. Fr.
= *Caloplaca ferruginea* (Huds.) Th. Fr.
Ab: Egea et al. (1985), Aragón and Martínez (1999), **CR**: Sarrión et al. (1993), Aragón et al. (2010), Matos et al. (2015), **Cu**: Martínez et al. (2002), **Gu**: Burgos and Burgaz (1990), Aragón et al. (1999), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Matos et al. (2015).
Blastenia hungarica (H. Magn.) Arup, Søchting & Frödén
= *Caloplaca hungarica* H. Magn.
To: Vázquez and Burgaz (1996).
Blennothallia crispa (Huds.) Otálora, P.M. Jørg. & Wedin
= *Collema crispum* (Huds.) Weber ex F.H. Wigg.
Ab: Aragón and Rico (1997), Aragón et al. (2001), Carvalho (2012), **CR**: Aragón et al. (2001, 2006a), Carvalho (2012), **Cu**: Aragón et al. (2001), Martínez et al. (2006), Prieto et al. (2006), Otálora et al. (2010b), Carvalho (2012), **Gu**: Crespo (1978), Aragón et al. (2001), Carvalho (2012), **To**: (Carvalho 2012), Aragón et al. (2022).
Brianaria bauschiana (Körb.) S. Ekman & M. Svenss.
= *Micarea bauschiana* (Körb.) V. Wirth & Vězda
CR: Sarrión and Burgaz (1995), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997).
****Briancoppinsia cytospora*** (Vouaux) Diederich, Ertz, Lawrey & van den Boom
= *Phoma cytospora* (Vouaux) D. Hawksw.
CR: Martínez (2002).
Bryobilimbia hypnorum (Lib.) Fryday, Printzen & S. Ekman
= *Mycobilimbia hypnorum* (Lib.) Kalb & Hafellner
Ab: Martínez et al. (2003), **CR**: Martínez et al. (2003), Aragón et al. (2006a), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Martínez et al. (2003), Aragón et al. (2022).
Bryoria capillaris (Ach.) Brodo & D. Hawksw.
Cu: Aragón et al. (2001, 2006b), Martínez et al. (2001, 2002, 2003), **Gu**: Burgos and Burgaz (1990), Aragón et al. (1999, 2001, 2006b), Martínez et al. (2003).
Bryoria fuscescens (Gyeln.) Brodo & D. Hawksw.
Ab: Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Aragón et al. (2001), Aragón and Giménez (2012), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2001, 2002), **Gu**: Aragón et al. (1999, 2001, 2006b).
Bryoria implexa (Hoffm.) Brodo & D. Hawksw.
Ab: Aragón et al. (2001, 2006b), Martínez et al. (2003), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2001, 2002, 2003), **Gu**: Aragón et al. (1999, 2006b).
****Bryostigma epiphyscium*** (Nyl.) S.Y. Kondr. & Hur
= *Arthonia epiphyscia* Nyl.
Cu: Martínez et al. (2002).
Buellia anomala Zahlbr.
To: Martínez et al. (1993).
Buellia badia (Fr.) A. Massal.
CR: Aragón et al. (2006a).
Buellia chlorophaea (Hepp ex Leight.) Lettau
Ab: Egea and Llimona (1981).
Buellia disciformis (Fr.) Mudd
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Matos et al. (2015), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Burgos and Burgaz (1990), Aragón et al. (1999, 2006b, 2015), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Matos et al. (2015).
Buellia epigea (Pers.) Tuck.
To: Aragón et al. (2022).
Buellia geophila (Flörke ex Sommerf.) Lynge
= *Buellia triphragmia* (Nyl.) Arnold
To: Vázquez and Burgaz (1996).
Buellia griseovirens (Turner & Borrer ex Sm.) Almb.
Ab: Egea et al. (1985), Aragón et al. (2006b), **CR**: Aragón et al. (2004b, 2006b), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Aragón et al. (1999), **To**: Aragón et al. (2006b).
Buellia iberica Giralt
Ab: Aragón et al. (2006b), **CR**: Giralt and Llimona (2000), Aragón et al. (2004b, 2006b), **Cu**: Aragón et al. (2006b), **To**: Aragón et al. (2004b, 2006b).
****Buellia lecanoricola*** Renob.
Cu: Martínez et al. (2002).
Buellia leptocline (Flot.) A. Massal.
Ab: Egea and Llimona (1981).
Buellia populorum (A. Massal.) Clauzade & Cl. Roux
To: Martínez et al. (1993), Vázquez and Burgaz (1996).
Buellia stellulata (Taylor) Mudd

Gu: Crespo et al. (1976), **To**: Vázquez and Burgaz (1996).
Buellia subsquamosa J. Steiner
Ab: Egea and Llimona (1981).
Buellia tergestina J. Steiner & Zahlbr.
Ab: Egea and Llimona (1981).
Buellia triseptata A. Nordin
Ab: Giralt and Nordin (2002), Aragón et al. (2006b), **CR**: Giralt and Nordin (2002), Aragón et al. (2006b), **Cu**: Aragón et al. (2006b), **To**: Aragón et al. (2006b).
Buellia zoharyi Galun
Cu: Concostrina-Zubiri et al. (2019).
Calicium abietinum Pers.
Ab: Sarrión et al. (1999), Aragón and Martínez (1999), Aragón et al. (2006b), Muñiz and Hladun (2011), **CR**: Sarrión et al. (1999), Fos et al. (2000), Aragón et al. (2004b), Muñiz and Hladun (2011), Aragón and Giménez (2012), **Cu**: Sarrión et al. (1999), Martínez et al. (2001, 2002), Aragón et al. (2006b), Muñiz and Hladun (2011), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Sarrión et al. (1999), Aragón et al. (2004b), Muñiz and Hladun (2011).
Calicium corynellum (Ach.) Ach.
CR: Sarrión et al. (1999), Aragón et al. (2006a), Muñiz and Hladun (2011), Aragón and Giménez (2012), Prieto et al. (2020), **To**: Sarrión et al. (1999), Muñiz and Hladun (2011).
Calicium glaucellum Ach.
Ab: Sarrión et al. (1999), Aragón and Martínez (1999), Aragón et al. (2006b), Muñiz and Hladun (2011), **CR**: Sarrión et al. (1993, 1999), Aragón et al. (2004b), Muñiz and Hladun (2011), Aragón and Giménez (2012), **Cu**: Sarrión et al. (1999), Martínez et al. (2001, 2002), Aragón et al. (2006b), Muñiz and Hladun (2011), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Sarrión et al. (1999), Muñiz and Hladun (2011).
***Calicium lecideinum* (Nyl.) M. Prieto & Wedin**
CR: Aragón and Giménez (2012).
Calicium montanum Tibell
CR: Martínez et al. (2003), Aragón et al. (2004b), Muñiz and Hladun (2011), Aragón and Giménez (2012), **To**: Martínez et al. (2003), Aragón et al. (2004b), Muñiz and Hladun (2011).
Calicium notarisii (Tul.) M. Prieto & Wedin
= *Cyphelium notarisii* (Tul.) Blomb. & Forssell
Cu: Martínez et al. (2003), Aragón et al. (2006b).
Calicium parvum Tibell
CR: Sarrión and Burgaz (1995).
Calicium salicinum Pers.
= *Calicium lichenoides* (L.) Schumach.
Ab: Sarrión et al. (1999), Aragón and Martínez (1999), Martínez et al. (2003), Aragón et al. (2006b), Muñiz and Hladun (2011), **CR**: Sarrión et al. (1993, 1999), Martínez et al. (2003), Muñiz and Hladun (2011), Aragón and Giménez (2012), **Cu**: Sarrión et al. (1999), Martínez et al. (2001, 2002, 2003), Aragón et al. (2006b), Muñiz and Hladun (2011), **Gu** : Martínez et al. (2003), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Sarrión et al. (1999), Martínez et al. (2003), Muñiz and Hladun (2011).
Calicium tigillare (Ach.) Pers.
= *Cyphelium tigillare* (Ach.) Ach.
Ab: Sarrión et al. (1999), Aragón and Martínez (1999), Martínez et al. (2003), Muñiz and Hladun (2011), **CR**: Sarrión and Burgaz (1995), Sarrión et al. (1999), Aragón et al. (2004b), Martínez et al. (2003), Muñiz and Hladun (2011), Aragón and Giménez (2012), **Cu**: Martínez et al. (2001, 2002), **Gu**: Martínez et al. (2003), **To**: Burgos and Burgaz (1988), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Sarrión et al. (1999), Martínez et al. (2003), Aragón et al. (2004b), Muñiz and Hladun (2011).
Calicium viride Pers.
Ab: Egea et al. (1985), Sarrión et al. (1999), Aragón and Martínez (1999), Aragón et al. (2006b), Muñiz and Hladun (2011), **CR**: Sarrión et al. (1999), Muñiz and Hladun (2011), **Cu**: Aragón et al. (2006b).
Calogaya decipiens (Arnold) Arup, Frödén & Søchting
Gu: Pena-Poza et al. (2018).
Calogaya saxicola (Hoffm.) Vondrák
= *Caloplaca murorum* Th. Fr.
= *Caloplaca murorum* f. *pulvinata* (A. Massal.) Clauzade & Rondon
= *Caloplaca murorum* f. *tegularis* (Ehrh.) T. Müll.
Gu: Más Guindal (1902), Carballal and Giménez-Coral (1981).
Calogaya schistidii (Anzi) Arup, Frödén & Søchting
= *Fulgensia schistidii* (Anzi) Poelt
Ab: Aragón and Martínez (2002a), **Cu**: Aragón and Martínez (2002a).
Caloplaca agardhiana (Flot.) Flagey
Cu: Aragón and Martínez (2002a).
Caloplaca alnetorum Poelt
Unspecified: Aragón et al. (2008).
Caloplaca alpestris (Ach.) Ozenda & Clauzade
Gu: Carballal and Giménez-Coral (1981).
Caloplaca alpestris* f. *ochracea (Müll. Arg.) Ozenda & Clauzade
Gu: Carballal and Giménez-Coral (1981).
Caloplaca cerina (Hedw.) Th. Fr.
Ab: Egea et al. (1985), Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Aragón et al. (2004b, 2006b, 2022), Matos et al. (2015), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Carballal and Giménez-Coral (1981), Burgos and Burgaz (1988), Aragón et al. (1999), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2006b), Matos et al. (2015).
Caloplaca conglomerata (Bagl.) Jatta
Ab: Egea (1984), **CR**: Egea (1984).
Caloplaca conglomerata* var. *nigrescens Egea & Llimona
Ab: Egea and Llimona (1981).
Caloplaca herbidella (Hue) H. Magn.
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Aragón et al. (2004b), **Cu**: Martínez et al. (2002), Aragón et al.

(2006b), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b, 2006b).
Caloplaca irrubescens (Arnold) Zahlbr.
Ab: Egea (1984).
Caloplaca keissleri (Servít) Poelt
Gu: Carballal and Giménez-Coral (1981).
Caloplaca lactea (A. Massal.) Zahlbr.
Gu: Carballal and Giménez-Coral (1981).
Caloplaca lecideina (Müll. Arg.) Clauzade & Rondon
Gu: Carballal and Giménez-Coral (1981).
Caloplaca lithophila H. Magn.
Gu: Carballal and Giménez-Coral (1981).
Caloplaca necator Poelt & Clauzade
Ab: Egea (1984).
Caloplaca obscurella (J. Lahm ex Körb.) Th. Fr.
To: Aragón et al. (2004b).
Caloplaca rubelliana (Ach.) Lojka
Ab: Egea and Llimona (1981).
Caloplaca tenuatula (Nyl.) Zahlbr.
Gu: Carballal and Giménez-Coral (1981).
Candelaria concolor (Dicks.) Arnold
CR: Aragón et al. (2010), Matos et al. (2015), **Cu**: Martínez et al. (2002), **To**: Aragón et al. (2004b), Matos et al. (2015).
Candelariella aurella (Hoffm.) Zahlbr.
Ab: Aragón and Martínez (2002a), **CR**: Aragón et al. (2006a), **Gu**: Carballal and Giménez-Coral (1981), **To**: Crespo and Atienza (1989), Vázquez and Burgaz (1996).
Candelariella coralliza (Nyl.) H. Magn.
CR: Aragón et al. (2006a), **To**: Garcia-Rowe and Saiz-Jimenez (1991), Vázquez and Burgaz (1996).
Candelariella faginea Nimis, Poelt & Puntillo
Ab: Aragón and Martínez (2002b).
Candelariella reflexa (Nyl.) Lettau
CR: Matos et al. (2015), **Cu**: Martínez et al. (2002).
Candelariella viae-lacteae G. Thor & V. Wirth
CR: Matos et al. (2015).
Candelariella vitellina (Hoffm.) Müll. Arg.
Ab: Egea and Llimona (1981), Egea et al. (1985), Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Aragón et al. (2004b, 2006a, 2010), **Cu**: Calatayud and Barreno (1993), Martínez et al. (2002), Aragón et al. (2006b, 2015), **Gu**: Burgos and Burgaz (1988), **To**: Garcia-Rowe and Saiz-Jimenez (1991), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b).
Candelariella xanthostigma (Pers. ex Ach.) Lettau
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Aragón et al. (2006b), Matos et al. (2015), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Burgos and Burgaz (1988), Aragón et al. (2006b), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2006b), Matos et al. (2015).
Carbonicola anthracophila (Nyl.) Bendiksby & Timdal
= *Hypocenomyce anthracophila* (Nyl.) P. James & Gotth. Schneid.
Ab: Martínez et al. (2003), Aragón et al. (2006b), **Cu**: Martínez et al. (2001, 2002, 2003), Aragón et al. (2006b).
Catapyrenium cinereum (Pers.) Körb.
Cu : Prieto et al. (2006, 2010b).
Catapyrenium daedaleum (Körb.) Stein
Ab: Aragón (2002), Prieto et al. (2010b), **Cu**: Aragón (2002), Prieto et al. (2006, 2010a, b).
Catapyrenium lachneum (Ach.) R. Sant.
Gu : Prieto et al. (2010b).
Catapyrenium pilosellum Breuss
Ab: Aragón and Rico (1997), Aragón et al. (2001), Prieto et al. (2010b), **CR:** Prieto et al. (2010b), **Cu:** Prieto et al. (2010b), **Gu:** Prieto et al. (2010b), **To:** Prieto et al. (2010b).
Catapyrenium psoromoides (Borrer) R. Sant.
CR: Aragón et al. (2001), Aragón and Sarrión (2003), Prieto et al. (2010b), Matos et al. (2015), **Cu:** Prieto et al. (2010b), **To**: Aragón and Sarrión (2003), Prieto et al. (2010[a], b).
Catapyrenium rufescens (Ach.) Breuss
= *Placidium rufescens* (Ach.) A. Massal.
Ab: Aragón et al. (2001), Prieto et al. (2010b), **Cu**: Martínez et al. (2006), Prieto et al. (2010b), **Gu**: Aragón et al. (2001), Prieto et al. (2010b), **To**: Prieto et al. (2010b).
Catapyrenium squamulosum (Ach.) Breuss
= *Placidium squamulosum* (Ach.) Breuss
Ab: Aragón and Rico (1997), Aragón et al. (2001), Prieto et al. (2010b), **CR:** Aragón et al. (2022), **Cu**: Martínez et al. (2006), Prieto et al. (2006, 2010b), **Gu:** Prieto et al. (2010b), **To:** Prieto et al. (2010b).
Catillaria chalybeia (Borrer) A. Massal.
Ab: Egea and Llimona (1981), **Cu**: Calatayud and Barreno (1993), Martínez et al. (2002).
****Catillaria mediterranea*** Hafellner
Cu: Martínez et al. (2002).
Catillaria nigroclavata (Nyl.) J. Steiner
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Aragón et al. (2004b), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **To**: Martínez and Hafellner (1998), Martínez (1999), Aragón et al. (2004b).
Catinaria atropurpurea (Schaer.) Vězda & Poelt
Ab: Egea et al. (1985), Martínez et al. (2003), **CR**: Martínez et al. (2003), **To**; Martínez et al. (2003).
Catinaria montana (Nyl.) Vain.
CR: Martínez et al. (2003).
Cetraria aculeata (Schreb.) Fr.
= *Cetraria aculeata* var. *spadicea* (Roth) Ach. ex Mong.
= *Cetraria steppae* (Savicz) Kärnefelt
= *Coelocaulon aculeatum* (Schreb.) Link
= *Cornicularia aculeata* (Schreb.) Ach.
= *Cornicularia steppae* Savicz
Ab: Aragón et al. (2001), **CR**: Aragón et al. (2001, 2006a, 2022), Aragón and Giménez (2012), **Cu**: Crespo (1978), Calatayud and Barreno (1993), Aragón et al. (2001), Martínez et al. (2002), Prieto et al. (2006), Concostrina-Zubiri et al. (2019), **Gu**: Carballal (1977), Crespo (1978), Rowe and Espinosa

Roji (1996), Aragón et al. (2001), Pérez-Ortega et al. (2012), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b, 2022).
Cetraria crespoae (Barreno & Vázquez) Kärnefelt
= *Coelocaulon crespoae* Barreno & Vázquez
CR: Aragón et al. (2001, 2006b), Martínez et al. (2003), Aragón and Giménez (2012), **Gu**: Burgos and Burgaz (1990), Aragón et al. (2001), Martínez et al. (2003), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2006b), Martínez et al. (2003).
Cetraria muricata (Ach.) Eckfeldt
= *Cornicularia muricata* (Ach.) Ach.
CR: Aragón et al. (2022), **Gu**: Carballal (1977), Aragón et al. (2001), **To:** Aragón et al. (2022).
Cetraria sepincola (Ehrh.) Ach.
Cu: Aragón et al. (2001), Martínez et al. (2003), **Gu**: Burgos and Burgaz (1990), Aragón et al. (2001), Martínez et al. (2003).
Cetrelia olivetorum (Nyl.) W.L. Culb. & C.F. Culb.
Gu: Hurtado et al. (2020a, b, c, d).
Chaenotheca brunneola (Ach.) Müll. Arg.
Ab: Sarrión et al. (1999), Aragón et al. (2006b), Muñiz and Hladun (2011), **Cu**: Muñiz and Hladun (2011).
Chaenotheca chrysocephala (Ach.) Th. Fr.
Ab: Sarrión et al. (1999), Aragón and Martínez (1999), Aragón et al. (2006b), Muñiz and Hladun (2011), **Cu**: Sarrión et al. (1999), Martínez et al. (2001, 2002), Aragón et al. (2006b), Muñiz and Hladun (2011).
Chaenotheca ferruginea (Turner) Mig.
Ab: Sarrión et al. (1999), Aragón and Martínez (1999), Aragón et al. (2006b), Muñiz and Hladun (2011), **Cu**: Sarrión et al. (1999), Martínez et al. (2001, 2002), Aragón et al. (2006b), Muñiz and Hladun (2011).
Chaenotheca furfuracea (L.) Tibell
Ab: Sarrión et al. (1999), Aragón and Martínez (1999), Martínez et al. (2003), Aragón et al. (2006b), Muñiz and Hladun (2011), **Cu**: Sarrión et al. (1999), Martínez et al. (2001, 2002, 2003), Aragón et al. (2006b), Muñiz and Hladun (2011), **Gu**: Martínez et al. (2003).
Chaenotheca phaeocephala (Turner) Th. Fr.
Ab: Sarrión et al. (1999), Martínez et al. (2003), Aragón et al. (2006), Muñiz and Hladun (2011), **CR**: Sarrión et al. (1999), Martínez et al. (2003), Muñiz and Hladun (2011), **Cu**: Sarrión et al. (1999), Martínez et al. (2001, 2002, 2003), Aragón et al. (2006b), Muñiz and Hladun (2011).
Chaenotheca trichialis (Ach.) Hellb.
Ab: Sarrión et al. (1999), Aragón and Martínez (1999), Martínez et al. (2003), Aragón et al. (2006b), Muñiz and Hladun (2011), **Cu**: Sarrión et al. (1999), Martínez et al. (2001, 2002, 2003), Aragón et al. (2006b), Muñiz and Hladun (2011).
Chaenotheca xyloxena Nádv.
Cu: Martínez et al. (2001, 2002, 2003), Muñiz and Hladun (2011).
Chaenothecopsis debilis (Sm.) Tibell
Ab: Aragón et al. (2006b), **CR**: Sarrión et al. (1999), Muñiz and Hladun (2011), **Cu**: Sarrión et al. (1999), Martínez et al. (2001, 2002), Muñiz and Hladun (2011).
****Chaenothecopsis hospitans*** (Th. Fr.) Tibell
CR: Sarrión et al. (1999), Muñiz and Hladun (2011).
Chaenothecopsis pusilla (Ach.) A.F.W. Schmidt
To: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Sarrión et al. (1999), Martínez et al. (2003).
Chlorangium gyrosum (Sohrabi, Sipman, Volk. John & V.J. Rico) S.Y. Kondr., Gromakova & Khodos.
= *Circinaria gyrosa* Sohrabi, Sipman, Volk. John & V.J. Rico
Gu: Sánchez et al. (2012, 2014), Böttger et al. (2013), Meeßen et al. (2013a, b, 2014, 2017), Sohrabi et al. (2013), de la Torre et al. (2018, 2020), Lopez-Ramirez et al. (2021).
Chrysothrix candelaris (L.) J.R. Laundon
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **Cu**: Calatayud and Barreno (1993), Aragón et al. (2006b), **Gu**: Burgos and Burgaz (1988), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996).
Circinaria caesiocinerea (Nyl. ex Malbr.) A. Nordin, Savić & Tibell
= *Aspicilia caesiocinerea* (Nyl. ex Malbr.) Arnold
Ab: Egea and Llimona (1981), **CR**: Aragón et al. (2006a).
Circinaria calcarea (L.) A. Nordin, Savić & Tibell
= *Aspicilia calcarea* (L.) Körb.
= *Aspicilia calcarea* f. *ochracea* (Körb.) Anzi
Ab: Aragón and Martínez (2002a), **Gu**: Más Guindal (1902), Carballal and Giménez-Coral (1981).
Circinaria contorta (Hoffm.) A. Nordin, Savić & Tibell
= *Aspicilia contorta* (Hoffm.) Körb.
= *Aspicilia coronata* (A. Massal.) B. de Lesd.
= *Aspicilia hoffmannii* Flagey
Ab: Egea and Llimona (1981), **CR**: Aragón et al. (2006a), **Cu**: Calatayud and Barreno (1993), Prieto et al. (2006), **Gu**: Carballal and Giménez-Coral (1981), **To**: Garcia-Rowe and Saiz-Jimenez (1991), Vázquez and Burgaz (1996).
Circinaria crespiana (V.J. Rico) Sohrabi & V.J. Rico
= *Aspicilia crespiana* V.J. Rico
To: Rico (1999).
Circinaria fruticulosa (Eversm.) Sohrabi
= *Aspicilia fruticulosa* (Eversm.) Flagey
= *Sphaerothallia fruticulosa* (Eversm.) Follmann & A. Crespo
Cu: Crespo (1978), Aragón et al. (2001), Martínez et al. (2003), Prieto et al. (2006), **Gu**: Crespo (1978), Aragón et al. (2001), Martínez et al. (2003), de la Torre et al. (2010), Raggio et al. (2011).
Circinaria hispida (Mereschk.) A. Nordin, Savić & Tibell
= *Aspicilia hispida* Mereschk.
= *Sphaerothallia hispida* (Mereschk.) Follmann & A. Crespo
Cu: Crespo (1978), Aragón et al. (2001), Martínez et al. (2003), Calatayud et al. (2004), Prieto et al. (2006), **Gu**: Crespo (1978), Martínez et al. (2003), Calatayud et al. (2004).

Cladonia arbuscula* subsp. *arbuscula (Wallr.) Flot.
= *Cladina arbusculata* (Wallr.) Hale & W. L. Culb.
Gu: Aragón et al. (2001), Martínez et al. (2003).
Cladonia cariosa (Ach.) Spreng.
Gu: Burgaz (2015b).
Cladonia carneola (Fr.) Fr.
Gu: Burgaz and Ahti (1992), Burgaz (2009, 2015b).
Cladonia cenotea (Ach.) Schaer.
Cu: Martínez et al. (2001, 2002, 2003), Aragón et al. (2006b).
Cladonia cervicornis (Ach.) Flot.
CR: Burgaz and Ahti (1992, 2009), Aragón et al. (2001, 2006a, 2022), Aragón and Giménez (2012), Burgaz (2015b), **Cu**: Burgaz and Ahti (2009), Pino-Bodas et al. (2010, 2013), Burgaz (2015b), **Gu**: Pino-Bodas et al. (2013), Burgaz (2015b), **To**: Burgaz and Ahti (2009), Burgaz (2015b).
Cladonia chlorophaea (Flörke ex Sommerf.) Spreng.
= *Cenomyce pyxidata* var. *chlorophaea* Flk.
Ab: Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Sarrión et al. (1993), Aragón et al. (2001, 2004b, 2006a, 2022), Burgaz and Ahti (2009), Burgaz (2015b), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Navás (1904), Rowe and Espinosa Roji (1996), Aragón et al. (1999, 2006b), Burgaz and Ahti (2009), Burgaz (2015b), Hurtado et al. (2020a, b, c, d), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2022), Burgaz and Ahti (2009), Burgaz (2015b).
Cladonia ciliata Stirt.
= *Cladonia ciliata* var. *tenuis* (Flörke) Ahti
CR: Aragón et al. (2022), **Gu**: Burgaz and Martínez (2008).
Cladonia coccifera (L.) Willd.
= *Cladonia coccifera* var. *stemmatina* (Ach.) Vain.
Gu: Carballal (1977), Burgaz and Ahti (1994), Aragón et al. (2001), Burgaz (2009, 2015b).
Cladonia coniocraea (Flörke) Spreng.
= *Cladonia ochrochlora* Flörke
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), Burgaz (2015b), **CR**: Sarrión et al. (1993), Aragón et al. (2001, 2006b), Burgaz & Ahti (2009), Aragón and Giménez (2012), Burgaz (2015b), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2002), Aragón et al. (2006b) **Gu**: Carballal (1977), Burgos and Burgaz (1988), Aragón et al. (1999, 2001, 2006b, 2015), Burgaz & Ahti (2009), Burgaz (2015b), Hurtado et al. (2020a, b, c, d), **To**: Vázquez and Burgaz (1996), Aragón et al. (2001, 2006b, 2022), Cardós et al. (2016, 2018).
Cladonia conista (Ach.) Robbins ex Allen
Ab: Ottonello (1991).
Cladonia corsicana Pino-Bodas, Burgaz and MP Martín
= *Cladonia turgida* var. *corsicana* Rondon & Vězda
CR: Burgaz and Ahti (1992), Burgaz (2015b).
Cladonia cryptochlorophaea Asahina
Gu: Burgaz and Ahti (1994, 2009), Aragón et al. (2001), Martínez et al. (2003), Burgaz (2015b).
Cladonia cyathomorpha Stirt. ex Walt. Watson
Ab: Aragón et al. (2006b), **CR**: Burgaz and Ahti (1992), Aragón et al. (2001, 2022), Burgaz (2015b), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2002), Burgaz and Ahti (2009), Burgaz (2015b), **Gu**: Burgaz and Ahti (2009), Burgaz (2015b), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2022), Burgaz and Ahti (2009), Burgaz (2015b).
Cladonia dimorpha S. Hammer
Ab: Burgaz (2015b), **CR:** Aragón et al. (2022), **To:** Aragón et al. (2022).
Cladonia diversa Asperges ex S. Stenroos
CR: Burgaz and Ahti (1994, 2009), Aragón et al. (2001, 2022), Burgaz (2009, 2015b), Aragón and Giménez (2012), **Gu**: Aragón et al. (1999, 2006b), Burgaz (2009, 2015b), **To**: Vázquez and Burgaz (1996), Aragón et al. (2001, 2022), Burgaz (2009, 2015b), Burgaz and Ahti (2009), Pino-Bodas and Burgaz (2021).
Cladonia ecmocyna Leight.
Gu: Burgaz (2015b).
Cladonia fimbriata (L.) Fr.
= *Cenomyce fimbriata* var. *simplex* f. *minor* Hag.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), Burgaz (2015b), **CR**: Burgaz and Ahti (1992), Sarrión et al. (1993), Aragón et al. (2001, 2006a, 2022), Aragón and Giménez (2012) , Burgaz (2015b), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2002), Burgaz (2015b), **Gu**: Navás (1904), Carballal (1977), Rowe and Espinosa Roji (1996), Aragón et al. (2001, 2006b, 2015), Burgaz (2015b), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2022), Cardós et al. (2016, 2018), Burgaz (2015b).
Cladonia firma (Nyl.) Nyl.
= *Cladonia nylanderi* Cout.
CR: Burgaz and Ahti (1992, 1994, 2009), Aragón et al. (2001), Burgaz (2015b), **Cu**: Aragón et al. (2001), Burgaz and Ahti (2009), Burgaz (2015b), **Gu**: Carballal (1977), Aragón et al. (2001), Burgaz and Ahti (2009), Pino-Bodas et al. (2010, 2013), Burgaz (2015b), **To**: Vázquez and Burgaz (1996), Burgaz and Ahti (2009), Pino-Bodas et al. (2010), Burgaz (2015b).
Cladonia floerkeana (Fr.) Flörke
Gu: Burgaz (2009, 2015b), **To:** Aragón et al. (2022).
Cladonia foliacea (Huds.) Willd.
= *Cladonia convoluta* (Lam.) Anders
= *Cladonia convoluta* var. *vagans* Follmann
= *Cladonia foliacea* subsp. *convoluta* (Lam.) Clauzade & Cl. Roux
= *Cladonia foliacea* var. *alcicornis* (Lightf.) Schaer.
= *Cladonia foliacea* var. *convoluta* (Lam.) Vain.
Ab: Ottonello (1991), Aragón and Rico (1997), Aragón et al. (2001), Burgaz and Ahti (2009), Burgaz (2015b), **CR**: Burgaz and Ahti (1992, 2009), Aragón et al. (2001, 2006a, 2022), Aragón and Giménez (2012), Burgaz (2015b), **Cu**: Abbayes (1946), Burgaz and Ahti (1994), Aragón et al. (2001), Prieto et al.

(2006), Pino-Bodas et al. (2010), Burgaz (2015b), Concostrina-Zubiri et al. (2019), **Gu**: Más Guindal (1902), Carballal (1977), Crespo (1978), Burgaz and Ahti (1994, 2009), Aragón et al. (2001), Pino-Bodas et al. (2010, 2018), Burgaz (2015b), Pino-Bodas and Stenroos (2021), **To:** Burgaz and Ahti (2009), Burgaz (2015b), Aragón et al. (2022).

Cladonia furcata (Huds.) Baumg.
= *Cladonia subrangiformis* L. Scriba ex Sandst.
Ab: Burgaz and Ahti (2009), Burgaz (2015b), **CR**: Burgaz and Ahti (1992, 2009), Aragón et al. (2001, 2006a, 2022), Martínez et al. (2003), Burgaz (2015b), **Cu**: Burgaz and Ahti (1992, 2009), Martínez et al. (2003), Prieto et al. (2006), Burgaz (2015b), **Gu**: Carballal (1977), Burgaz and Ahti (1994, 2009), Martínez et al. (2003), Burgaz (2015b), Pino-Bodas et al. (2015), **To**: Aragón et al. (2001, 2022), Burgaz and Ahti (2009), Burgaz (2015b).

Cladonia glauca Flörke
Ab: Aragón et al. (2006b), **CR**: Burgaz and Ahti (1994, 2009), Sarrión et al. (1995), Aragón et al. (2001, 2022), Burgaz (2015b), **Cu**: Aragón et al. (2001), Martínez et al. (2002), Burgaz (2015b), **Gu**: Burgaz and Ahti (2009), Burgaz (2015b), **To**: Burgaz and Ahti (1994, 2009), Vázquez and Burgaz (1996), Aragón et al. (2001, 2022), Burgaz (2015b).

Cladonia gracilis (L.) Willd.
CR: Aragón et al. (2022), **Gu:** Burgaz (2015b), **To**: Pino-Bodas and Burgaz (2021), Aragón et al. (2022).

Cladonia grayi G. Merr. ex Sandst.
Gu: Burgaz (2015b), **To:** Aragón et al. (2022).

Cladonia homosekikaica Nuno
CR: Aragón and Giménez (2012), Aragón et al. (2022), **Gu**: Burgaz (2015b), **To**: Aragón et al. (2022).

Cladonia humilis (With.) J.R. Laundon
Ab: Burgaz and Ahti (2009), Burgaz (2015b), **CR**: Sarrión et al. (1993), Burgaz and Ahti (1994, 2009), Aragón et al. (2001, 2022), Burgaz (2015b), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Burgaz and Ahti (2009), Burgaz (2015b), **To**: Vázquez and Burgaz (1996), Aragón et al. (2001, 2022), Burgaz and Ahti (2009), Pino-Bodas et al. (2012a), Burgaz (2015b).

Cladonia iberica Burgaz & Ahti
Ab: Burgaz (2015b), **CR:** Martínez et al. (2003), Burgaz (2015b), **Gu:** Burgaz (2015b), **To:** Burgaz (2015b).

Cladonia incrassata Flörke
CR: Martínez et al. (2003), **To**: Vázquez and Burgaz (1996), Aragón et al. (2001), Martínez et al. (2003).

Cladonia macilenta Hoffm.
CR: Sarrión et al. (1993), Aragón et al. (2001, 2022), Burgaz (2009, 2015b), **Cu**: Martínez et al. (2001, 2002), Aragón et al. (2006b), **Gu**: Burgaz (2009, 2015b), **To**: Vázquez and Burgaz (1996), Aragón et al. (2001), Burgaz (2009, 2015b), Pino-Bodas and Burgaz (2021).

Cladonia merochlorophaea Asahina
CR: Burgaz and Ahti (2009), Burgaz (2015b).

Cladonia novochlorophaea (Sipman) Brodo & Ahti
Gu: Burgaz and Ahti (2009), Burgaz (2015b).

Cladonia phyllophora Hoffm.
CR: Burgaz and Ahti (1992, 2009), Sarrión et al. (1993), Aragón et al. (2001, 2022), Burgaz (2015b), **Gu**: Burgaz and Ahti (1994), Aragón et al. (2001), Burgaz (2015b), **To:** Aragón et al. (2022).

Cladonia pleurota (Flörke) Schaer.
Gu: Burgaz (2009), Burgaz (2015b).

Cladonia pulvinata (Sandst.) van Herk & Aptroot
CR: Aragón et al. (2022).

Cladonia pyxidata (L.) Hoffm.
= *Cladonia monomorpha* Aptroot, Sipman & Herk
= *Cladonia pyxidata* var. *neglecta* (Flörke) A. Massal.
= *Cladonia pocillum* (Ach.) O.J. Rich.
Ab: Aragón and Martínez (1999), Aragón et al. (2001, 2006b), Burgaz and Ahti (2009), Burgaz (2015b), **CR**: Aragón et al. (2006a, 2022), Burgaz and Ahti (2009), Burgaz (2015b), **Cu**: Calatayud and Barreno (1993), Aragón et al. (2001), Martínez et al. (2002), Burgaz and Ahti (2009), Burgaz (2015b), **Gu**: Colmeiro (1867), Más Guindal (1902), Carballal (1977), Aragón et al. (1999, 2001), Burgaz and Ahti (2009), Burgaz (2015b), Hurtado et al. (2020a, b, c, d), **To**: Abbayes (1946), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2022).

Cladonia ramulosa (With.) J.R. Laundon
= *Cladonia pityrea* f. *scyphifera* (Delise) Vain.
= *Cladonia prolifica* Ahti & S. Hammer
= *Cladonia pseudopityrea* Vain.
Ab: Aragón et al. (2006b), Burgaz (2015b), **CR**: Burgaz and Ahti (1992, 2009), Sarrión et al. (1993), Aragón et al. (2001, 2006b, 2022), Aragón and Giménez (2012), Burgaz (2015b), **Cu**: Calatayud and Barreno (1993), Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Carballal (1977), Burgaz and Ahti (2009), Burgaz (2015b), **To**: Burgaz and Ahti (2009), Vázquez and Burgaz (1996), Aragón et al. (2001, 2022), Burgaz (2015b).

Cladonia rangiferina (L.) Weber
= *Cladina rangiferina* (L.) Nyl.
Gu: Aragón et al. (2001).

Cladonia rangiformis Hoffm.
Ab: Egea and Llimona (1981), Aragón and Rico (1997), Aragón et al. (2001), Burgaz and Ahti (2009), Burgaz (2015b), **CR**: Burgaz and Ahti (1992, 2009), Sarrión et al. (1993), Aragón et al. (2001, 2006a, 2022), Aragón and Giménez (2012), Burgaz (2015b), **Cu**: Burgaz and Ahti (1992), Calatayud and Barreno (1993), Aragón et al. (2001), Martínez et al. (2002), Prieto et al. (2006), Burgaz (2015b), **Gu**: Carballal (1977), Aragón et al. (2001), Burgaz and Ahti (2009), Burgaz (2015b), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2022), Burgaz and Ahti (2009), Burgaz (2015b).

Cladonia scabriuscula (Delise) Nyl.
CR: Aragón et al. (2022), **Gu**: Burgaz and Ahti (2009)

Cladonia squamosa Hoffm.
CR: Sarrión et al. (1993), Burgaz and Ahti (1994), Aragón et al. (2001, 2022), Martínez et al. (2003),

Aragón and Giménez (2012), Burgaz (2015b), **Cu**: Burgaz and Ahti (2009), Burgaz (2015b), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2022), Martínez et al. (2003).

Cladonia subturgida Samp.

Ab: Burgaz and Ahti (2009), Pino-Bodas et al. (2012c), Burgaz (2015b), **CR**: Burgaz and Ahti (1994, 2009), Aragón et al. (2001, 2006b, 2022), Pino-Bodas et al. (2012c), Burgaz (2015b), **Gu**: Burgaz and Ahti (2009), Pino-Bodas et al. (2012c), Burgaz (2015b), **To**: Burgaz and Ahti (2009), Pino-Bodas et al. (2012c), Burgaz (2015b), Aragón et al. (2022).

Cladonia subulata (L.) Weber ex F.H. Wigg.

= *Cladonia fimbriata* var. *radiata* (Schreb.) Cromb.

CR: Burgaz and Ahti (2009), Aragón and Giménez (2012), Burgaz (2015b), **Cu**: Colmeiro (1867), Aragón et al. (2001, 2006b, 2022), Martínez et al. (2002), Burgaz and Ahti (2009), **Gu**: Colmeiro (1867), Burgaz and Ahti (1994, 2009), Aragón et al. (2001), Burgaz (2015b), **To**: Burgaz and Ahti (1994, 2009), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2022), Burgaz (2015b).

Cladonia symphycarpa (Ehrh. ex Schrad.) Fr.

Cu: Burgaz and Ahti (1992, 2009), Aragón et al. (2001), Martínez et al. (2002, 2003), Burgaz (2015b), **Gu**: Martínez et al. (2003), Burgaz and Ahti (2009), Pino-Bodas et al. (2012b), Burgaz (2015b).

***Cladonia uncialis* subsp. *uncialis (*L.) Weber ex F.H. Wigg.**

Gu: Más Guindal (1902), Burgaz and Martínez (2008), Burgaz (2015b), **To**: Pino-Bodas and Burgaz (2021).

Cladonia uncialis subsp. ***biuncialis*** (Hoffm.) M. Choisy

CR: Aragón et al. (2022), **Gu**: Burgaz and Ahti (2009), **To:** Aragón et al. (2022).

Clauzadea metzleri (Körb.) Clauzade & Cl. Roux ex D. Hawksw.

= *Protoblastenia metzleri* (Körb.) J. Steiner

Ab: Aragón and Martínez (2002a), **Gu**: Carballal and Giménez-Coral (1981).

Clavascidium lacinulatum (Ach.) M. Prieto

= *Catapyrenium lacinulatum* (Ach.) Breuss

Ab: Aragón and Rico (1997), Aragón et al. (2001), Prieto et al. (2010b), **Cu:** Prieto et al. (2006, 2010b), **Gu:** Prieto et al. (2010b), **To:** Prieto et al. (2010b).

Clavascidium semaforonense (Breuss) M. Prieto

Gu: Prieto et al. (2010b).

****Clypeococcum hypocenomycis*** D. Hawksw.

Cu: Martínez et al. (2002).

Collema curtisporum Degel.

To: Carvalho (2012).

Collema flaccidum (Ach.) Ach.

Ab: Martínez et al. (2003), Carvalho (2012), **CR**: Sarrión et al. (1993), Aragón et al. (2001), Martínez et al. (2003), Carvalho (2012), **Gu:** Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (2003), Carvalho (2012).

Collema furfuraceum (Schaer.) Du Rietz

Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), Carvalho (2012), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Aragón et al. (2001, 2010), Aragón and Giménez (2012), Carvalho (2012), Matos et al. (2015), **Cu**: Aragón et al. (2001), Martínez et al. (2002), Carvalho (2012), **Gu**: Burgaz et al. (1994a, b), Sarrión et al. (1995), Aragón et al. (2001), Carvalho (2012), **To**: Martínez et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b), Carvalho (2012), Cardós et al. (2016, 2018).

Collema nigrescens (Huds.) DC.

Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón et al. (2001), Martínez et al. (2003), Carvalho (2012), **CR**: Sarrión et al. (1993), Aragón et al. (2001), Martínez et al. (2003), Aragón and Giménez (2012), Carvalho (2012), **Cu**: Aragón et al. (2001), Martínez et al. (2002, 2003), Carvalho (2012), **Gu**: Martínez et al. (2003), Otálora et al. (2010b), Carvalho (2012), **To**: Martínez et al. (1993, 2003), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Carvalho (2012).

Collema ryssoleum (Tuck.) A. Schneid.

Ab: Egea and Llimona (1981), Aragón et al. (2001), Carvalho (2012).

Collema subflaccidum Degel.

Ab: Aragón and Rico (1997), Aragón et al. (2001), Martínez et al. (2003), Carvalho (2012), **CR**: Sarrión et al. (1993), Aragón et al. (2001, 2004b, 2010), Martínez et al. (2003), Aragón and Giménez (2012), Carvalho (2012), Matos et al. (2015), **Cu**: Aragón et al. (2001), Martínez et al. (2002), Carvalho (2012), **To**: Martínez et al. (1993, 2003), Burgaz et al. (1994a), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Carvalho (2012), Cardós et al. (2016, 2018).

Collema subnigrescens Degel.

Ab: Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), Martínez et al. (2003), Carvalho (2012), **CR**: Martínez et al. (2003), Aragón and Giménez (2012), Carvalho (2012), Matos et al. (2015), **To**: Fuertes et al. (1996), Vázquez and Burgaz (1996), Burgaz et al. (1994a), Aragón and Martinez (1997), Aragón et al. (2001), Martínez et al. (2003), Carvalho (2012), Cardós et al. (2016, 2018).

****Corticifraga peltigerae*** (Fuckel) D. Hawksw. & R. Sant.

CR: Martínez (2002), **Gu**: Martínez and Hafellner (1998), Martínez (1999), **To**: Martínez and Hafellner (1998), Martínez (1999, 2002).

Cratiria lauri-cassiae (Fée) Marbach

= *Buellia lauri-cassiae* (Fée) Müll. Arg.

Cu: Martínez et al. (2002), **To**: Martínez et al. (1993), Aragón and Martinez (1997).

Crespoa crozalsiana (B. de Lesd. ex Harm.) Lendemer & B.P. Hodk.

= *Parmelia crozalsiana* B. de Lesd. ex Harm.

= *Pseudoparmelia crozalsiana* (B. de Lesd. ex Harm.) Hale

To: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón et al. (2001).
Dacampia engeliana (Saut.) A. Massal.
Cu: Martínez and Hafellner (1998), Martínez et al. (2002).
Dacampia rufescentis (Vouaux) D. Hawksw.
To: Martínez (2002).
Dendrographa latebrarum (Ach.) Ertz & Tehler
= *Lecanactis latebrarum* (Ach.) Arnold
= *Lepraria latebrarum* Ach.
CR: Sarrión et al. (1993, 1995), **To**: Martínez et al. (1993), Sarrión and Aragón (1995), Vázquez and Burgaz (1996), Aragón et al. (2004b).
Dermatocarpon leptophyllum (Ach.) K.G.W. Lång
To: Vázquez and Burgaz (1996).
Dermatocarpon luridum (Dill. ex With.) J.R. Laundon
CR: Aragón et al. (2001).
Dermatocarpon miniatum (L.) W. Mann
= *Dermatocarpon miniatum* var. *complicatum* (Lightf.) Th. Fr.
Ab: Egea and Llimona (1981), Aragón and Rico (1997), Aragón et al. (2001).
Didymocyrtis cladoniicola (Diederich, Kocourk. & Etayo) Ertz & Diederich
To: Zhurbenko and Pino Bodas (2017).
Didymocyrtis peltigerae (Fuckel) Hafellner
Ab: Martínez and Hafellner (1998), Martínez (1999), Atienza et al. (2003).
Dimelaena oreina (Ach.) Norman
Ab: Egea and Llimona (1981), **CR**: Aragón et al. (2006a), **Gu**: Crespo et al. (1976).
Diploschistes aeneus (Müll. Arg.) Lumbsch
Ab: Lumbsch et al. (1993).
Diploschistes albissimus (Ach.) Dalla Torre & Sarnth.
To: Abbayes (1946).
Diploschistes caesioplumbeus (Nyl.) Vain.
= *Diploschistes actinostoma* var. *caesioplumbeus* (Nyl.) J. Steiner
Ab: Egea and Llimona (1981), **To**: van den Boom and Gómez-Bolea (1991).
Diploschistes diacapsis (Ach.) Lumbsch
= *Diploschistes steppicus* Reichert
Cu: Martínez et al. (2006), Concostrina-Zubiri et al. (2019), **Gu**: Carballal (1977).
Diploschistes muscorum (Scop.) R. Sant.
= *Diploschistes bryophilus* (Ach.) Zahlbr.
= *Diploschistes bryophilus* f. *parasitica* Lettau
Ab: Aragón and Martínez (1999), **CR**: Sarrión et al. (1993), Aragón et al. (2004b, 2006a, 2022), **Cu**: Crespo (1978), Calatayud and Barreno (1993), Martínez et al. (2002), Prieto et al. (2006), **Gu**: Carballal (1977), Crespo (1978), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2022).
Diploschistes scruposus (Schreb.) Norman
= *Urceolaria scruposa* (Schreb.) Ach.
CR: Aragón et al. (2006a, 2022), **To**: Colmeiro (1867), Aragón et al. (2022).
Diploschistes scruposus* var. *violarius (Nyl.) Lettau
Ab: Egea and Llimona (1981).
Diplotomma alboatrum (Hoffm.) Flot.
= *Buellia alboatra* (Hoffm.) Th. Fr.
Ab: Aragón et al. (2006b), **CR**: Aragón et al. (2006b), **Cu**: Martínez et al. (2001, 2002), Aragón et al. (2006b), Concostrina-Zubiri et al. (2019), **To**: Aragón et al. (2006b).
Diplotomma cedricola (Werner) Etayo
= *Buellia cedricola* Werner
Ab: Aragón and Martínez (2002a), Martínez et al. (2003), **CR**: Sarrión et al. (1995), Burgaz and Sarrión (1995), Sarrión and Burgaz (1995), Martínez et al. (2003), Aragón et al. (2004b), Aragón and Giménez (2012), **Cu**: Martínez et al. (2001, 2002, 2003), **To**: Sarrión and Aragón (1995), Burgaz and Sarrión (1995), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Martínez et al. (2003), Aragón et al. (2004b).
Diplotomma epipolium (Ach.) Arnold
= *Buellia epipolia* (Ach.) Mong.
Ab: Aragón and Martínez (2002a), **Cu**: Martínez et al. (2006), **Gu**: Carballal and Giménez-Coral (1981).
Diplotomma pharcidium (Ach.) M. Choisy
= *Buellia pharcidia* (Ach.) Malme
CR: Sarrión et al. (1993).
Diplotomma populorum A. Massal.
To: Aragón and Martinez (1997).
Diplotomma venustum Körb. ex Arnold
Ab: Aragón and Martínez (2002a).
Enchylium coccophorum (Tuck.) Otálora, P.M. Jørg. & Wedin
CR: Aragón et al. (2022), **To:** Aragón et al. (2022).
Enchylium conglomeratum (Hoffm.) Otálora, P.M. Jørg. & Wedin
= *Collema conglomeratum* Hoffm.
CR: Aragón et al. (2001).
Enchylium ligerinum (Hy) Otálora, P.M. Jørg. & Wedin
= *Collema ligerinum* (Hy) Harm.
Ab: Carvalho (2012).
Enchylium polycarpon (Hoffm.) Otálora, P.M. Jørg. & Wedin
= *Collema polycarpon* Hoffm.
Ab: Aragón and Rico (1997), Aragón et al. (2001), Otálora et al. (2010b), **Cu**: Carvalho (2012).
Enchylium tenax (Sw.) Gray
= *Collema tenax* (Sw.) Ach.
Ab: Aragón and Rico (1997), Aragón et al. (2001), Carvalho (2012), **CR**: Aragón et al. (2001, 2022), Carvalho (2012), **Cu**: Crespo (1978), Aragón et al. (2001), Carvalho (2012), **Gu**: Carballal (1977), Carballal and Giménez-Coral (1981), Aragón et al. (2001), Carvalho (2012), **To**: Carvalho (2012), Aragón et al. (2022).
Endocarpon loscosii Müll. Arg.
CR: Aragón et al. (2022).
Endocarpon pusillum Hedw.
= *Dermatocarpon trapeziforme* (J. König) Trevis.
Ab: Aragón and Rico (1997), Aragón et al. (2001), **CR**: Aragón et al. (2022), **Cu**: Crespo (1978), **Gu**: Carballal (1977), Crespo (1978), Aragón et al. (2001), **To**: Aragón et al. (2022).

Endococcus ramalinarius (Linds.) D. Hawksw.
To: Martínez (2002).
Endococcus rugulosus Nyl.
Cu: Calatayud and Barreno (1995a).
Epicladonia sandstedei (Zopf) D. Hawksw.
To: Zhurbenko and Pino Bodas (2017).
Epicladonia stenospora (Harm.) D. Hawksw.
To: Pino-Bodas et al. (2017b).
Evernia prunastri (L.) Ach.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Fuertes et al. (1996), Aragón et al. (2001, 2006b, a, 2010), Martínez (2002), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Carballal (1976), Aragón et al. (1999, 2001, 2015), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993), Fuertes et al. (1996),Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Martínez (2002), Matos et al. (2015).
Fenestroconidia caloplacae Calat. & Etayo
Cu: Calatayud and Etayo (1999).
Flavoparmelia caperata (L.) Hale
= *Parmelia caperata* (L.) Ach.
CR: Sarrión et al. (1993), Aragón et al. (2001, 2004b, 2006b), **Cu**: Aragón et al. (2001), **Gu**: Más Guindal (1902), Aragón et al. (2001), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2006b).
Flavoparmelia soredians (Nyl.) Hale
= *Parmelia soredians* Nyl.
CR: Aragón et al. (2001, 2006b, 2010), Aragón and Giménez (2012), Matos et al. (2015), **Gu**: Aragón et al. (2001, 2015), **To**: Vázquez and Burgaz (1996), Aragón et al. (2001, 2006b).
Flavoplaca citrina (Hoffm.) Arup, Frödén & Søchting
= *Caloplaca citrina* (Hoffm.) Th. Fr.
Ab: Aragón and Martínez (1999, 2002a), Aragón et al. (2006b), **CR**: Aragón et al. (2006b), **Cu**: Martínez et al. (2001, 2002), Aragón et al. (2006b), **Gu**: Carballal and Giménez-Coral (1981), Aragón et al. (1999, 2006b), **To**: Aragón et al. (2006b).
Flavoplaca coronata (Kremp. ex Körb.) Arup, Frödén & Søchting
= *Caloplaca coronata* (Kremp. ex Körb.) J. Steiner
Gu: Carballal and Giménez-Coral (1981).
Flavopunctelia flaventior (Stirt.) Hale
= *Parmelia flaventior* Stirt.
CR: Sarrión et al. (1995).
Fuscidea praeruptorum (Du Rietz & H. Magn.) V. Wirth & Vězda
CR: Aragón et al. (2006a).
Fuscopannaria ignobilis (Anzi) P.M. Jørg.
= *Pannaria ignobilis* Anzi
Ab: Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), Martínez et al. (2003), Carballal et al. (2010), **CR**: Sarrión et al. (1993), Aragón et al. (2001), Martínez et al. (2003), Carballal et al. (2010), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Martínez et al. (2002), Carballal et al. (2010), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b), Martínez et al. (2003), Carballal et al. (2010).
Fuscopannaria mediterranea (Tav.) P.M. Jørg.
= *Pannaria mediterranea* Tav.
Ab: Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), Carballal et al. (2010), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Martínez and Aragón (1994), Fuertes et al. (1996), Aragón et al. (2001, 2004b), Carballal et al. (2010), Aragón et al. (2010), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Martínez and Aragón (1994), Aragón et al. (2001), Martínez et al. (2002), Carballal et al. (2010), **To**: Martínez et al. (1993), Burgaz et al. (1994a), Martínez and Aragón (1994), Fuertes et al. (1996), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b), Carballal et al. (2010), Cardós et al. (2016, 2018).
Fuscopannaria nebulosa (Hoffm.) E. Tripp & Lendemer
= *Moelleropsis nebulosa* (Hoffm.) Gyeln.
CR: Martínez et al. (2003), Aragón and Giménez (2012), Aragón et al. (2022), **To**: Carballal et al. (2010), Aragón et al. (2022).
Fuscopannaria olivacea (P.M. Jørg.) P.M. Jørg.
CR: Aragón et al. (2004b), Carballal et al. (2010), Aragón and Giménez (2012), **To**: Aragón et al. (2004b), Carballal et al. (2010), Cardós et al. (2016, 2018).
Glaucomaria carpinea (L.) S.Y. Kondr., Lőkös & Farkas
= *Lecanora carpinea* (L.) Vain.
Ab: Egea et al. (1985), Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Ibañez and Burgaz (1998), Aragón et al. (2010), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Ibañez and Burgaz (1998), Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Burgos and Burgaz (1988), Ibañez and Burgaz (1998), Aragón et al. (1999, 2015), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Ibañez and Burgaz (1998), Matos et al. (2015).
Glaucomaria subcarpinea (Szatala) S.Y. Kondr., Lőkös & Farkas
= *Lecanora subcarpinea* Szatala
Cu: Ibañez and Burgaz (1998), **Gu**: Ibañez and Burgaz (1998).
Glaucomaria sulphurea (Hoffm.) S.Y. Kondr., Lőkös & Farkas
= *Lecanora sulphurea* (Hoffm.) Ach.
Cu: Calatayud and Barreno (1993).
Glaucomaria swartzii (Ach.) S.Y. Kondr., Lőkös & Farkas
= *Lecanora subradiosa* Nyl.
= *Lecanora swartzii* (Ach.) Ach.
Ab: Egea and Llimona (1981), **Cu**: Calatayud and Barreno (1993).
Glyphopeltis ligustica (B. de Lesd.) Timdal
Ab: Egea et al. (1995).
Gonohymenia cribellifera (Nyl.) Henssen
Ab: Egea and Llimona (1981).

Graphium aphthosae Alstrup & D. Hawksw.
Cu: Martínez and Hafellner (1998), Martínez (1999), Martínez et al. (2002).
Gyalecta ulmi (Sw.) Zahlbr.
Ab: Aragón and Martínez (2002a), Álvarez Andrés and López de Silanes (2002), Martínez et al. (2003), Carballal et al. (2004), **CR:** Aragón and Giménez (2012), **Cu**: Martínez et al. (2001, 2002, 2003), Álvarez Andrés and López de Silanes (2002), Carballal et al. (2004).
Gyalolechia desertorum (Tomin) Søchting, Frödén & Arup
= *Fulgensia desertorum* (Tomin) Poelt
Gu: Carballal (1977).
Gyalolechia fulgens (Sw.) Søchting, Frödén & Arup
= *Fulgensia fulgens* (Sw.) Elenkin
Ab: Aragón and Martínez (2002a), **CR:** Aragón et al. (2022), **Cu**: Crespo (1978), **Gu**: Carballal (1977), **To:** Aragón et al. (2022).
Gyalolechia fulgida (Nyl.) Søchting, Frödén & Arup
= *Fulgensia fulgida* (Nyl.) Szatala
Ab: Aragón and Martínez (2002a), **Cu:** Prieto et al. (2006), **Gu**: Carballal (1977), Carballal and Giménez-Coral (1981).
Gyalolechia subbracteata (Nyl.) Søchting, Frödén & Arup
= *Fulgensia subbracteata* (Nyl.) Poelt
Cu: Martínez et al. (2006), **Gu**: Carballal (1977).
Haematomma ochroleucum (Neck.) J.R. Laundon
CR: Sarrión et al. (1999), **Cu**: Calatayud and Barreno (1993).
Hertelidea botryosa (Fr.) Printzen & Kantvilas
= *Lecidea botryosa* (Fr.) Th. Fr.
CR: Aragón et al. (2004b), **Cu**: Martínez et al. (2002), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b).
Heterocephalacria bachmannii (Diederich & M.S. Christ.) Millanes & Wedin
To: Zhurbenko and Pino Bodas (2017), Pino-Bodas et al. (2017a).
Heterodermia speciosa (Wulfen) Trevis.
Gu: Hurtado et al. (2020a, b, c, d).
Heteroplacidium contumescens (Nyl.) Breuss
Ab: Prieto et al. (2010b), **To:** Prieto et al. (2010b), Aragón et al. (2022).
Homostegia piggotii (Berk. & Broome) P. Karst.
Cu: Martínez et al. (2002).
Hypocenomyce scalaris (Ach.) M. Choisy
Ab: Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Sarrión and Burgaz (1995), Aragón et al. (2001, 2004b, 2006b), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2001, 2002), **Gu**: Burgos and Burgaz (1990), Aragón et al. (1999, 2001, 2006b), **To**: Sarrión and Aragón (1995), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b, 2006b).
Hypocenomyce stoechadiana Abbassi Maaf & Cl. Roux
= *Waynea stoechadiana* (Abbassi Maaf & Cl. Roux) Cl. Roux & P. Clerc
CR: Matos et al. (2015), **To**: Vázquez and Burgaz (1996), Cardós et al. (2016, 2018).
Hypogymnia farinacea Zopf
= *Hypogymnia bitteriana* (Zahlbr.) Räsänen
= *Parmelia bitteriana* Zahlbr.
Ab: Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Sarrión et al. (1993), Sarrión and Burgaz (1995), Aragón et al. (2001, 2004b, 2006b), **Cu**: Abbayes (1946), Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Burgos and Burgaz (1990), Aragón et al. (1999, 2001, 2006b), **To**: Sarrión and Aragón (1995), Vázquez and Burgaz (1996), Aragón et al. (2001, 2004b, 2006b).
Hypogymnia physodes (L.) Nyl.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Sarrión et al. (1995), Aragón et al. (2001, 2004b, 2006b), **Cu**: Calatayud and Barreno (1993), Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Carballal (1976), Aragón et al. (1999, 2001, 2006b), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2006b).
Hypogymnia tubulosa (Schaer.) Hav.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Sarrión et al. (1993), Aragón et al. (2001, 2006b), Matos et al. (2015), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Carballal (1976), Aragón et al. (1999, 2001, 2006b, 2015), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2006b).
Imshaugia aleurites (Ach.) S.L.F. Mey.
Ab: Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **Cu**: Martínez et al. (2001, 2002), Aragón et al. (2006b), **Gu**: Aragón et al. (1999, 2006b).
Inoderma epigaeum (Pers.) Gray
CR: Aragón et al. (2022), **To**: Aragón et al. (2022).
Ivanpisutia ocelliformis (Nyl.) S.Y. Kondr.
= *Biatora ocelliformis* (Nyl.) Arnold
Cu: Martínez et al. (2001, 2002, 2003).
Japewiella tavaresiana (H. Magn.) Printzen
= *Lecidea carrollii* Coppins & P. James
CR: Sarrión et al. (1993).
Karsteniomyces peltigerae (P. Karst.) D. Hawksw.
CR: Martínez and Hafellner (1998), Martínez (1999).
Knufia peltigerae (Fuckel) Réblová & Unter.
= *Capronia peltigerae* (Fuckel) D. Hawksw.
Gu: Martínez and Hafellner (1998), Martínez (1999).
Koerberia biformis A. Massal.
Ab: Burgaz and Martínez (2001), Martínez et al. (2003), Burgaz (2011a, b), **CR**: Aragón et al. (2001), Burgaz and Martínez (2001), Martínez et al. (2003), Burgaz (2011a, b), Matos et al. (2015), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Burgaz and Martínez (2001), Martínez et al. (2003), Burgaz (2011a, b).
Kuettlingeria furax (Egea & Llimona) I.V. Frolov, Vondrák & Arup

= *Caloplaca furax* Egea & Llimona
Ab: Egea and Llimona (1983), Egea (1984).
Kuettlingeria teicholyta (Ach.) Trevis.
= *Pyrenodesmia teicholyta* (Ach.) E.D. Rudolph
Gu: Pena-Poza et al. (2018).
Lambiella gyrizans (Nyl.) M. Westb. & Resl
= *Rimularia gyrizans* (Nyl.) Hertel & Rambold
CR: Aragón et al. (2006a), **To**: Aragón et al. (2004b).
Lambiella insularis (Nyl.) T. Sprib.
= *Lecidea insularis* Nyl.
Ab: Egea and Llimona (1981).
Lasallia pustulata (L.) Mérat
= *Umbilicaria pustulata* (L.) Hoffm.
Ab: Egea and Llimona (1981), Aragón et al. (2001), **CR**: Sarrión and Burgaz (1995), Sarrión et al. (1995), Aragón et al. (2001, 2004b, 2006a), Aragón and Giménez (2012), **Cu**: Colmeiro (1867), Calatayud and Barreno (1993), Aragón et al. (2001), **Gu**: Colmeiro (1867), **To**: Vázquez and Burgaz (1996), Aragón et al. (2001, 2004b).
****Lasiosphaeriopsis salisburyi*** D. Hawksw. & Sivan.
Gu: Martínez and Hafellner (1998), Martínez (1999), **To**: Martínez and Hafellner (1998), Martínez (1999).
Lathagrium auriforme (With.) Otálora, P.M. Jørg. & Wedin
= *Collema auriforme* (With.) Coppins & J.R. Laundon
Ab: Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), Carvalho (2012), **CR**: Carvalho (2012), **Cu**: Carvalho (2012), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón et al. (2001), Carvalho (2012).
Lathagrium cristatum (L.) Otálora, P.M. Jørg. & Wedin
= *Collema cristatum* (L.) Weber ex F.H. Wigg.
Ab: Egea and Llimona (1981), Aragón and Rico (1997), Aragón et al. (2001), Carvalho (2012), **CR**: Carvalho (2012), Aragón et al. (2022), **Cu**: Carvalho (2012), **Gu**: Carballal (1977), Carballal and Giménez-Coral (1981), Aragón et al. (2001), Carvalho (2012), **To**: Carvalho (2012).
Lathagrium fuscovirens (With.) Otálora, P.M. Jørg. & Wedin
= *Collema fuscovirens* (With.) J.R. Laundon
= *Collema tuniforme* (Ach.) Ach.
Ab: Carvalho (2012), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón et al. (2001), Carvalho (2012).
Lathagrium undulatum (Laurer ex Flot.) Poetsch
= *Collema undulatum* Laurer ex Flot.
= *Collema undulatum* var. *granulosum* Degel.
Ab: Aragón and Rico (1997), Aragón et al. (2001), Carvalho (2012), **CR:** Aragón et al. (2022), **Gu**: Carballal and Giménez-Coral (1981), Aragón et al. (2001).
Lazarenkoella polycarpoides (J. Steiner) S.Y. Kondr. & Lőkös
= *Caloplaca polycarpoides* (J. Steiner) M. Steiner & Poelt
To: Crespo and Atienza (1989), Vázquez and Burgaz (1996).
Lecania cyrtella (Ach.) Th. Fr.
To: Crespo and Atienza (1989), Vázquez and Burgaz (1996).
Lecania cyrtellina (Nyl.) Zahlbr.
Cu: Martínez et al. (2001, 2002).
Lecania erysibe (Ach.) Mudd
Ab: Egea and Llimona (1981), **Gu**: Carballal and Giménez-Coral (1981).
Lecania fuscella (Schaer.) A. Massal.
Ab: Aragón and Martínez (1999), **To**: Crespo and Atienza (1989), Vázquez and Burgaz (1996).
Lecania inundata (Hepp ex Körb.) M. Mayrhofer
To: van den Boom and Gómez-Bolea (1991).
Lecania naegelii (Hepp) Diederich & van den Boom
= *Bacidia naegelii* (Hepp) Zahlbr.
Ab: Aragón and Martínez (1999), **CR**: Sarrión et al. (1993), **Cu**: Martínez et al. (2001, 2002), **Gu**: Aragón et al. (1999), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997).
Lecania rabenhorstii (Hepp) Arnold
Gu: Carballal and Giménez-Coral (1981).
Lecania zinaidae Oxner
To: Crespo and Atienza (1989), Vázquez and Burgaz (1996).
Lecanora albella (Pers.) Ach.
= *Lecanora allophana* (Ach.) Nyl.
= *Lecanora pallida* (Schreb.) Rabenh.
Ab: Aragón and Martínez (1999), **CR**: Ibañez and Burgaz (1998), **Gu**: Burgos and Burgaz (1988), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997).
Lecanora argentata (Ach.) Röhl.
Gu: Ibañez and Burgaz (1998), Aragón et al. (2015), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996).
Lecanora campestris (Schaer.) Hue
Ab: Egea and Llimona (1981), **CR**: Aragón et al. (2006a, 2022), **To**: Aragón et al. (2022).
Lecanora cenisia Ach.
Cu: Calatayud and Barreno (1993).
Lecanora chlarotera Nyl.
Ab: Egea et al. (1985), Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Ibañez and Burgaz (1998), Aragón et al. (2006b, 2010), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Ibañez and Burgaz (1998), Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Carballal (1976), Burgos and Burgaz (1988), Ibañez and Burgaz (1998), Aragón et al. (1999, 2015), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Ibañez and Burgaz (1998), Aragón et al. (2004b, 2006b), Matos et al. (2015).
Lecanora coniferarum Printzen
CR: Martínez and Aragón (2004), Aragón et al. (2006b), **Cu**: Martínez and Aragón (2004), Aragón et al. (2006b), **To**: Martínez and Aragón (2004), Aragón et al. (2006b).
Lecanora expallens Ach.
CR: Aragón et al. (2006b), Matos et al. (2015), **To**: Aragón et al. (2006b).
Lecanora glabrata (Ach.) Malme

Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996).
Lecanora hispanica I. Ibáñez & Burgaz
CR: Ibañez and Burgaz (1998).
Lecanora horiza (Ach.) Röhl.
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Aragón et al. (2010), Matos et al. (2015), **Cu**: Ibañez and Burgaz (1998), Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Rowe and Espinosa Roji (1996), Ibañez and Burgaz (1998), **To**: Vázquez and Burgaz (1996), Matos et al. (2015).
Lecanora hypoptella (Nyl.) Grummann
Cu: Martínez and Aragón (2002), Aragón et al. (2006b), **Gu**: Martínez and Aragón (2002), Aragón et al. (2006a).
Lecanora intricata (Ach.) Ach.
Ab: Egea and Llimona (1981).
Lecanora intumescens (Rebent.) Rabenh.
Ab: Egea et al. (1985), Aragón et al. (2006b), **CR**: Aragón et al. (2010), Matos et al. (2015), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Ibañez and Burgaz (1998), Aragón et al. (1999, 2015), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Matos et al. (2015).
Lecanora laatokkaensis (Räsänen) Poelt
Ab: Egea and Llimona (1981).
Lecanora laxa (Śliwa & Wetmore) Printzen
CR: Martínez and Aragón (2004), Aragón et al. (2006b), **Cu**: Martínez and Aragón (2004), **To**: Martínez and Aragón (2004), Aragón et al. (2006b).
Lecanora meridionalis H. Magn.
CR: Ibañez and Burgaz (1998), **Gu**: Ibañez and Burgaz (1998), **To**: Vázquez and Burgaz (1996).
Lecanora mughicola Nyl.
Cu: Martínez and Aragón (2004).
Lecanora nemoralis Makar.
To: Vázquez and Burgaz (1996).
Lecanora orosthea **(Ach.) Ach.**
CR: Aragón and Giménez (2012).
Lecanora paramerae I. Martínez, Aragón & Lumbsch
Cu: Martínez et al. (1999, 2001, 2002).
Lecanora polytropa (Hoffm.) Rabenh.
CR: Aragón et al. (2006a), **Cu**: Calatayud and Barreno (1993).
Lecanora psarophana Nyl.
Ab: Egea and Llimona (1981).
Lecanora pulicaris (Pers.) Ach.
Cu: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Aragón et al. (1999, 2006b), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997).
Lecanora quercicola Coppins & P. James
Cu: Martínez et al. (2002), **Gu**: Aragón et al. (1999).
Lecanora rugosella Zahlbr.
Ab: Aragón and Martínez (1999), **CR**: Sarrión et al. (1995), Ibañez and Burgaz (1998), **Cu**: Ibañez and Burgaz (1998), Martínez et al. (2002), **Gu**: Ibañez and Burgaz (1998), Aragón et al. (1999), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997).
Lecanora rupicola (L.) Zahlbr.
Ab: Egea and Llimona (1981), **CR**: Aragón et al. (2006a).
Lecanora saligna (Schrad.) Zahlbr.
= *Lecanora saligna* var. *sarcopis* (Ach.) Tomin
CR: Sarrión et al. (1993), **Cu**: Martínez et al. (2001, 2002), **Gu**: Aragón et al. (1999).
Lecanora sienae B. de Lesd.
Ab: Egea et al. (1985), **Gu**: Carballal (1976), **To**: Martínez et al. (1993).
Lecanora strobilina (Spreng.) Kieff.
Ab: Egea et al. (1985), Aragón et al. (2006b), **CR**: Aragón et al. (2006b), **Cu**: Martínez et al. (2002), **Gu**: Aragón et al. (1999).
Lecanora subcarnea (Sw.) Ach.
Ab: Egea and Llimona (1981), **CR**: Aragón et al. (2006a), Aragón and Giménez (2012), **Cu**: Calatayud and Barreno (1993).
Lecanora sulphurata (Ach.) Nyl.
Ab: Egea and Llimona (1981).
Lecanora symmicta (Ach.) Ach.
CR: Aragón et al. (2006b), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2006b).
Lecanora umbrina (Ach.) A. Massal.
To: Martínez et al. (1993), Vázquez and Burgaz (1996).
Lecidea atrobrunnea (DC.) Schaer.
Ab: Egea and Llimona (1981), **CR**: Aragón et al. (2006a).
Lecidea berengeriana (A. Massal.) Nyl.
= *Mycobilimbia berengeriana* (A. Massal.) Hafellner & V. Wirth
Ab: Aragón and Martínez (1999), Martínez et al. (2003), **CR**: Martínez et al. (2003), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Martínez et al. (2003).
Lecidea circinarioides Casares & Hafellner
To: Casares-Porcel et al. (1996), Vázquez and Burgaz (1996).
Lecidea contigua (Hoffm.) Fr.
Ab: Egea and Llimona (1981).
Lecidea exigua Chaub.
Unspecified: Aragón et al. (2008).
Lecidea fuscoatra (L.) Ach.
Ab: Egea and Llimona (1981), **CR**: Aragón et al. (2006a), **Cu**: Calatayud and Barreno (1993).
Lecidea grisella Flörke
Ab: Egea and Llimona (1981).
Lecidea holopolia (Tuck.) Zahlbr.
Ab: Aragón et al. (2006b), **Cu**: Aragón et al. (2006b).
Lecidea hypopta Ach.
Ab: Martínez et al. (2003), **Cu**: Martínez et al. (2001, 2002, 2003), Aragón et al. (2006b), **Gu**: Aragón et al. (1999, 2006b).
Lecidea lapicida (Ach.) Ach.
CR: Aragón et al. (2006a).
Lecidea obluridata Nyl.
Ab: Egea and Llimona (1981).
Lecidea parasema Ach.
Gu: Carballal (1976).
Lecidea sarcogynoides Körb.

CR: Aragón et al. (2006a), **Cu**: Calatayud and Barreno (1993).
Lecidella anomaloides (A. Massal.) Hertel & H. Kilias
CR: Aragón et al. (2006a).
Lecidella carpathica Körb.
= *Lecidea carpathica* (Körb.) Szatala
Ab: Egea and Llimona (1981), **CR**: Aragón et al. (2006a), **Cu**: Calatayud and Barreno (1993).
Lecidella elaeochroma (Ach.) M. Choisy
Ab: Egea et al. (1985), Aragón and Martínez (1999), **CR**: Sarrión et al. (1993) Aragón et al. (2010), Matos et al. (2015), **Cu**: Martínez et al. (2002), **Gu**: Fuertes et al. (1996), Aragón et al. (1999), **To**: Vázquez and Burgaz (1996), Aragón et al. (2004b), Matos et al. (2015).
Lecidella euphorea (Flörke) Kremp.
Ab: Egea et al. (1985), **CR**: Sarrión et al. (1993), **Cu**: Martínez et al. (2002), **Gu**: Burgos and Burgaz (1988), Aragón et al. (1999), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997).
Lecidella pulveracea (Flot. ex Schaer.) P. Syd.
Ab: Aragón et al. (2006b), **CR**: Aragón et al. (2004b, 2006b, 2010), Matos et al. (2015), **Cu**: Martínez et al. (2002), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Matos et al. (2015).
Lecidella stigmatea (Ach.) Hertel & Leuckert
Ab: Aragón and Martínez (2002a), **Cu**: Calatayud and Barreno (1993), **Gu**: Carballal and Giménez-Coral (1981).
Lepra albescens (Huds.) Hafellner
= *Pertusaria albescens* (Huds.) M. Choisy & Werner
= *Pertusaria albescens* var. *globulifera* (Turner) Poelt
Ab: Egea et al. (1985), Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Sarrión et al. (1993, 1995), Burgaz et al. (1994a), Fuertes et al. (1996), Fos et al. (2000), Aragón et al. (2004b, 2010), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Martínez et al. (2001, 2002), Aragón et al. (2006b), **Gu**: Burgos and Burgaz (1988), Burgaz et al. (1994a, b), Fuertes et al. (1996), Aragón et al. (2015), **To**: Martínez et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b), Cardós et al. (2016, 2018).
Lepra amara (Ach.) Hafellner
= *Pertusaria amara* (Ach.) Nyl.
Ab: Egea and Llimona (1981), Egea et al. (1985), Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Sarrión and Burgaz (1995), Aragón et al. (2006a), **Cu**: Martínez et al. (2002), **Gu**: Burgos and Burgaz (1988), Aragón et al. (1999, 2015), **To**: Sarrión and Aragón (1995), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b), Cardós et al. (2016, 2018).
Lepra aspergilla (Ach.) Hafellner
= *Pertusaria aspergilla* (Ach.) J.R. Laundon
CR: Aragón et al. (2006a), Aragón and Giménez (2012).
Lepra corallina (L.) Hafellner
= *Pertusaria corallina* (L.) Arnold
Cu: Calatayud and Barreno (1993).
Lepra excludens (Nyl.) Hafellner
= *Pertusaria excludens* Nyl.
CR: Aragón et al. (2006a), Aragón and Giménez (2012).
Lepra leucosora (Nyl.) Hafellner
= *Pertusaria leucosora* Nyl.
Ab: Egea and Llimona (1981), **Cu**: Pérez-Ortega and Calatayud (2009).
Lepra ophthalmiza (Nyl.) Hafellner
= *Pertusaria ophthalmiza* (Nyl.) Nyl.
Ab: Aragón and Martínez (1999), Martínez et al. (2003), Aragón et al. (2006b), **CR**: Aragón et al. (2004b), **To**: Aragón and Martínez (2002a).
Lepra slesvicensis (Erichsen) Hafellner
= *Pertusaria amara* f. *slesvicensis* (Erichsen) Almb.
= *Pertusaria slesvicensis* Erichsen
CR: Sarrión et al. (1993), Aragón et al. (2004b).
Lepraria caesioalba (B. de Lesd.) J.R. Laundon
CR: Aragón et al. (2006a), **Cu**: Calatayud and Barreno (1993), **To**: Aragón et al. (2022).
Lepraria crassissima (Hue) Lettau
Cu: Martínez et al. (2006).
Lepraria diffusa (J.R. Laundon) Kukwa
CR: Aragón et al. (2006a).
Lepraria incana (L.) Ach.
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Aragón et al. (2006a, 2022), Matos et al. (2015), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Burgos and Burgaz (1988), Aragón et al. (1999, 2006b, 2015), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b, 2022), Cardós et al. (2016, 2018).
Lepraria isidiata (Llimona) Llimona & A. Crespo
= *Lepraria crassissima* var. *isidiata* Llimona
Gu: Carballal (1977).
Lepraria lobificans Nyl.
CR: Aragón et al. (2004b, 2006a), **To**: Aragón et al. (2004b, 2022).
Lepraria membranacea (Dicks.) Vain.
= *Crocynia membranacea* (Dicks.) Zahlbr.
= *Leproloma membranaceum* (Dicks.) Vain.
Ab: Egea and Llimona (1981), **CR**: Aragón et al. (2006a), Aragón and Giménez (2012), **To**: Aragón et al. (2004b).
Lepraria neglecta (Nyl.) Erichsen
Ab: Egea and Llimona (1981), **CR**: Aragón et al. (2006a), **Gu**: Carballal (1977), Burgaz et al. (1994a).
Lepraria rigidula (B. de Lesd.) Diederich
CR: Aragón et al. (2022), **To:** Aragón et al. (2022).
Leprocaulon microscopicum (Vill.) Gams ex D. Hawksw.
Ab: Egea et al. (1985), **CR**: Aragón et al. (2006a, 2022), Aragón and Giménez (2012), **Cu**: Calatayud and Barreno (1993), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2022).
Leproplaca xantholyta (Nyl.) Nyl.
= *Caloplaca xantholyta* (Nyl.) Jatta

Ab: Aragón and Martínez (2002a), **Cu**: Aragón and Martínez (2002a).
Leptochidium albociliatum (Desm.) M. Choisy
= *Leptogium albociliatum* Desm.
CR: Aragón et al. (2001, 2006a, 2022), Burgaz and Martínez (2001), Martínez et al. (2003), Burgaz (2011a, b), Aragón and Giménez (2012), **Cu**: Burgaz and Martínez (2001), Martínez et al. (2003), Burgaz (2011a, b), **Gu**: Carballal (1977), Burgaz and Martínez (2001), Martínez et al. (2003), Burgaz (2011a, b), **To**: Burgaz and Martínez (2001), Aragón et al. (2022).
Leptogidium dendriscum (Nyl.) Nyl.
= *Polychidium dendriscum* (Nyl.) Henssen
To: Vázquez and Burgaz (1996), Aragón et al. (2001).
Leptogium brebissonii Mont.
Unspecified: Aragón et al. (2008).
Leptogium burnetiae C.W. Dodge
Ab: Aragón (2004).
Leptogium coralloideum (Meyen & Flot.) Vain.
Unspecified: Aragón et al. (2008).
Leptogium furfuraceum (Harm.) Sierk
Ab: Otálora et al. (2010a, b), **CR**: Aragón and Giménez (2012), **To**: Otálora et al. (2010a, b), Cardós et al. (2016, 2018).
Leptogium quercicola Otálora, Aragón, I. Martínez & M.C. Molina
Ab: Otálora et al. (2004), **CR**: Otálora et al. (2004), **Gu**: Otálora et al. (2004), **To**: Otálora et al. (2004).
Leptogium saturninum (Dicks.) Nyl.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), Martínez et al. (2003), Otálora et al. (2010b), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Aragón et al. (2001), Martínez et al. (2003), **Cu**: Aragón et al. (2001), Martínez et al. (2002, 2003), **Gu:** Fuertes et al. (1996), Hurtado et al. (2020a, b, c, d), **To**: Burgaz et al. (1994a), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Martínez et al. (2003).
Leptogium teretiusculum Wallr. ex Arnold
CR: Aragón et al. (2001, 2004b), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Aragón et al. (2001), Martínez et al. (2002).
Leptogium terrenum Nyl.
CR: Aragón et al. (2022), **To:** Aragón et al. (2022).
Leptorhaphis atomaria (Ach.) Szatala
Ab: Martínez and Aragón (2001).
Letharia vulpina (L.) Hue
Cu: Aragón et al. (2001, 2006b), Martínez et al. (2001, 2002, 2003), **Gu**: Burgos and Burgaz (1990), Aragón et al. (2001, 2006b), Martínez et al. (2003).
****Lichenoconium erodens*** M.S. Christ. & D. Hawksw.
To: Zhurbenko and Pino Bodas (2017).
****Lichenoconium lecanorae*** (Jaap) D. Hawksw.
Cu: Martínez et al. (2002).
****Lichenoconium pyxidatae*** (Oudem.) Petr. & Syd.
Cu: Martínez et al. (2002).
****Lichenoconium usneae*** (Anzi) D. Hawksw.
CR: Martínez (2002), **Cu**: Martínez et al. (2002), **To**: Martínez (2002).
****Lichenodiplis lecanorae*** (Vouaux) Dyko & D. Hawksw.
Cu: Martínez et al. (2002).
Lichenomphalia meridionalis (Contu & La Rocca) P.-A. Moreau & Courtec.
= *Omphalina meridionalis* Contu & La Rocca
CR: Aragón et al. (2022), **Gu**: Barrasa and Rico (2001), Rico and Barrasa (2011), Gasulla et al. (2020), **To**: Gasulla et al. (2020).
Lichenomphalia umbellifera (L.) Redhead, Lutzoni, Moncalvo & Vilgalys
Gu: Rico and Barrasa (2011).
Lichenomphalia velutina (Quél.) Redhead, Lutzoni, Moncalvo & Vilgalys
Gu: Rico and Barrasa (2011), **To**: Rico and Barrasa (2011).
****Lichenopeltella peltigericola*** (D. Hawksw.) R. Sant.
CR: Martínez and Hafellner (1998), Martínez (1999).
****Lichenosticta alcicornaria*** (Linds.) D. Hawksw.
Cu: Calatayud and Barreno (1995b), Calatayud and Etayo (1999).
****Lichenostigma elongata*** Nav.-Ros. & Haf.
To: van den Boom and Etayo (2000).
****Lichenostigma epirupestre*** Pérez-Ort. & Calat.
Cu: Pérez-Ortega and Calatayud (2009).
Lichinella algerica (J. Steiner) P.P. Moreno & Egea
Ab: Aragón et al. (2001).
Lichinella cribellifera (Nyl.) P.P. Moreno & Egea
Ab: Aragón et al. (2001).
Lichinella iodopulchra (Couderc ex Croz.) P.P. Moreno & Egea
Ab: Aragón et al. (2001).
Lichinella stipatula Nyl.
Ab: Egea and Llimona (1981), Aragón et al. (2001), **To**: Garcia-Rowe and Saiz-Jimenez (1991), Vázquez and Burgaz (1996).
Lobaria pulmonaria (L.) Hoffm.
Ab: Egea et al. (1985), Aragón and Martínez (1995), Aragón and Rico (1997), Burgaz and Martínez (1999b, 2003), Aragón et al. (2001), Martínez et al. (2003, 2012), Otálora et al. (2015), Merinero et al. (2014), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Aragón and Martínez (1995), Burgaz and Martínez (1999b, 2003), Aragón et al. (2001), Martínez (2002, 2003, 2012), Aragón and Giménez (2012), Merinero et al. (2014), **Cu**: Aragón and Martínez (1995), Aragón et al. (2001), **Gu**: Burgos and Burgaz (1988), Burgaz et al. (1994a, b), Aragón and Martínez (1995), Burgaz and Martínez (1999b, 2003), Aragón et al. (2001, 2015), Martínez et al. (2003, 2012), Belinchón et al. (2009, 2011), Merinero et al. (2014), Otálora et al. (2011, 2015), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993, 2003, 2012), Burgaz et al. (1994a), Aragón and Martinez (1995, 1997), Vázquez and Burgaz (1996), Burgaz and Martínez (1999b, 2003), Aragón et al. (2001), Merinero et al. (2014), Otálora et al. (2015).
Lobarina scrobiculata (Scop.) Nyl. ex Cromb.
= *Lobaria scrobiculata* (Scop.) P. Gaertn.

Ab: Aragón and Rico (1997), Burgaz and Martínez (1999b, 2003), Aragón et al. (2001), Martínez et al. (2003), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Aragón and Martínez (1995), Fuertes et al. (1996), Burgaz and Martínez (1999b, 2003), Aragón et al. (2001), Martínez et al. (2003), Aragón and Giménez (2012), Prieto et al. (2015), Merinero et al. (2017b), **Gu**: Burgos and Burgaz (1988), Aragón and Martínez (1995), Burgaz and Martínez (1999b, 2003), Aragón et al. (2001), Martínez et al. (2003), Merinero et al. (2017a, b), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993, 2003), Burgaz et al. (1994a), Aragón and Martinez (1995, 1997), Vázquez and Burgaz (1996), Burgaz and Martínez (1999b, 2003), Aragón et al. (2001), Martínez (2002), Merinero et al. (2017b).

Lobothallia alphoplaca (Wahlenb.) Hafellner
= *Lecanora alphoplaca* (Wahlenb.) Ach.
Ab: Egea and Llimona (1981).

Lobothallia cheresina (Müll. Arg.) A. Nordin, Cl. Roux & Sohrabi
= *Aspicilia cheresina* (Müll. Arg.) Hue
Gu: Carballal and Giménez-Coral (1981).

Lobothallia praeradiosa (Nyl.) Hafellner
= *Aspicilia praeradiosa* (Nyl.) Poelt & Leuckert
= *Lecanora praeradiosa* Nyl.
Ab: Egea and Llimona (1981), **CR**: Aragón et al. (2006a).

Lobothallia radiosa (Hoffm.) Hafellner
= *Aspicilia radiosa* (Hoffm.) Poelt & Leuckert
= *Aspicilia subcircinata* (Nyl.) Coppins
Gu: Carballal and Giménez-Coral (1981), **To**: Garcia-Rowe and Saiz-Jimenez (1991), Vázquez and Burgaz (1996).

Massalongia carnosa (Dicks.) Körb.
CR: Burgaz (2011a, b), **To**: Burgaz (2011a, b).

Megalaria grossa (Pers. ex Nyl.) Hafellner
Cu: Martínez et al. (2002, 2003), **Gu**; Martínez et al. (2003).

Megalaria laureri (Hepp ex Th. Fr.) Hafellner
To: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Martínez et al. (2003).

Megaspora verrucosa (Ach.) Arcadia & A. Nordin
= *Aspicilia mutabilis* (Ach.) Körb.
= *Megaspora verrucosa* var. *mutabilis* (Ach.) Nimis & Cl. Roux
Ab: Aragón and Martínez (1999), **CR**: Sarrión et al. (1993, 1995), Aragón et al. 2004b), **Cu**: Martínez et al. (2001, 2002), Aragón et al. (2006b), **Gu**: Aragón et al. (1999), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b).

Melanelia stygia (L.) Essl.
= *Parmelia stygia* (L.) Ach.
Gu: Más Guindal (1902), Aragón et al. (2001).

Melanelixia fuliginosa (Fr. ex Duby) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch
= *Melanelia fuliginosa* (Fr. ex Duby) Essl.
= *Parmelia glabratula* subsp. *fuliginosa* (Fr. ex Duby) J.R. Laundon
Ab: Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Sarrión et al. (1995), Aragón et al. (2001, 2004b, 2006b, a, 2010), Matos et al. (2015), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Aragón et al. (1999, 2006b, 2015), Hurtado et al. (2020a, b, c, d), **To**: Aragón et al. (2001, 2004b, 2006b).

Melanelixia glabra (Schaer.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch
= *Melanelia glabra* (Schaer.) Essl.
= *Parmelia glabra* (Schaer.) Nyl.
Ab: Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Aragón et al. (2001, 2006a, 2010), Martínez (2002), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Carballal (1976), Burgos and Burgaz (1988), Aragón et al. (2001, 2015), **To**: Burgaz et al. (1994a), Fuertes et al. (1996), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Matos et al. (2015).

Melanelixia glabratula (Lamy) Sandler & Arup
= *Parmelia glabratula* (Lamy) Nyl.
Ab: Egea et al. (1985), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), **To**: Martínez et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Vázquez and Burgaz (1996).

Melanelixia subargentifera (Nyl.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch
= *Melanelia subargentifera* (Nyl.) Essl.
Cu: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Aragón et al. (1999).

Melanelixia subaurifera (Nyl.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch
= *Melanelia subaurifera* (Nyl.) Essl.
= *Parmelia subaurifera* Nyl.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Aragón et al. (2001), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Burgos and Burgaz (1988), Burgaz et al. (1994a, b), Aragón et al. (1999, 2001), Hurtado et al. (2020a, b, c, d), **To**: Burgaz et al. (1994a), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001).

Melanohalea elegantula (Zahlbr.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch
= *Melanelia elegantula* (Zahlbr.) Essl.
= *Parmelia elegantula* (Zahlbr.) Szatala
Ab: Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Aragón et al. (2006a), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Burgos and Burgaz (1988), Aragón et al. (2001), Hurtado et al. (2020a, b, c, d), **To**: Aragón et al. (2001).

Melanohalea exasperata (De Not.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch
= *Melanelia exasperata* (De Not.) Essl.
= *Parmelia aspera* A. Massal.
= *Parmelia exasperata* De Not.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Sarrión et al. (1993), Aragón et al. (2001), Matos et al. (2015), **Cu**: Aragón et al. (2001),

Martínez et al. (2002), **Gu**: Navás (1901), Carballal (1976), Burgos and Burgaz (1988), Rowe and Espinosa Roji (1996), Aragón et al. (2001, 2015), Divakar et al. (2012), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001).

Melanohalea exasperatula (Nyl.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch
= *Melanelia exasperatula* (Nyl.) Essl.
= *Parmelia exasperatula* Nyl.
Ab: Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Aragón et al. (2001), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Aragón et al. (1999, 2001, 2006b), **To**: Vázquez and Burgaz (1996), Aragón et al. (2001).

Melanohalea laciniatula (Flagey ex H. Olivier) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch
= *Melanelia laciniatula* (Flagey ex H. Olivier) Essl.
Ab: Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Aragón et al. (2006b).

Melaspileella proximella (Nyl.) Boud.
= *Melaspilea proximella* (Nyl.) Nyl.
Ab: Aragón and Martínez (1999), **Cu**: Martínez et al. (2002).

Melaspilea urceolata (Fr.) Arnold
Ab: Martínez et al. (2003).

****Merismatium deminutum*** (Arnold) Cl. Roux & Nav.-Ros.
= *Polyblastia deminuta* Arnold
Ab: Aragón and Martínez (2002a).

Micarea denigrata (Fr.) Hedl.
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Aragón et al. (2006b), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Aragón et al. (1999, 2006b), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2006b).

Micarea prasina Fr.
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Aragón et al. (2004b, 2006b, 2022), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Aragón et al. (2006b), **To**: Aragón et al. (2004b, 2006b, 2022).

Micarea synotheoides (Nyl.) Coppins
CR: Sarrión et al. (1993), Aragón et al. (2006b), **Cu**: Aragón et al. (2006b), **Gu**: Aragón et al. (1999), **To**: Aragón et al. (2006b).

Microcalicium disseminatum (Ach.) Vain.
Cu: Martínez et al. (2001, 2002, 2003), Aragón et al. (2006b), Muñiz and Hladun (2011).

Miriquidica deusta (Stenh.) Hertel & Rambold
CR: Aragón et al. (2006a), Aragón and Giménez (2012).

Miriquidica subplumbea (Anzi) Cl. Roux
= *Lecidea griseoatra* (Hoffm.) Flot. ex Schaer.
= *Lecidea subplumbea* Anzi
Ab: Egea and Llimona (1981), **Gu**: Más Guindal (1902).

Montanelia disjuncta (Erichsen) Divakar, A. Crespo, Wedin & Essl.
= *Melanelia disjuncta* (Erichsen) Essl.
CR: Aragón et al. (2001, 2006a).

Montanelia sorediata (Ach.) Divakar, A. Crespo, Wedin & Essl.
= *Melanelia sorediata* (Ach.) Goward & Ahti
CR: Aragón et al. (2006a).

****Muellerella pygmaea*** (Körb.) D. Hawksw.
Cu: Calatayud and Barreno (1995a).

Mycobilimbia olivacea Aragón, Sarrión & Hafellner
Ab: Sarrión et al. (2003), **Cu**: Sarrión et al. (2003).

Mycobilimbia parvilobulosa Sarrión, Aragón & Hafellner
Ab: Sarrión et al. (2003), **CR**: Sarrión et al. (2003), **To**: Sarrión et al. (2003).

Mycocalicium subtile (Pers.) Szatala
= *Mycocalicium parietinum* (Ach.) Vain.
Ab: Egea et al. (1985), Sarrión et al. (1999), Aragón and Martínez (1999), Aragón et al. (2006b), Muñiz and Hladun (2007, 2011), **CR**: Sarrión et al. (1993, 1999), Aragón et al. (2004b), Muñiz and Hladun (2007, 2011), Aragón and Giménez (2012), **Cu**: Sarrión et al. (1999), Martínez et al. (2001, 2002), Aragón et al. (2006b), Muñiz and Hladun (2011), **Gu**: Aragón et al. (2006b), Muñiz and Hladun (2011), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Sarrión et al. (1999), Muñiz and Hladun (2011).

Mycocalicium victoriae (C. Knight ex F. Wilson) Nádv.
CR: Sarrión et al. (1993, 1999), Martínez et al. (2003), Muñiz and Hladun (2007, 2011).

Myriospora smaragdula (Wahlenb. ex Ach.) Nägeli ex Uloth
= *Acarospora smaragdula* (Wahlenb. ex Ach.) A. Massal.
CR: Aragón et al. (2006a).

Naetrocymbe punctiformis (Pers.) R.C. Harris
= *Arthopyrenia punctiformis* (Pers.) A. Massal.
Cu: Martínez et al. (2002), **Gu**: Burgos and Burgaz (1990).

Naevia pinastri (Anzi) Thiyagaraja, Lücking & K.D. Hyde
= *Arthonia pinastri* Anzi
Cu: Martínez et al. (2001).

****Nectriopsis lecanodes*** (Ces.) Diederich & Schroers
CR: Martínez (2002), **To**: Martínez (2002).

Nephroma laevigatum Ach.
Ab: Egea et al. (1985), Martínez and Aragón (1994), Aragón and Rico (1997), Burgaz and Martínez (1999, 2003), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Martínez and Aragón (1994), Fuertes et al. (1996), Burgaz and Martínez (1999, 2003), Aragón et al. (2001, 2006a, 2022), Martínez (2002), Aragón and Giménez (2012), **Gu**: Burgos and Burgaz (1988), Burgaz et al. (1994a, b), Martínez and Aragón (1994), Aragón et al. (2001), Burgaz and Martínez (2003), **To**: Martínez et al. (1993), Burgaz et al. (1994a), Martínez and Aragón (1994), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Burgaz and Martínez (1999, 2003), Martínez (2002), Cardós et al. (2016, 2018), Aragón et al. (2022).

Nephroma parile (Ach.) Ach.
Gu: Burgos and Burgaz (1990), Burgaz et al. (1994a, b), Aragón and Martínez (1995), Burgaz and Martínez (1999, 2003), Aragón et al. (2001), Martínez et al. (2003), Hurtado et al. (2020a, b, c, d).
Nephroma resupinatum (L.) Ach.
CR: Martínez et al. (2003), **Gu**: Burgos and Burgaz (1988), Burgaz et al. (1994a, b), Martínez and Aragón (1994), Burgaz and Martínez (1999, 2003), Aragón et al. (2001, 2015), Martínez et al. (2003), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993, 2003), Martínez and Aragón (1994), Vázquez and Burgaz (1996), Burgaz and Martínez (1999), Aragón et al. (2001).
Nephroma tangeriense (Maheu & A. Gillet) Gattefossé & Werner
CR: Burgaz and Martínez (1999, 2003), Aragón et al. (2001, 2022), **Cu**: Calatayud and Barreno (1993), Aragón et al. (2001), **To**: Vázquez and Burgaz (1996), Burgaz and Martínez (1999), Aragón et al. (2001, 2022).
Nephromopsis chlorophylla (Willd.) Divakar, A. Crespo & Lumbsch
= *Cetraria chlorophylla* (Willd.) Vain.
= *Tuckermannopsis chlorophylla* (Willd.) Hale.
Ab: Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2001, 2002), **Gu**: Carballal (1976), Burgos and Burgaz (1988), Aragón et al. (1999, 2001, 2006b), **To**: Vázquez and Burgaz (1996), Aragón et al. (2001).
Nephromopsis iberica (A. Crespo & Barreno) Divakar, A. Crespo & Lumbsch
= *Cetraria iberica* A. Crespo & Barreno
Gu: Crespo and Barreno (1980).
Nephromopsis merrillii (Du Rietz) Divakar, A. Crespo & Lumbsch
= *Cetraria merrillii* Du Rietz
CR: Aragón et al. (2001, 2006b), Martínez et al. (2003), **Gu**: Aragón et al. (2001), Martínez et al. (2003), Aragón and Giménez (2012), **To**: Martínez et al. (1993, 2003), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2006b).
Nevesia sampaiana (Tav.) P.M. Jørg., L. Lindblom, Wedin & S. Ekman
= *Fuscopannaria sampaiana* (Tav.) P.M. Jørg.
Unspecified: Aragón et al. (2008).
Normandina pulchella (Borrer) Nyl.
Ab: Aragón and Rico (1997), Aragón et al. (2001), **Cu**: Calatayud and Barreno (1993), Aragón et al. (2001), Martínez et al. (2002), **Gu**: Aragón et al. (2001), **To**: Burgaz et al. (1994a), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Cardós et al. (2016, 2018).
Obryzum corniculatum (Hoffm.) Wallr.
= *Leptogium corniculatum* (Hoffm.) Minks
CR: Aragón et al. (2001, 2006a, 2022), Aragón and Giménez (2012), **Cu**: Aragón and Martínez (2002a), **To**: Aragón et al. (2001, 2022), Otálora et al. (2010b).
Ochrolechia alboflavescens (Wulfen) Zahlbr.
CR: Sarrión et al. (1993).
Ochrolechia balcanica Verseghy
CR: Sarrión et al. (1993), Aragón and Giménez (2012), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Cardós et al. (2016, 2018).
Ochrolechia dalmatica (Erichsen) Boqueras
Unspecified: Aragón et al. (2008).
Ochrolechia pallescens (L.) A. Massal.
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Aragón et al. (2010), Aragón and Giménez (2012), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Burgos and Burgaz (1990), Aragón et al. (1999, 2015), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Cardós et al. (2016, 2018).
Ochrolechia parella (L.) A. Massal.
CR: Sarrión et al. (1993), **Cu**: Calatayud and Barreno (1993), **Gu**: Burgaz et al. (1994a), **To**: Martínez et al. (1993).
Ochrolechia subviridis (Høeg) Erichsen
CR: Aragón et al. (2004b).
Ochrolechia szatalaensis Verseghy
Ab: Egea et al. (1985), Aragón and Martínez (1999), Aragón et al. (2006b), **Cu**: Martínez et al. (2002).
Ochrolechia tartarea (L.) A. Massal.
Ab: Egea et al. (1985).
Ochrolechia turneri (Sm.) Zopf
Ab: Egea et al. (1985), Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Aragón et al. (2006a), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Aragón et al. (1999, 2006b, 2015).
Olegblumia demissa (Flot. ex Körb.) S.Y. Kondr., Lőkös, Jung Kim, A.S. Kondr., S.O. Oh & Hur
= *Lecanora demissa* (Flot. ex Körb.) Zahlbr.
Ab: Egea and Llimona (1981).
Opeltia flavorubescens (Huds.) S.Y. Kondr. & Hur
= *Caloplaca flavorubescens* (Huds.) J.R. Laundon
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Aragón et al. (2006b), **Cu**: Martínez et al. (2001, 2002), Aragón et al. (2006b), **Gu**: Burgos and Burgaz (1988), Aragón et al. (1999, 2006b), **To**: Aragón et al. (2006b).
Ophioparma junipericola I. Martínez & Aragón
Cu: Martínez and Aragón (2003).
Oxneria fallax (Arnold) S.Y. Kondr. & Kärnefelt
= *Xanthoria fallax* Arnold
To: Crespo and Atienza (1989), Vázquez and Burgaz (1996).
Pachyphiale fagicola (Arnold) Zwackh
Cu: Martínez et al. (2002), Álvarez Andrés (2003), Carballal et al. (2004).
Pannaria conoplea (Ach.) Bory
CR: Aragón et al. (2001), Martínez et al. (2003), Carballal et al. (2010), **Gu:** Hurtado et al. (2020a, b, c, d).
Pannaria olivacea P.M. Jørg.
CR: Aragón et al. (2001), Martínez et al. (2003), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Martínez et al. (2003).
Pannaria rubiginosa (Ach.) Delise
Ab : Martínez et al. (2003), **CR**: Aragón et al. (2001), Martínez et al. (2003), **To**: Aragón et al. (2001), Martínez et al. (2003).

Paracollema italicum (B. de Lesd.) Otálora, P.M. Jørg. & Wedin
= *Collema italicum* B. de Lesd.
Ab: Carvalho (2012).
Parmelia fuliginosa (With.) Schaer.
To: Vázquez and Burgaz (1996), Aragón and Martinez (1997).
Parmelia omphalodes (L.) Ach.
CR: Aragón et al. (2001), **Cu**: Calatayud and Barreno (1993), Aragón et al. (2001), **Gu**: Más Guindal (1902), **To**: Aragón et al. (2001).
Parmelia saxatilis (L.) Ach.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Sarrión and Burgaz (1995), Sarrión et al. (1995), Aragón et al. (2001, 2004b, 2006b, a), Aragón and Giménez (2012), **Cu**: Calatayud and Barreno (1993), Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Carballal (1976), Aragón et al. (1999, 2001, 2006b, 2015), Hurtado et al. (2020a, b, c, d), **To**: Sarrión and Aragón (1995), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b, 2006b).
Parmelia submontana Hale
Ab: Martínez et al. (2003), **Cu**: Aragón et al. (2001), Martínez et al. (2002, 2003), **Gu**: Martínez et al. (2003), **To**: Martínez et al. (1993, 2003), Vázquez and Burgaz (1996), Aragón et al. (2001).
Parmelia sulcata Taylor
= *Parmelia saxatilis* var. *sulcata* (Taylor) Linds.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Crespo et al. (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Sarrión and Burgaz (1995), Fuertes et al. (1996), Aragón et al. (2001, 2006b, a, 2010), Aragón and Giménez (2012), **Cu**: Calatayud and Barreno (1993), Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Navás (1901), Carballal (1976), Burgaz et al. (1994a, b), Fuertes et al. (1996), Rowe and Espinosa Roji (1996), Aragón et al. (2001, 2006b, 2015), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b, 2006b), Cardós et al. (2016, 2018).
Parmeliella thriptophylla (Ach.) Müll. Arg.
Ab: Egea et al. (1985), **CR:** Aragón et al. (2022), **Gu:** Hurtado et al. (2020a, b, c, d).
Parmelina pastillifera (Harm.) Hale
= *Parmelia pastillifera* (Harm.) R. Schub. & Klem.
Ab: Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993), **Gu:** Fuertes et al. (1996), Hurtado et al. (2020a, b, c, d).
Parmelina quercina (Willd.) Hale
= *Parmelia quercina* (Willd.) Vain.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Aragón et al. (2001, 2010), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Más Guindal (1902), Burgos and Burgaz (1988), Aragón et al. (2001), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Matos et al. (2015).
Parmelina tiliacea (Hoffm.) Hale
= *Parmelia scortea* (Ach.) Ach.
= *Parmelia tiliacea* (Hoffm.) Ach.
Ab: Egea and Llimona (1981), Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Sarrión and Burgaz (1995), Fuertes et al. (1996), Aragón et al. (2001, 2004b, 2006b, a, 2010), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Navás (1901), Carballal (1976), Fuertes et al. (1996), Rowe and Espinosa Roji (1996), Aragón et al. (1999, 2001, 2006b, 2015), Hurtado et al. (2020a, b, c, d), **To**: Carballal (1977), Martínez et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b, 2006b), Matos et al. (2015).
Parmeliopsis ambigua (Hoffm.) Nyl.
Ab: Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2001, 2002), **Gu**: Burgos and Burgaz (1988), Aragón et al. (1999, 2001, 2006b).
Parmeliopsis hyperopta (Ach.) Vain.
Ab: Martínez et al. (2003)**, Cu:** Martínez et al. (2003), **Gu**: Burgos and Burgaz (1990), Aragón et al. (2001), Martínez et al. (2003).
Parmotrema perlatum (Huds.) M. Choisy
= *Parmelia perlata* (Huds.) Ach.
Gu: Más Guindal (1902), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996).
Parmotrema reticulatum (Taylor) M. Choisy
CR: Aragón et al. (2001).
Parmotrema tinctorum (Despr. ex Nyl.) Hale
= *Parmotrema chinense* (Osbeck) Hale & Ahti
CR: Aragón et al. (2001), Martínez et al. (2003), Aragón and Giménez (2012), **Cu**: Aragón et al. (2001), Martínez et al. (2002, 2003), **Gu**: Aragón et al. (2001), **To**: Aragón and Martinez (1997), Aragón et al. (2001), Martínez et al. (2003), Cardós et al. (2016, 2018).
Parvoplaca tiroliensis (Zahlbr.) Arup, Søchting & Frödén
= *Caloplaca tiroliensis* Zahlbr.
Gu: Burgaz and Burgos (1987).
Pectenia atlantica (Degel.) P.M. Jørg., L. Lindblom, Wedin & S. Ekman
= *Degelia atlantica* (Degel.) P.M. Jørg. & P. James
Ab: Aragón and Rico (1997), Aragón et al. (2001), Martínez et al. (2003), Carballal et al. (2010), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Martínez and Aragón (1994), Aragón et al. (2001), Martínez et al. (2003), Carballal et al. (2010), Otálora et al. (2013), Martínez et al. (2014), **To**: Martínez et al. (1993, 2003, 2014), Burgaz et al. (1994a), Martínez and Aragón (1994), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Carballal et al. (2010), Otálora et al. (2013).

Pectenia plumbea (Lightf.) P.M. Jørg., L. Lindblom, Wedin & S. Ekman
= *Degelia plumbea* (Lightf.) P.M. Jørg. & P. James
= *Parmeliella plumbea* (Lightf.) Müll. Arg.
Ab: Egea et al. (1985), Martínez and Aragón (1994), Aragón and Rico (1997), Aragón et al. (2001), Martínez et al. (2003, 2014), Carballal et al. (2010), Otálora et al. (2013), Cardós et al. (2019), **CR**: Sarrión et al. (1993), Martínez and Aragón (1994), Aragón et al. (2001), Martínez et al. (2003, 2014), Aragón and Giménez (2012), Otálora et al. (2013), Cardós et al. (2017, 2019), **Gu**: Burgos and Burgaz (1990), Burgaz et al. (1994a, b), Martínez and Aragón (1994), Aragón et al. (2001), Martínez et al. (2003), Carballal et al. (2010), Otálora et al. (2013), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993, 2003, 2014), Burgaz et al. (1994a), Martínez and Aragón (1994), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b), Otálora et al. (2013), Cardós et al. (2016, 2018).
Peltigera britannica (Gyeln.) Holt.-Hartw. & Tønsberg
Cu: Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003).
Peltigera canina (L.) Willd.
Ab: Martinez and Burgaz (1993), Martínez and Burgaz (1995), Aragón and Rico (1997), Martínez (1999), Aragón and Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), **CR**: Martínez and Burgaz (1995), Martínez (1999), Aragón et al. (2001, 2006a, 2022), Burgaz and Martínez (2003), Aragón and Giménez (2012), **Cu**: Martínez et al. (1997), Martínez (1999), Aragón et al. (2001), Martínez et al. (2002), Burgaz and Martínez (2003), Prieto et al. (2006), **Gu**: Más Guindal (1902), Carballal (1977), Martinez and Burgaz (1993, 1995), Martínez et al. (1997), Aragón et al. (1999, 2001), Martínez (1999), Burgaz and Martínez (2003), **To**: Martinez and Burgaz (1993), Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Martínez et al. (1997), Martínez (1999), Aragón et al. (2001, 2022), Burgaz and Martínez (2003).
Peltigera collina (Ach.) Schrad.
Ab: Egea et al. (1985), Martinez and Burgaz (1993), Martínez and Aragón (1994), Aragón and Rico (1997), Martínez (1999), Aragón and Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), **CR**: Martinez and Burgaz (1993), Sarrión et al. (1993), Burgaz et al. (1994a), Martínez and Aragón (1994), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), Aragón and Giménez (2012), **Cu**: Calatayud and Barreno (1993), Martínez and Aragón (1994), **Gu**: Burgos and Burgaz (1990), Martinez and Burgaz (1993), Burgaz et al. (1994a, b), Martínez and Aragón (1994), Aragón et al. (1999, 2001, 2015), Martínez (1999), Burgaz and Martínez (2003), **To**: Martinez and Burgaz (1993), Martínez et al. (1993), Burgaz et al. (1994a), Martínez and Aragón (1994), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Martínez et al. (1997), Martínez (1999), Aragón et al. (2001, 2022), Burgaz and Martínez (2003).
Peltigera didactyla (With.) J.R. Laundon
Gu: Burgos and Burgaz (1990), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), **To**: Aragón et al. (2022).
Peltigera horizontalis (Huds.) Baumg.
CR: Martínez et al. (2003), Aragón and Giménez (2012), Aragón et al. (2022), **Gu**: Burgos and Burgaz (1988-9, Martinez and Burgaz (1993), Martínez (1999, 2003), Aragón et al. (2001), Burgaz and Martínez (2003), Hurtado et al. (2020a, b, c, d), **To**: Martinez and Burgaz (1993), Martínez et al. (1993, 2003), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Martínez (1999, 2002), Aragón et al. (2001), Burgaz and Martínez (2003).
Peltigera hymenina (Ach.) Delise
To: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Martínez et al. (1997), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003).
Peltigera kristinssonii Vitik.
Gu: Burgaz and Martínez (2003).
Peltigera leucophlebia (Nyl.) Gyeln.
Cu: Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003).
Peltigera malacea (Ach.) Funck
CR: Aragón et al. (2022), **Gu**: Martínez et al. (1997), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), **To**: Martínez et al. (1997), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003).
Peltigera membranacea (Ach.) Nyl.
Ab: Aragón and Rico (1997), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), **CR:** Aragón et al. (2022), **Cu**: Martínez (1999), Aragón et al. (2001), Martínez et al. (2002), Burgaz and Martínez (2003), **Gu**: Martínez and Burgaz (1995), Aragón et al. (2001), Burgaz and Martínez (2003), **To**: Martínez et al. (1997), Martínez (1999), Aragón et al. (2001, 2022), Burgaz and Martínez (2003).
Peltigera monticola Vitik.
Ab: Aragón and Rico (1997), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), Martínez et al. (2003), **Cu**: Martínez et al. (2003), **Gu**: Burgaz and Martínez (2003), Martínez et al. (2003).
Peltigera neckeri Hepp ex Müll. Arg.
Ab: Aragón and Rico (1997), Martínez (1999), Aragón and Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), **CR**: Martinez and Burgaz (1993), Martínez et al. (1997), Martínez (1999, 2002), Aragón et al. (2001, 2022), Burgaz and Martínez (2003), Aragón and Giménez (2012), **Cu**: Martínez et al. (1997), Martínez (1999), Aragón et al. (2001), Martínez et al. (2002), Burgaz and Martínez (2003), **Gu**: Martínez et al. (1997), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Martínez

(1999), Aragón et al. (2001), Burgaz and Martínez (2003).
Peltigera polydactylon (Neck.) Hoffm.
Ab: Egea et al. (1985), **CR**: Martínez et al. (1997), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), **Cu**: Calatayud and Barreno (1993), Martínez (1999), Burgaz and Martínez (2003), **Gu**: Martínez (1999), Burgaz and Martínez (2003), **To**: Vázquez and Burgaz (1996), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003).
Peltigera ponojensis Gyeln.
Ab: Aragón and Rico (1997), Martínez et al. (1997), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), **Cu**: Martínez and Burgaz (1995), **Gu**: Martínez and Burgaz (1995), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Martínez (1999), Aragón et al. (2001, 2022), Burgaz and Martínez (2003).
Peltigera praetextata (Flörke ex Sommerf.) Zopf
Ab: Martínez and Burgaz (1995), Aragón and Rico (1997), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), **CR**: Martinez and Burgaz (1993, 1995), Sarrión et al. (1993), Martínez (1999), Aragón et al. (2001, 2022), Burgaz and Martínez (2003), **Cu**: Martínez and Burgaz (1995), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), **Gu**: Burgos and Burgaz (1988), Martinez and Burgaz (1993, 1995), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), Hurtado et al. (2020a, b, c, d), **To**: Martinez and Burgaz (1993, 1995), Martínez et al. (1993, 1997), Burgaz et al. (1994a), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Martínez (1999, 2002), Aragón et al. (2001, 2022), Burgaz and Martínez (2003).
Peltigera rufescens (Weiss) Humb.
Ab: Martínez and Burgaz (1995, 1997), Aragón and Rico (1997), Martínez (1999), Aragón and Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), **Cu**: Martínez et al. (1997), Martínez (1999), Aragón et al. (2001), Martínez et al. (2002), Burgaz and Martínez (2003), Prieto et al. (2006), **Gu**: Martinez and Burgaz (1993), Martínez and Burgaz (1995), Martínez et al. (1997), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), **To**: Vázquez and Burgaz (1996), Martínez et al. (1997), Martínez (1999), Aragón et al. (2001, 2022), Burgaz and Martínez (2003).
Peltigera venosa (L.) Hoffm.
Gu: Burgos and Burgaz (1988), Martinez and Burgaz (1993), Martínez (1999), Aragón et al. (2001), Burgaz and Martínez (2003), Martínez et al. (2003), **To**: Aragón et al. (2022).
Peltula euploca (Ach.) Poelt ex Pišút
Ab: Egea and Llimona (1981), Egea (1989), Aragón et al. (2001).
Pertusaria chiodectonoides Bagl. ex A. Massal.
= *Pertusaria inquinata* (Ach.) Th. Fr.
Ab: Egea and Llimona (1981).
Pertusaria coccodes (Ach.) Nyl.
Ab: Egea et al. (1985), Aragón and Martínez (1999), Boqueras and Llimona (2003), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Aragón et al. (2010), Matos et al. (2015), **Cu**: Martínez et al. (2002), **To**: Burgaz et al. (1994a), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b).
Pertusaria coronata (Ach.) Th. Fr.
Ab: Egea et al. (1985), Aragón and Martínez (1999), Boqueras and Llimona (2003), Aragón et al. (2006b), **Gu**: Burgos and Burgaz (1990), Boqueras and Llimona (2003), Aragón et al. (2015), **To**: Aragón and Martinez (1997), Aragón et al. (2004b).
Pertusaria flavicans Lamy
Cu: Calatayud and Barreno (1993).
Pertusaria flavida (DC.) J.R. Laundon
CR: Sarrión et al. (1993), Burgaz et al. (1994a), Sarrión and Burgaz (1995), Fuertes et al. (1996), Boqueras and Llimona (2003), Aragón et al. (2004b, 2010), Aragón and Giménez (2012), Matos et al. (2015), **Gu**: Burgos and Burgaz (1990), Boqueras and Llimona (2003), **To**: Martínez et al. (1993), Burgaz et al. (1994a), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Boqueras and Llimona (2003), Aragón et al. (2004b), Cardós et al. (2016, 2018).
Pertusaria leioplaca (Ach.) DC.
= *Pertusaria leucostoma* (Ach.) A. Massal.
Ab: Egea et al. (1985), **CR**: Sarrión et al. (1993), Boqueras and Llimona (2003), **Gu**: Burgos and Burgaz (1990), Boqueras and Llimona (2003), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996).
Pertusaria paramerae A. Crespo & Vězda
Ab: Aragón and Martínez (1999), Martínez et al. (2003), Aragón et al. (2006b), **Cu**: Martínez et al. (2001, 2002, 2003).
Pertusaria pertusa (L.) Tuck.
= *Pertusaria rupestris* (DC.) Schaer.
Ab: Egea and Llimona (1981), Egea et al. (1985), Aragón and Martínez (1999), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Sarrión and Burgaz (1995), Aragón et al. (2004b), **Cu**: (alatayud and Barreno (1993), **Gu**: Más Guindal (1902), **To**: Martínez et al. (1993), Burgaz et al. (1994a), Sarrión and Aragón (1995), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b), Cardós et al. (2016, 2018).
Pertusaria pseudocorallina (Lilj.) Arnold
Ab: Egea and Llimona (1981), Boqueras and Llimona (2003), **CR**: Aragón et al. (2006a), Aragón and Giménez (2012), **Cu**: Calatayud and Barreno (1993).
Pertusaria rupicola (Sommerf.) Harm.
CR: Aragón et al. (2006a), **Cu**: Calatayud and Barreno (1993).
Phaeophyscia ciliata (Hoffm.) Moberg
Ab: Pedroño et al. (1987), Aragón et al. (2001).
Phaeophyscia endococcina (Körb.) Moberg
Gu: Aragón and Martínez (2002a).
Phaeophyscia hirsuta (Mereschk.) Essl.
Ab: Aragón and Rico (1997), Aragón et al. (2001), **CR:** Matos et al. (2015), **To**: Vázquez and Burgaz (1996), Aragón et al. (2001).

Phaeophyscia insignis (Mereschk.) Moberg
Ab: Egea et al. (1985), Pedroño et al. (1987), Aragón and Rico (1997), Aragón et al. (2001).
Phaeophyscia orbicularis (Neck.) Moberg
Ab: Egea and Llimona (1981), Egea et al. (1985), Pedroño et al. (1987), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Sarrión et al. (1995), Aragón et al. (2001, 2010), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Carballal (1976), Carballal and Giménez-Coral (1981), Fuertes et al. (1996), Aragón et al. (1999, 2001), **To**: Crespo and Atienza (1989), Fuertes et al. (1996), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Matos et al. (2015).
****Phaeosporobolus usneae*** D. Hawksw. & Hafellner
Cu: Martínez et al. (2002).
Phlyctis agelaea (Ach.) Flot.
Ab: Egea et al. (1985).
Phlyctis argena (Ach.) Flot.
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Aragón et al. (2004b, 2010), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Aragón et al. (1999, 2006b, 2015), **To**: Martínez et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Cardós et al. (2016, 2018).
****Phoma epiphyscia*** Vouaux
Cu: Martínez et al. (2002).
****Phoma peltigerae*** (P. Karst.) D. Hawksw.
Ab: Martínez and Hafellner (1998), Martínez (1999), **Cu**: Martínez et al. (2002), **Gu**: Martínez and Hafellner (1998), Martínez (1999).
Physcia adscendens H. Olivier
= *Physcia ascendens* Bitter
Ab: Egea et al. (1985), Pedroño et al. (1987), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Sarrión et al. (1993), Aragón et al. (2001, 2006a, 2010), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Carballal (1976), Carballal and Giménez-Coral (1981), Fuertes et al. (1996), Aragón et al. (1999, 2001), **To**: Crespo and Atienza (1989), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Matos et al. (2015).
Physcia aipolia (Ehrh. ex Humb.) Fürnr.
Ab: Egea et al. (1985), Pedroño et al. (1987), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Aragón et al. (2001, 2010), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Carballal (1976), Rowe and Espinosa Roji (1996), Aragón et al. (1999, 2001), **To**: Martínez et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Aragón and Martinez (1997), Aragón et al. (2001), Matos et al. (2015).
Physcia aipolia* subsp. *aipolia (Ehrh. ex Humb.) Fürnr.
To: Vázquez and Burgaz (1996).
Physcia aipolia* var. *acrita (Ach.) Hue
Gu: Rowe and Espinosa Roji (1996).
Physcia biziana (A. Massal.) Zahlbr.
Ab: Egea et al. (1985), Pedroño et al. (1987), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Carballal (1976), Aragón et al. (2001), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001).
Physcia caesia (Hoffm.) Fürnr.
= *Physcia wainioi* Räsänen
Ab: Egea and Llimona (1981), Aragón et al. (2001), **CR**: Aragón et al. (2001, 2006a), **Cu**: Calatayud and Barreno (1993), Aragón et al. (2001), **To**: Vázquez and Burgaz (1996), Aragón et al. (2001).
Physcia dubia (Hoffm.) Lettau
Ab: Egea and Llimona (1981), Pedroño et al. (1987), Aragón et al. (2001), **CR**: Aragón and Giménez (2012), **Cu**: Aragón et al. (2001), Martínez et al. (2002).
Physcia leptalea (Ach.) DC.
= *Physcia semipinnata* (Leers ex J.F. Gmel.) Moberg
Ab: Egea et al. (1985), Pedroño et al. (1987), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Aragón et al. (2001, 2006a), Aragón and Giménez (2012), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Carballal (1976), Carballal and Giménez-Coral (1981), Rowe and Espinosa Roji (1996), Aragón et al. (2001), **To**: Crespo and Atienza (1989), Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001).
Physcia stellaris (L.) Nyl.
Ab: Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Aragón et al. (2001), Aragón and Giménez (2012), **Gu**: Más Guindal (1902), Aragón et al. (1999, 2001).
Physcia tenella (Scop.) DC.
Ab: Egea and Llimona (1981), Pedroño et al. (1987), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Aragón et al. (2001, 2006a, 2010), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2002), Matos et al. (2015), **Gu**: Carballal (1976), Burgos and Burgaz (1988), Aragón et al. (2001, 2015), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón et al. (2001), Matos et al. (2015).
Physcia tribacia (Ach.) Nyl.
CR: Aragón et al. (2006a).
Physcia ulothrix (Ach.) Nyl.
Gu: Rowe and Espinosa Roji (1996).
Physconia detersa (Nyl.) Poelt
To: Fuertes et al. (1996), Vázquez and Burgaz (1996), Aragón et al. (2001).
Physconia distorta (With.) J.R. Laundon
= *Physconia pulverulacea* Moberg
Ab: Egea et al. (1985), Pedroño et al. (1987), Aragón and Rico (1997), Aragón and Martínez (1999),

Aragón et al. (2001), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Aragón et al. (2001, 2004b, 2006a, 2010), Matos et al. (2015), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Carballal (1976), Burgaz et al. (1994a), Aragón et al. (1999, 2001, 2015), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b), Matos et al. (2015).

Physconia enteroxantha (Nyl.) Poelt
Ab: Egea and Llimona (1981), Egea et al. (1985), Pedroño et al. (1987), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Aragón et al. (2001, 2010), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Calatayud and Barreno (1993), Aragón et al. (2001), Martínez et al. (2002), **Gu**: Aragón et al. (1999, 2015), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b), Matos et al. (2015).

Physconia grisea (Lam.) Poelt
= *Physconia farrea* (Ach.) Poelt
Ab: Egea and Llimona (1981), Pedroño et al. (1987), Aragón et al. (2001), **CR**: Aragón et al. (2001), Matos et al. (2015), **Gu**: Carballal (1976), Aragón et al. (2001).

Physconia grisea* subsp. *algeriensis (Flagey) Poelt
Ab: Egea et al. (1985).

Physconia muscigena (Ach.) Poelt
= *Physcia pulverulenta* var. *muscigena* (Ach.) Nyl.
Cu: Calatayud and Barreno (1993), Aragón et al. (2001), **Gu**: Rowe and Espinosa Roji (1996).

Physconia perisidiosa (Erichsen) Moberg
Ab: Egea et al. (1985), Pedroño et al. (1987), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Aragón et al. (2001, 2010), Matos et al. (2015), **Cu**: Calatayud and Barreno (1993), Aragón et al. (2001), Martínez et al. (2002), **Gu**: Burgos and Burgaz (1988), Burgaz et al. (1994a, b), Fuertes et al. (1996), Aragón et al. (1999, 2001), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993), Burgaz et al. (1994a). Fuertes et al. (1996), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Matos et al. (2015).

Physconia pulverulenta (Schreb.) Poelt
Gu: Rowe and Espinosa Roji (1996), **To**: Garcia-Rowe and Saiz-Jimenez (1991).

Physconia servitii (Nádv.) Poelt
CR: Aragón et al. (2001, 2004b), Matos et al. (2015), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón et al. (2001).

Physconia subpulverulenta (Szatala) Poelt
Ab: Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Aragón et al. (2001, 2004b), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001).

Physconia venusta* subsp. *subaquila (Nyl.) Clauzade & Cl. Roux
To: Vázquez and Burgaz (1996).

Physconia venusta* subsp. *venusta (Ach.) Poelt
Ab: Egea et al. (1985), Pedroño et al. (1987), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Fuertes et al. (1996), Aragón et al. (2001, 2004b, 2006a, 2010), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Carballal (1976), Burgos and Burgaz (1988), Burgaz et al. (1994a), Aragón et al. (1999, 2001), **To**: Martínez et al. (1993), Burgaz et al. (1994a), Fuertes et al. (1996), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b, 2015), Cardós et al. (2016, 2018), Matos et al. (2015).

Piccolia ochrophora (Nyl.) Hafellner
= *Strangospora ochrophora* (Nyl.) R.A. Anderson
Cu: Martínez et al. (2002).

Placidiopsis cinerascens (Nyl.) Breuss
Ab: Prieto et al. (2011), **Cu**: Prieto et al. (2006, 2011), **To**: Prieto et al. (2011), Aragón et al. (2022).

Placidiopsis custnani (A. Massal.) Körb.
Ab: Prieto et al. (2011), **Gu**: Prieto et al. (2011).

Placidium imbecillum (Breuss) Breuss
Ab: Prieto et al. (2010b), **Cu:** Prieto et al. (2010b).

Placidium tenellum (Nyl.) A. Massal.
CR: Aragón et al. (2022).

Placocarpus schaereri (Fr.) Breuss
Ab: Aragón and Martínez (2002a).

Placynthiella icmalea (Ach.) Coppins & P. James
= *Saccomorpha icmalea* (Ach.) Clauzade & Cl. Roux
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Aragón et al. (2004b, 2006a), Matos et al. (2015), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Aragón et al. (1999, 2006b), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b).

Placynthium asperellum (Ach.) Trevis.
Cu: Burgaz 2(010, 2011), **Gu**: Burgaz (2010, 2011).

Placynthium garovaglii (A. Massal.) Malme
Cu: Burgaz (2010, 2011), **Gu**: Burgaz (2010).

Placynthium hungaricum Gyeln.
Cu: Burgaz (2010, 2011).

Placynthium nigrum (Huds.) Gray
Ab: Burgaz et al. (2002), Burgaz (2011a, b), **CR**: Burgaz (2011a, b), **Cu**: Martínez et al. (2002), Burgaz (2010, 2011), Concostrina-Zubiri et al. (2019), **Gu**: Carballal and Giménez-Coral (1981), Burgaz et al. (2002), Burgaz (2010, 2011), **To**: Burgaz et al. (2002), Burgaz (2011a, b), Aragón et al. (2022).

Placynthium subradiatum (Nyl.) Arnold
Cu: Burgaz (2010, 2011), **Gu**: Burgaz (2010, 2011).

Placynthium tantaleum (Hepp) Hue
Cu: Burgaz et al. (2002), Burgaz (2010, 2011), **Gu**: Burgaz (2011a, b).

Placynthium tremniacum (A. Massal.) Jatta
Ab: Burgaz (2011a, b), **Cu**: Burgaz (2011a, b), **Gu**: Burgaz (2010).

Platismatia glauca (L.) W.L. Culb. & C.F. Culb.

Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Sarrión et al. (1993), Sarrión and Burgaz (1995), Aragón et al. (2001, 2004b), **Cu**: Abbayes (1946), Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Carballal (1976), Aragón et al. (1999, 2001, 2006b, 2015), Hurtado et al. (2020a, b, c, d), **To**: Aragón et al. (2004b).

Plectocarpon scrobiculatae Diederich & Etayo
CR: Martínez and Hafellner (1998).

Pleurosticta acetabulum (Neck.) Elix & Lumbsch
= *Parmelia acetabulum* (Neck.) Duby
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **Cu**: Colmeiro (1867), Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Colmeiro (1867), Carballal (1976), Aragón et al. (1999, 2001, 2006b), Blanco et al. (2004), Divakar et al. (2012).

Polycauliona candelaria (L.) Frödén, Arup & Søchting
= *Xanthoria candelaria* (L.) Th. Fr.
Ab: Aragón et al. (2006b), **CR:** Matos et al. (2015), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Burgos and Burgaz (1990), Aragón et al. (1999, 2001).

Polychidium muscicola (Sw.) Gray
CR: Aragón et al. (2001, 2006a, 2022), Burgaz and Martínez (2001), Burgaz (2011a, b), Aragón and Giménez (2012), **Cu**: Burgaz and Martínez (2001), Burgaz (2011a, b), **Gu**: Burgaz and Martínez (2001), Burgaz (2011a, b), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2022), Burgaz and Martínez (2001), Burgaz (2011a, b).

Polycoccum microsticticum (Leight.) Arnold
Cu: Calatayud and Barreno (1995b), Atienza et al. (2003).

Polyozosia albescens (Hoffm.) S.Y. Kondr., Lőkös & Farkas
= *Lecanora albescens* (Hoffm.) Flörke
Gu: Carballal and Giménez-Coral (1981).

Polyozosia dispersa (Pers.) S.Y. Kondr., Lőkös & Farkas
= *Lecanora dispersa* (Pers.) Röhl.
Ab: Egea and Llimona (1981), **Gu**: Carballal and Giménez-Coral (1981).

Polyozosia hagenii (Ach.) S.Y. Kondr., Lőkös & Farkas
= *Lecanora hagenii* (Ach.) Ach.
Ab: Egea et al. (1985), Aragón et al. (2006b), **CR**: Aragón et al. (2006b), Matos et al. (2015), **Cu**: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Aragón et al. (1999), **To**: Aragón et al. (2006b).

Porpidia cinereoatra (Ach.) Hertel & Knoph
Cu: Calatayud and Barreno (1993).

Porpidia contraponenda (Arnold) Knoph & Hertel
CR: Aragón et al. (2006a).

Porpidia crustulata (Ach.) Hertel & Knoph
CR: Aragón et al. (2006a).

Porpidia macrocarpa (DC.) Hertel & A.J. Schwab
CR: Aragón et al. (2006a).

Porpidia soredizodes (Lamy ex Nyl.) J.R. Laundon
CR: Aragón et al. (2006a).

Protoblastenia calva (Dicks.) Zahlbr.
Ab: Aragón and Martínez (2002a), **Cu**: Aragón and Martínez (2002a).

Protopannaria pezizoides (Weber) P.M. Jørg. & S. Ekman
CR: Aragón et al. (2001), **Gu**: Martínez et al. (2003), **To**: Vázquez and Burgaz (1996), Aragón et al. (2001), Martínez et al. (2003).

Protoparmelia badia (Hoffm.) Hafellner
= *Lecanora badia* (Hoffm.) Ach.
CR: Aragón et al. (2006a), **Gu**: Más Guindal (1902).

Protoparmelia oleagina (Harm.) Coppins
CR: Martínez et al. (2003).

Protoparmelia olivascens (Nyl.) Llimona ex Sussey
= *Lecanora olivascens* Nyl.
To: Garcia-Rowe and Saiz-Jimenez (1991), Vázquez and Burgaz (1996).

Protoparmeliopsis bolcana (Pollini) Lumbsch
= *Lecanora bolcana* (Pollini) Poelt
Cu: Calatayud and Barreno (1993).

Protoparmeliopsis muralis (Schreb.) M. Choisy
= *Lecanora diffracta* (Ach.) Ach.
= *Lecanora muralis* (Schreb.) Rabenh.
Ab: Egea and Llimona (1981), **Cu**: Calatayud and Barreno (1993), **Gu**: Carballal and Giménez-Coral (1981), **To**: Garcia-Rowe and Saiz-Jimenez (1991), Vázquez and Burgaz (1996).

Pseudevernia furfuracea (L.) Zopf
= *Evernia furfuracea* (L.) W. Mann
= *Parmelia furfuracea* (L.) Ach.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), **CR**: Sarrión et al. (1993, 1995), Sarrión and Burgaz (1995), Aragón et al. (2001, 2004b, 2006b), Aragón and Giménez (2012), **Cu**: Colmeiro (1867), Abbayes (1946), Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Carballal (1976), Aragón et al. (1999, 2001, 2006b, 2015), **To**: Martínez et al. (1993), Sarrión and Aragón (1995), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b, 2006b).

Psora decipiens (Hedw.) Hoffm.
Ab: Aragón and Rico (1997), Aragón et al. (2001), **CR**: Aragón et al. (2022), **Cu**: Abbayes (1946), Crespo (1978), Aragón et al. (2001), Martínez et al. (2006), Prieto et al. (2006), Concostrina-Zubiri et al. (2019), **Gu**: Carballal (1977), Crespo (1978), Aragón et al. (2001), **To**: Abbayes (1946), Vázquez and Burgaz (1996), Aragón et al. (2022).

Psora globifera (Ach.) A. Massal.
CR: Aragón et al. (2022), **Cu**: Concostrina-Zubiri et al. (2019).

Psora saviczii (Tomin) Follmann & A. Crespo
Cu: Martínez et al. (2006), Concostrina-Zubiri et al. (2019).

Psora testacea Hoffm.
= *Protoblastenia testacea* (Hoffm.) Clauzade & Rondon

Ab: Aragón and Rico (1997), Aragón et al. (2001), **Cu**: Aragón et al. (2001), **Gu**: Aragón et al. (2001).
Psora vallesiaca (Schaer.) Timdal
Ab: Aragón and Rico (1997), Aragón et al. (2001), **Cu**: Aragón et al. (2001), **Gu**: Aragón et al. (2001).
Psoroglaena dictyospora (Orange) H. Harada
= *Macentina dictyospora* Orange
CR: Aragón and Sarrión (2003), **To**: Aragón and Sarrión (2003).
Psoroglaena stigonemoides (Orange) Henssen
CR: Aragón and Sarrión (2003), **To**: Aragón and Sarrión (2003).
Psoroma hypnorum (Vahl) Gray
CR: Aragón and Giménez (2012), Aragón et al. (2022), **Gu**: Burgos and Burgaz (1990), Aragón et al. (2001), Martínez et al. (2003), Carballal et al. (2010).
Punctelia borreri (Turner ex Sm.) Krog
= *Parmelia borreri* Turner ex Sm.
CR: Sarrión et al. (1993), Aragón et al. (2001), Aragón and Giménez (2012), **Cu**: Aragón et al. (2001), Martínez et al. (2002).
****Punctelia oxyspora*** (Tul.) Divakar, A. Crespo & Lumbsch
= *Nesolechia oxyspora* (Tul.) A. Massal.
Cu: Martínez et al. (2002).
Punctelia subrudecta (Nyl.) Krog
CR: Aragón et al. (2001).
Pyrenodesmia alociza (A. Massal.) Arnold
= *Caloplaca alociza* (A. Massal.) Mig.
Gu: Carballal and Giménez-Coral (1981).
Pyrenodesmia aractina (Fr.) S.Y. Kondr.
= *Caloplaca aractina* (Fr.) Häyrén
CR: Aragón et al. (2006a).
Pyrenodesmia chalybaea (Fr.) A. Massal.
= *Caloplaca chalybaea* (Fr.) Müll. Arg.
Gu: Carballal and Giménez-Coral (1981).
Pyrenodesmia haematites (Chaub. ex St.-Amans) S.Y. Kondr.
= *Caloplaca haematites* (Chaub. ex St.-Amans) Zwackh
Ab: Egea et al. (1985), Aragón and Martínez (1999), **Cu**: Martínez et al. (2001), Aragón et al. (2006b), **Gu**: Crespo and Marcos Laso (1984), **To**: Crespo and Atienza (1989), Vázquez and Burgaz (1996), Aragón and Martinez (1997).
Pyrenodesmia variabilis (Pers.) A. Massal.
= *Caloplaca variabilis* (Pers.) Müll. Arg.
Ab: Aragón and Martínez (2002a), **Cu**: Aragón and Martínez (2002a), **Gu**: Carballal and Giménez-Coral (1981).
Pyrrhospora quernea (Dicks.) Körb.
Ab: Aragón et al. (2006b), **Cu**: Aragón et al. (2006b).
Ramalina calicaris (L.) Röhl.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Aragón et al. (2001), **Cu**: Aragón et al. (2001), **Gu**: Carballal (1976), Aragón et al. (2001), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001).
Ramalina capitata (Ach.) Nyl.
Ab: Egea and Llimona (1981), Aragón et al. (2001), **CR**: Sarrión and Burgaz (1995), Aragón et al. (2001), **Gu**: Arroyo et al. (1991), Aragón and Martínez (2002a), **To**: Arroyo et al. (1991), Vázquez and Burgaz (1996), Aragón et al. (2001).
Ramalina digitellata Nyl.
Ab: Egea and Llimona (1981), **Gu**: Arroyo et al. (1991), **To**: Arroyo et al. (1991).
Ramalina farinacea (L.) Ach.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Aragón et al. (2001, 2010), Martínez (2002), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2002), Aragón and Giménez (2012), del Campo et al. (2013), **Gu**: Carballal (1976), Arroyo and Manrique (1988), Aragón et al. (2001, 2015), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Martínez (2002).
Ramalina fastigiata (Pers.) Ach.
= *Ramalina fenestrata* Motyka
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993, 1995), Aragón et al. (2001), Aragón and Giménez (2012), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Carballal (1976), Arroyo and Manrique (1989), Aragón et al. (2001), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001).
Ramalina fraxinea (L.) Ach.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Aragón et al. (2001, 2010), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Carballal (1976), Arroyo and Manrique (1989), Rowe and Espinosa Roji (1996), Aragón et al. (1999, 2001, 2015), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001).
Ramalina obtusata (Arnold) Bitter
Cu: Aragón et al. (2001).
Ramalina panizzei De Not.
Ab: Aragón et al. (2001), **Cu**: Aragón et al. (2001), **Gu**: Aragón et al. (2001), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996).
Ramalina pollinaria (Westr.) Ach.
Cu: Martínez et al. (2002), Aragón et al. (2006b), **Gu**: Burgos and Burgaz (1990), Aragón et al. (1999, 2001).
Ramalina polymorpha (Lilj.) Ach.
Ab: Aragón et al. (2001), **CR**: Aragón and Giménez (2012).
Ramalina protecta H. Magn.
Ab: Egea and Llimona (1981), Arroyo et al. (1991), **CR**: Crespo et al. (1976), Arroyo et al. (1991), **To**: Crespo et al. (1976), Vázquez and Burgaz (1996).
Ramboldia elabens (Fr.) Kantvilas & Elix
= *Pyrrhospora elabens* (Fr.) Hafellner
CR: Sarrión et al. (1993), Sarrión and Burgaz (1995), Aragón et al. (2004b), Aragón and Giménez (2012),

To: Sarrión and Aragón (1995), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b).
Ramboldia insidiosa (Th. Fr.) Hafellner
CR: Aragón et al. (2004b), Pérez-Ortega and Etayo (2008), **To**: Aragón et al. (2004b).
Ramboldia lusitanica (Räsänen) Kalb, Lumbsch & Elix
CR: Aragón et al. (2006b), **To**: Aragón and Martínez (2002a), Aragón et al. (2006b).
****Refractohilum galligenum*** D. Hawksw.
CR: Martínez (2002).
****Refractohilum peltigerae*** (Keissl.) D. Hawksw.
Gu: Martínez and Hafellner (1998), Martínez (1999).
****Rhagadostoma brevisporum*** (Nav.-Ros. & Hladun) Nav.-Ros.
= *Rhagadostoma lichenicola* var. *brevisporum* Nav.-Ros. & Hladun
Cu: Martínez and Hafellner (1998), Martínez (1999), Martínez et al. (2002).
Rhizocarpon badioatrum (Flörke ex Spreng.) Th. Fr.
CR: Aragón et al. (2006a).
Rhizocarpon disporum (Nägeli ex Hepp) Müll. Arg.
Ab: Egea and Llimona (1981).
Rhizocarpon distinctum Th. Fr.
Ab: Egea and Llimona (1981).
Rhizocarpon geographicum (L.) DC.
= *Rhizocarpon riparium* subsp. *lindsayanum* (Räsänen) J.W. Thomson
Ab: Egea and Llimona (1981), **CR**: Aragón et al. (2006a), **Cu**: Crespí (1930), **Gu**: Más Guindal (1902), Crespí (1930), Crespo et al. (1976), **To**: Crespo et al. (1976), Vázquez and Burgaz (1996).
Rhizocarpon lavatum (Ach.) Hazsl.
CR: Aragón et al. (2006a).
Rhizocarpon lecanorinum Anders
CR: Aragón et al. (2006a).
Rhizocarpon oportense (Vain.) Räsänen
Ab: Egea and Llimona (1981).
Rhizocarpon polycarpum (Hepp) Th. Fr.
CR: Aragón et al. (2006a).
Rhizocarpon postumum (Nyl.) Arnold
CR: Aragón et al. (2006a).
Rhizocarpon richardii (Lamy ex Nyl.) Zahlbr.
= *Rhizocarpon confervoides* DC.
Ab: Egea and Llimona (1981), **Cu**: Crespí (1930).
Rhizocarpon schedomyces Hafellner & Poelt
CR: Aragón et al. (2004b), **To**: Aragón et al. (2004b).
Rhizocarpon simillimum (Anzi) Lettau
Ab: Egea and Llimona (1981).
Rhizocarpon tetrasporum Runemark
CR: Aragón et al. (2006a).
Rhizocarpon viridiatrum (Wulfen) Körb.
Ab: Egea and Llimona (1981).
Rhizoplaca melanophthalma **(DC.) Leuckert & Poelt**
CR: Aragón and Giménez (2012).
Ricasolia amplissima (Scop.) De Not.
= *Dendriscocaulon umhausense* (Auersw.) Degel.
= *Lobaria amplissima* (Scop.) Forssell
Ab: Egea et al. (1985), Aragón and Martinez (1995, 1997), Aragón and Rico (1997), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Burgaz et al. (1994a), Aragón and Martínez (1995), Burgaz and Martínez (1999b, 2003), Fuertes et al. (1996),Aragón et al. (2001, 2004b), Martínez et al. (2003), Aragón and Giménez (2012), **Gu**: Burgos and Burgaz (1988, 1990), Burgaz et al. (1994a, b), Aragón and Martínez (1995), Aragón et al. (1999, 2001), Burgaz and Martínez (1999b, 2003), Martínez et al. (2003), Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993, 2003), Burgaz et al. (1994a), Sarrión and Aragón (1995), Aragón and Martinez (1995, 1997), Fuertes et al. (1996), Vázquez and Burgaz (1996), Burgaz and Martínez (1999b, 2003), Aragón et al. (2001), Aragón et al. (2004b), Cardós et al. (2016, 2018).
Rinodina anomala (Zahlbr.) H. Mayrhofer & Giralt
CR: Sarrión et al. (1995), **Cu**: Martínez et al. (2002), Giralt (2010), **To**: Vázquez and Burgaz (1996), Giralt (2010).
Rinodina archaea (Ach.) Arnold
Ab: Egea et al. (1985), Giralt (2001, 2010), Aragón et al. (2006b), **CR**: Aragón et al. (2006b), Giralt (2010), **Cu**: Martínez et al. (2001, 2002), Aragón et al. (2006b), Giralt (2010), **Gu**: Aragón et al. (1999, 2006b), Giralt (2010), **To**: Vázquez and Burgaz (1996), Aragón et al. (2006b), Giralt (2010).
Rinodina aspersa (Borrer) J.R. Laundon
CR: Aragón et al. (2006a), Giralt (2010).
Rinodina atrocinerea (Hook.) Körb.
Ab: Egea and Llimona (1981), Giralt (2010), **CR**: Aragón et al. (2006a), Giralt (2010).
Rinodina beccariana Bagl.
CR: Aragón et al. (2006a), Giralt (2010).
Rinodina bischoffii (Hepp) A. Massal.
Ab: Giralt (2010), **Cu**: Aragón and Martínez (2002a), Giralt (2010), **Gu**: Carballal and Giménez-Coral (1981), Giralt (2010).
Rinodina capensis Hampe
CR: Aragón et al. (2004b), Giralt (2010), Matos et al. (2015), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b).
Rinodina colobina (Ach.) Th. Fr.
Ab: Giralt (2001, 2010), **CR**: Giralt (2010), Aragón et al. (2010), Matos et al. (2015), **Cu**: Martínez et al. (2002), Giralt (2010), **Gu**: Giralt (2010), **To:** Matos et al. (2015).
Rinodina confinis Samp.
CR: Sarrión et al. (1993).
Rinodina confragosa (Ach.) Körb.
Ab: Egea and Llimona (1981), Giralt and Barbero (1995), Giralt (2001, 2010), **CR**: Aragón et al. (2006a), Giralt (2010), **Cu**: Giralt and Barbero (1995), Giralt (2001, 2010).
Rinodina conradii Körb
CR: Giralt (2010), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Giralt (2001, 2010).
Rinodina corticola (Arnold) Arnold
CR: Sarrión et al. (1993), **To**: Vázquez and Burgaz (1996).

Rinodina crespoae Giralt & H. Mayrhofer
CR: Giralt (2010).
Rinodina dalmatica Zahlbr.
CR: Fos et al. (2000), Martínez et al. (2003).
Rinodina dolichospora Malme
CR: Giralt (2010).
Rinodina excrescens Vain.
CR: Giralt (2010).
Rinodina exigua (Ach.) Gray
Ab: Egea et al. (1985), Aragón and Martínez (1999), Aragón et al. (2006b), Giralt (2010), **CR**: Giralt (2010), Aragón et al. (2010), Matos et al. (2015), **Cu**: Martínez et al. (2001, 2002), Aragón et al. (2006b), Giralt (2010), **Gu**: Carballal (1976), Aragón et al. (1999), **To**: Crespo and Atienza (1989), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Matos et al. (2015).
Rinodina gennarii Bagl.
Cu: Giralt and Llimona (1997), Giralt (2001, 2010).
Rinodina griseosoralifera Coppins
To: Vázquez and Burgaz (1996), Martínez et al. (2003), Giralt (2010).
Rinodina immersa (Körb.) J. Steiner
Ab: Aragón and Martínez (2002a), Giralt (2010), **Cu**: Aragón and Martínez (2002a), Giralt (2010), **Gu**: Giralt (2010).
Rinodina lecanorina (A. Massal.) A. Massal.
= *Rinodina trachytica* (A. Massal.) Arnold
Ab: Giralt and Barbero (1995), Giralt (2001, 2010), Aragón and Martínez (2002a), **CR**: Giralt and Barbero (1995), Giralt (2010).
Rinodina mayrhoferi A. Crespo
Cu: Martínez et al. (2002), Giralt (2010), **Gu**: Crespo (1983), Giralt (2001, 2010).
Rinodina obnascens (Nyl.) H. Olivier
Ab: Egea and Llimona (1981), Giralt and Llimona (1997), Giralt (2001, 2010).
Rinodina occulta (Körb.) Sheard
Ab: Egea and Llimona (1981).
Rinodina oleae Bagl.
Ab: Aragón and Martínez (1999), Giralt (2001, 2010), Aragón et al. (2006b), **CR**: Giralt (2010).
Rinodina plana H. Magn.
CR: Giralt (2010), **Cu**: Martínez et al. (2001), Giralt (2010), **Gu**: Giralt (2001, 2010).
Rinodina pyrina (Ach.) Arnold
Ab: Egea et al. (1985), Aragón and Martínez (1999), Giralt (2001, 2010), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Giralt (2010), Aragón et al. (2010), Matos et al. (2015), **Gu**: Burgos and Burgaz (1988), Giralt (2010), **To**: Crespo and Atienza (1989), Martínez et al. (1993), Vázquez and Burgaz (1996), Giralt (2010), Matos et al. (2015).
Rinodina septentrionalis Malme
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), Giralt (2010), **CR**: Giralt (2010), **Cu**: Giralt (2001, 2010), Martínez et al. (2001, 2002).
Rinodina sophodes (Ach.) A. Massal.
Ab: Aragón and Martínez (1999), Giralt (2001, 2010), **CR**: Sarrión et al. (1993), Aragón et al. (2004b), Giralt (2010), **Cu**: Martínez et al. (2002), **Gu**: Burgos and Burgaz (1988), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Giralt (2010).
Rinodina teichophila (Nyl.) Arnold
Ab: Egea and Llimona (1981), Giralt and Llimona (1997), Giralt (2001, 2010).
Romjularia lurida (Ach.) Timdal
= *Lecidea lurida* Ach.
= *Psora lurida* (Ach.) DC.
Ab: Ottonello (1991), Aragón and Rico (1997), Aragón et al. (2001), **CR**: Aragón et al. (2022), **Cu:** Prieto et al. (2006), **Gu**: Aragón et al. (2001), **To**: Aragón et al. (2022).
Rostania multipunctata (Degel.) Otálora, P.M. Jørg. & Wedin
= *Collema multipunctatum* Degel.
CR: Aragón et al. (2001).
Rostania occultata (Bagl.) Otálora, P.M. Jørg. & Wedin
= *Collema occultatum* Bagl.
Ab: Aragón and Rico (1997), Carvalho (2012), **CR**: Aragón et al. (2001, 2010), Carvalho (2012), Matos et al. (2015).
Rufoplaca arenaria (Pers.) Arup, Søchting & Frödén
= *Caloplaca arenaria* (Pers.) Müll. Arg.
Ab: Egea (1984), **CR**: Egea (1984), Aragón et al. (2006a).
Sarcogyne pruinosa (Schaer.) A. Massal.
Gu: Carballal and Giménez-Coral (1981).
Sarcogyne regularis Körb.
Ab: Aragón and Martínez (2002a).
****Sclerococcum crassum*** (Sarrión & Hafellner) Ertz & Diederich
= **Dactylospora crassa* Sarrión & Hafellner
CR: Sarrión et al. (2002).
****Sclerococcum mediterraneum*** (Sarrión & Hafellner) Olariaga, Teres, J.M. Martín, M. Prieto & Baral
= **Dactylospora mediterranea* Sarrión & Hafellner
CR: Sarrión et al. (2002).
****Sclerococcum pseudourceolatum*** (Sarrión & Hafellner) Olariaga, Teres, J.M. Martín, M. Prieto & Baral
= **Dactylospora pseudourceolata* Sarrión & Hafellner
CR: Sarrión et al. (2002).
Sclerophora pallida (Pers.) Y.J. Yao & Spooner
= *Sclerophora nivea* (J.F. Gmel.) Tibell
Unspecified: Aragón et al. (2008).
Scoliciosporum umbrinum (Ach.) Lojka
CR: Sarrión et al. (1993), Aragón et al. (2006b), **Cu**: Calatayud and Barreno (1993), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón et al. (2006b).
Scutula igniarii (Nyl.) S. Ekman
= *Bacidia igniarii* (Nyl.) Oxner
Unspecified: Aragón et al. (2008).
****Scutula miliaris*** (Wallr.) P. Karst.
CR: Martínez and Hafellner (1998).
Scytinium aragonii (Otálora) Otálora, P.M. Jørg. & Wedin

= *Leptogium aragonii* Otálora
CR: Matos et al. (2015), Aragón et al. (2022), **To**: Aragón et al. (2022).
Scytinium callopismum (A. Massal.) Otálora, P.M. Jørg. & Wedin
= *Collema callopismum* A. Massal.
CR: Aragón et al. (2001).
Scytinium fragrans (Sm.) Otálora, P.M. Jørg. & Wedin
Unspecified: Aragón et al. (2008).
Scytinium gelatinosum (With.) Otálora, P.M. Jørg. & Wedin
= *Leptogium gelatinosum* (With.) J.R. Laundon
CR: Aragón et al. (2001), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2002), **To**: Aragón et al. (2022).
Scytinium imbricatum (P.M. Jørg.) Otálora, P.M. Jørg. & Wedin
CR: Aragón et al. (2022), **To:** Aragón et al. (2022).
Scytinium intermedium (Arnold) Otálora, P.M. Jørg. & Wedin
= *Leptogium intermedium* (Arnold) Arnold
To: Aragón (2004).
Scytinium lichenoides (L.) Otálora, P.M. Jørg. & Wedin
= *Leptogium lichenoides* (L.) Zahlbr.
Ab: Egea and Llimona (1981), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001, 2006b), Otálora et al. (2010b), **CR**: Aragón et al. (2001, 2006a), Aragón and Giménez (2012), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **Gu:** Aragón et al. (2015), Hurtado et al. (2020a, b, c, d), **To**: Burgaz et al. (1994a), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b), Cardós et al. (2016, 2018).
Scytinium magnussonii (Degel. & P.M. Jørg.) Otálora, P.M. Jørg. & Wedin
= *Leptogium magnussonii* Degel. & P.M. Jørg.
CR: Aragón (2004), **Gu**: Aragón (2004), **To**: Aragón (2004).
Scytinium palmatum (Huds.) Gray
= *Leptogium palmatum* (Huds.) Mont.
To: Martínez et al. (1993), Vázquez and Burgaz (1996).
Scytinium plicatile (Ach.) Otálora, P.M. Jørg. & Wedin
= *Collemodium plicatile* (Ach.) Nyl.
Gu: Rowe and Espinosa Roji (1996).
Scytinium pulvinatum (Hoffm.) Otálora, P.M. Jørg. & Wedin
= *Leptogium pulvinatum* (Hoffm.) Cromb.
Cu: Otálora et al. (2010b).
Scytinium schraderi (Ach.) Otálora, P.M. Jørg. & Wedin
= *Leptogium schraderi* (Ach.) Nyl.
Cu: Otálora et al. (2010b).
Scytinium subaridum (P.M. Jørg. & Goward) Otálora, P.M. Jørg. & Wedin
= *Leptogium subaridum* P.M. Jørg. & Goward
CR: Aragón et al. (2004a), **Gu**: Aragón et al. (2004a), **To**: Aragón et al. (2004a).
Scytinium subtile (Schrad.) Otálora, P.M. Jørg. & Wedin
= *Leptogium subtile* (Schrad.) Torss.
CR: Aragón (2004), Aragón and Giménez (2012), Matos et al. (2015), **To**: Aragón (2004).
Scytinium tenuissimum (Dicks.) Otálora, P.M. Jørg. & Wedin
= *Leptogium tenuissimum* (Dicks.) Körb.
Ab: Egea et al. (1985), **CR:** Aragón et al. (2022), **To**: Aragón et al. (2022).
Seawardiella lobulata (Flörke) S.Y. Kondr., I. Kärnefelt & A. Thell
= *Caloplaca boulyi* (Zahlbr.) M. Steiner & Poelt
= *Caloplaca lobulata* (Flörke) Hellb.
To: Crespo and Atienza (1989), Vázquez and Burgaz (1996).
Solenopsora candicans (Dicks.) J. Steiner
Ab: Aragón and Martínez (2002a).
Solorina bispora Nyl.
Ab: Aragón et al. (2001), Burgaz and Martínez (2003), Martínez et al. (2003).
Solorina bispora* subsp. *bispora Nyl.
Ab: Martínez and Burgaz (1998), Burgaz and Martínez (1998).
Solorina crocea (L.) Ach.
Gu: Burgaz and Martínez (1998, 2003), Aragón et al. (2001).
Solorina saccata (L.) Ach.
Ab: Aragón and Rico (1997), Burgaz and Martínez (1998, 2003), Aragón et al. (2001), **Cu**: Abbayes (1946), Burgaz and Martínez (1998, 2003), Aragón et al. (2001).
Sphaerophorus globosus (Huds.) Vain.
Gu: Hurtado et al. (2020a, b, c, d).
Sphaerothallia taurica (Mereschk.) Barreno & Crespo
Cu: Crespo (1978), **Gu**: Crespo (1978).
****Sphinctrina paramerae*** D. Muñiz & Hladun
Cu: Muñiz and Hladun (2011).
****Sphinctrina tubaeformis*** A. Massal.
Cu: Martínez et al. (2002).
****Sphinctrina turbinata*** Fr.
CR: Sarrión et al. (1993, 1999), Muñiz and Hladun (2011).
Spiloma fuliginosum Turner & Borrer
= *Arthonia fuliginosa* (Turner & Borrer) Flot.
Ab: Egea et al. (1985).
Squamarina cartilaginea (With.) P. James
= *Squamarina crassa* (Huds.) Poelt
Ab: Aragón and Rico (1997), **CR**: Aragón et al. (2022), **Cu**: Sanders et al. (1994), Aragón et al. (2001), Martínez et al. (2006), Concostrina-Zubiri et al. (2019), **Gu**: Carballal (1977), Carballal and Giménez-Coral (1981), Aragón et al. (2001), **To:** Aragón et al. (2022).
Squamarina concrescens (Müll. Arg.) Poelt
Gu: Carballal (1977), Aragón et al. (2001).
Squamarina lentigera (Weber) Poelt
Cu: Martínez et al. (2006), Prieto et al. (2006), Concostrina-Zubiri et al. (2019), **Gu**: Carballal

(1977), Crespo (1978), Aragón et al. (2001), **To**: Aragón et al. (2022).
Squamarina oleosa (Zahlbr.) Poelt
Gu: Aragón et al. (2001).
Squamarina stella-petraea Poelt
Gu: Carballal (1977), Carballal and Giménez-Coral (1981).
Staurothele hazslinszkyi (Körb.) J. Steiner
Ab: Egea and Llimona (1981).
Staurothele hymenogonia (Nyl.) Th. Fr.
Gu: Carballal and Giménez-Coral (1981).
****Stigmidium acetabuli*** Calat. & Triebel
Ab: Calatayud and Triebel (2003).
****Stigmidium congestum*** (Körb.) Triebel
CR: Martínez (2002), **Cu**: Martínez et al. (2002).
Straminella bullata (Follmann & A. Crespo) S.Y. Kondr., Lőkös & Farkas
= *Rhizoplaca bullata* (Follmann & A. Crespo) Leuckert & Poelt
Ab: Egea and Llimona (1981).
Straminella burgaziae (I. Martínez & Aragón) S.Y. Kondr., Lőkös & Farkas
= *Lecanora burgaziae* I. Martínez & Aragón
CR: Martínez and Aragón (2004).
Straminella conizaeoides (Nyl. ex Cromb.) S.Y. Kondr., Lőkös & Farkas
= *Lecanora conizaeoides* Nyl. ex Cromb.
Ab: Aragón et al. (2006b), **Cu**: Aragón et al. (2006b), **Gu**: Martínez and Aragón (2004), Aragón et al. (2006b).
Straminella densa (Śliwa & Wetmore) S.Y. Kondr., Lőkös & Farkas
= *Lecanora densa* (Śliwa & Wetmore) Printzen
CR: Martínez and Aragón (2004), Aragón et al. (2006b).
Straminella varia (Hoffm.) S.Y. Kondr., Lőkös & Farkas
= *Lecanora varia* (Hoffm.) Ach.
Ab: Egea et al. (1985), Aragón and Martínez (1999), Martínez and Aragón (2004), **CR**: Sarrión and Burgaz (1995), Aragón et al. (2004b), Martínez and Aragón (2004), Aragón and Giménez (2012), **Cu**: Martínez et al. (2002), Martínez and Aragón (2004), **To**: Sarrión and Aragón (1995), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b), Martínez and Aragón (2004).
Strangospora microhaema (Norman) R.A. Anderson
CR: Martínez et al. (2003).
Strangospora moriformis (Ach.) Stein
To: Vázquez and Burgaz (1996).
Swinscowia affinis (A. Massal.) S.H. Jiang, Lücking & Sérus.
= *Strigula affinis* (A. Massal.) R.C. Harris
To: Martínez et al. (1993), Vázquez and Burgaz (1996).
Synalissa symphorea (Ach.) Nyl.
Cu: Aragón and Martínez (2002a).
****Talpapellis beschiana*** (Diederich) Zhurb., U. Braun, Diederich & Heuchert
= *Taeniolella beschiana* Diederich
To: Zhurbenko and Pino Bodas (2017).
****Telogalla olivieri*** (Vouaux) Nik. Hoffm. & Hafellner
= *Guignardia olivieri* (Vouaux) Sacc.
Cu: Martínez et al. (2002).
Tephromela atra (Huds.) Hafellner
= *Lecanora atra* (Huds.) Ach.
Ab: Egea et al. (1985), Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Aragón et al. (2006a, 2010), **Cu**: Calatayud and Barreno (1993), Martínez et al. (2002), **Gu**: Más Guindal (1902), **To**: Aragón et al. (2004b).
****Tetramelas pulverulentus*** (Anzi) A. Nordin & Tibell
= *Buellia pulverulenta* (Anzi) Jatta
CR: Martínez (2002).
Teuvoa uxoris (Werner) Sohrabi, V.J. Rico & S.D. Leav.
= *Aspicilia uxoris* (Werner) V.J. Rico, Aragón & Esnault
Cu: Rico et al. (2007), **Gu**: Rico et al. (2007).
Thalloidima albilabrum (Dufour) Flagey
= *Psora albilabra* (Dufour) Körb.
= *Toninia albilabra* (Dufour) H. Olivier
Cu: Martínez et al. (2006), Prieto et al. (2006), **Gu**: Carballal (1977), Aragón et al. (2001).
Thalloidima candidum (Weber) A. Massal.
= *Toninia candida* (Weber) Th. Fr.
Ab: Aragón and Rico (1997), Aragón et al. (2001), **Cu**: Abbayes (1946), Aragón et al. (2001), **Gu**: Carballal (1977), Carballal and Giménez-Coral (1981).
Thalloidima massatum (Tuck.) Kistenich, Timdal, Bendiksby & S. Ekman
CR: Aragón et al. (2022), **To**: Aragón et al. (2022).
Thalloidima opuntioides (Vill.) Kistenich, Timdal, Bendiksby & S. Ekman
= *Toninia opuntioides* (Vill.) Timdal
Ab: Egea and Llimona (1981), Aragón and Rico (1997), Aragón et al. (2001), **CR**: Aragón et al. (2022), **Gu**: Aragón et al. (2001), **To**: Aragón et al. (2022).
Thalloidima sedifolium (Scop.) Kistenich, Timdal, Bendiksby & S. Ekman
= *Toninia sedifolia* (Scop.) Timdal
Ab: Aragón and Rico (1997), Aragón et al. (2001), **CR**: Aragón et al. (2022), **Cu**: Aragón and Martínez (2002a), Martínez et al. (2006), Prieto et al. (2006), Concostrina-Zubiri et al. (2019), **Gu**: Aragón et al. (2001), **To**: Aragón et al. (2022).
Thalloidima tauricum Szatala
= *Toninia taurica* (Szatala) Oxner
Ab: Aragón and Rico (1997), Aragón et al. (2001), **To**: Aragón et al. (2022).
Thelenella muscorum (Th. Fr.) Vain.
= *Chromatochlamys muscorum* (Th. Fr.) H. Mayrhofer & Poelt
CR: Aragón et al. (2022), **Cu**: Aragón et al. (2006b), **Gu:** Aragón et al. (2015), **To**: Aragón and Martínez (2002a), Aragón et al. (2022).
Thelopsis rubella Nyl.
CR: Aragón and Sarrión (2003), **To**: Aragón and (Sarrión 2003).

Tingiopsidium sonomense (Tuck.) Hafellner & T. Sprib.
= *Koerberia sonomensis* (Tuck.) Henssen
To: Burgaz and Martínez (2001), Burgaz (2011a, b).
Toninia cinereovirens (Schaer.) A. Massal.
Ab: Egea and Llimona (1981), Aragón et al. (2001).
Toninia coeruleonigricans (Lightf.) Th. Fr.
Cu: Abbayes (1946), **Gu**: Carballal (1977), Crespo (1978).
Toninia diffracta (A. Massal.) Zahlbr.
Ab: Aragón and Rico (1997), Aragón et al. (2001), **Gu**: Aragón et al. (2001).
****Toninia plumbina*** (Anzi) Hafellner & Timdal
To: Martínez (2002).
Toninia populorum (A. Massal.) Kistenich, Timdal, Bendiksby & S. Ekman
= *Arthrosporum populorum* A. Massal.
Unspecified: Aragón et al. (2008).
Toninia squalida (Ach.) A. Massal.
CR: Aragón et al. (2022).
Toninia tristis (Th. Fr.) Th. Fr.
CR: Aragón et al. (2022), **To:** Aragón et al. (2022).
Toninia toepfferi (Stein) Navás
To: Aragón et al. (2022).
Toninia vesicularis (Hoffm.) Mong.
Gu: Rowe and Espinosa Roji (1996).
Toniniopsis bagliettoana (A. Massal. & De Not.) Kistenich & Timdal
= *Bacidia bagliettoana* (A. Massal. & De Not.) Jatta
Ab: Martínez and Hafellner (1998), Martínez (1999), Aragón and Martínez (1999), Llop (2007), **Cu**: Martínez et al. (2002), Llop (2007).
Trapelia coarctata (Turner) M. Choisy
CR: Aragón et al. (2006a, 2022).
Trapelia glebulosa (Sm.) J.R. Laundon
CR: Aragón et al. (2022).
Trapeliopsis flexuosa (Fr.) Coppins & P. James
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Matos et al. (2015), **Cu**: Martínez et al. (2001, 2002), Aragón et al. (2006b), **Gu**: Aragón et al. (1999, 2006b), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2004b).
Trapeliopsis granulosa (Hoffm.) Lumbsch
Ab: Aragón et al. (2006b), **CR:** Aragón et al. (2022), **Cu**: Aragón et al. (2006b), **To**: Aragón et al. (2022).
Trapeliopsis gymnidiata Aptroot & Schumm
CR: Aragón et al. (2022).
Trapeliopsis pseudogranulosa Coppins & P. James
CR: Aragón et al. (2022).
Trapeliopsis wallrothii (Flörke ex Spreng.) Hertel & Gotth. Schneid.
CR: Aragón et al. (2022), **To:** Aragón et al. (2022).
****Tremella anaptychiae*** J.C. Zamora & Diederich
Gu: Zamora et al. (2017).
****Tremella diederichiana*** Pérez-Ort., Millanes, V.J. Rico & J.C. Zamora
To: Zamora et al. (2016).
****Tremella hypogymniae*** Diederich & M.S. Christ.
Cu: Martínez et al. (2002).
****Tremella macrobasidiata*** J.C. Zamora, Pérez-Ort. & V.J. Rico
To: Zamora et al. (2011).
****Tremella variae*** Pérez-Ort., Millanes, V.J. Rico & J.C. Zamora
To: Zamora et al. (2016).
Umbilicaria cinerascens (Nyl.) Nyl.
Ab: Egea and Llimona (1981), Aragón et al. (2001).
Umbilicaria cylindrica (L.) Delise
Gu: Más Guindal (1902).
Umbilicaria freyi Codogno, Poelt & Puntillo
Gu: Sancho et al. (1991).
Umbilicaria grisea Hoffm.
Ab: Aragón et al. (2001), **CR**: Aragón et al. (2006a), **To**: Sancho et al. (1991), Valladares and Sancho (1995).
Umbilicaria hispanica (Frey) Davydov, Peršoh & Rambold
Cu: Calatayud and Barreno (1993), Aragón et al. (2001), **Gu**: Sancho and Crespo (1989).
Umbilicaria murina (Ach.) DC.
Ab: Egea and Llimona (1981).
Umbilicaria polyphylla (L.) Baumg.
Cu: Aragón and Martínez (2002a), **Gu**: Aragón and Martínez (2002a).
Umbilicaria spodochroa Hoffm.
Gu: Valladares and Sancho (1995).
****Unguiculariopsis lettaui*** (Grummann) Coppins
CR: Martínez (2002), **To**: Martínez (2002).
Usnea filipendula Stirt.
CR: Aragón and Giménez (2012), **Gu**: Burgos and Burgaz (1988), Aragón et al. (2001).
Usnea fulvoreagens (Räsänen) Räsänen
CR: Martínez et al. (2003), **Gu**: Burgos and Burgaz (1988), Aragón et al. (2001), Martínez et al. (2003).
Usnea glabrata (Ach.) Vain.
= *Usnea sorediifera* (Arnold) Lynge
CR: Aragón et al. (2001), **Cu**: Martínez et al. (2002), **Gu**: Carballal (1976), Aragón et al. (2001).
Usnea glabrescens (Nyl. ex Vain.) Vain.
Cu: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Aragón et al. (1999), Hurtado et al. (2020a, b, c, d), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001).
Usnea hirta (L.) F.H. Wigg.
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Aragón et al. (2006b), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2001, 2002), **Gu**: Aragón et al. (1999, 2001, 2006b), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón et al. (2001, 2006b).
Usnea lapponica Vain.
CR: Sarrión et al. (1993).
Usnea subfloridana Stirt.
Ab: Aragón and Rico (1997), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Aragón et al. (2001), Aragón and Giménez (2012), **Gu:** Hurtado et al. (2020a, b, c, d), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001).
Usnea substerilis Motyka

CR: Sarrión et al. (1993), **Cu**: Martínez et al. (2002), **Gu**: Aragón et al. (1999).
Usnea wasmuthii Räsänen
Ab: Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Aragón et al. (2001, 2004b, 2006b), **Gu:** Hurtado et al. (2020a, b, c, d), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b, 2006b).
Usnochroma carphineum (Fr.) Søchting, Arup & Frödén
= *Caloplaca carphinea* (Fr.) Jatta
Ab: Egea and Llimona (1981), Egea (1984), **CR**: Crespo et al. (1976), Egea (1984), Aragón et al. (2006a), Aragón and Giménez (2012), **To**: Crespo et al. (1976), Vázquez and Burgaz (1996), van den Boom and Rico (2006).
Varicellaria hemisphaerica (Flörke) I. Schmitt & Lumbsch
= *Pertusaria hemisphaerica* (Flörke) Erichsen
Ab: Aragón and Martínez (1999), Aragón et al. (2006b), **CR**: Sarrión et al. (1993), Aragón et al. (2004b, 2006a, 2010), **Cu**: Martínez et al. (2001, 2002), **Gu**: Aragón et al. (1999, 2015), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Cardós et al. (2016, 2018).
Varicellaria lactea (L.) I. Schmitt & Lumbsch
= *Pertusaria lactea* (L.) Arnold
CR: Sarrión et al. (1993), Aragón et al. (2006a), **To**: Vázquez and Burgaz (1996).
Variospora aurantia (Pers.) Arup, Frödén & Søchting
= *Caloplaca aurantia* (Pers.) Hellb.
Gu: Carballal and Giménez-Coral (1981).
Variospora cancarixiticola (Nav.-Ros., Egea & Llimona) Arup, Søchting & Frödén
= *Caloplaca cancarixiticola* Nav.-Ros., Egea & Llimona
Cu: Navarro-Rosinés et al. (2000).
Variospora dolomiticola (Zahlbr.) Arup, Søchting & Frödén
= *Caloplaca dolomiticola* Zahlbr.
Gu: Carballal and Giménez-Coral (1981).
Variospora flavescens (Huds.) Arup, Frödén & Søchting
= *Caloplaca heppiana* (Müll. Arg.) Zahlbr.
Gu: Carballal and Giménez-Coral (1981).
Verrucaria breussii Diederich & van den Boom
= *Verrucaria sorbinea* Breuss
CR: Aragón and Sarrión (2003).
Verrucaria mortarii (Arnold) Leight.
Gu: Carballal and Giménez-Coral (1981).
Verrucaria muralis Ach.
Gu: Carballal and Giménez-Coral (1981).
Verrucaria nigrescens Pers.
Gu: Carballal and Giménez-Coral (1981), Pena-Poza et al. (2018).
Verrucaria nigricans (Nyl.) Zschacke
Ab: Egea and Llimona (1981).
Verrucaria phloeophila Breuss
CR: Aragón and Sarrión (2003), **To**: Aragón and Sarrión (2003).
Verruculopsis lecideoides (A. Massal.) Gueidan & Cl. Roux
= *Catapyrenium lecideoides* (A. Massal.) Arnold
= *Verrucaria lecideoides* (A. Massal.) Trevis.
Ab: Egea and Llimona (1981), **To**: Garcia-Rowe and Saiz-Jimenez (1991), Vázquez and Burgaz (1996).
****Vouauxiella lichenicola*** (Linds.) Petr. & Syd.
CR: Martínez (2002).
****Vouauxiella verrucosa*** (Vouaux) Petr. & Syd.
Cu: Martínez et al. (2002).
Vulpicida pinastri (Scop.) J.-E. Mattsson & M.J. Lai
= *Cetraria pinastri* (Scop.) Gray
Gu: Burgos and Burgaz (1990), Aragón et al. (2001), Martínez et al. (2003).
Waynea adscendens V.J. Rico
Ab: Aragón and Martínez (2002a), Martínez et al. (2003), **CR**: Aragón et al. (2004b), Martínez et al. (2003), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Martínez et al. (2001, 2002, 2003), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Martínez et al. (2003), Aragón et al. (2004b), Llop (2006), Cardós et al. (2016, 2018).
Xalocoa ocellata (Fr.) Kraichak, Lücking & Lumbsch
= *Diploschistes ocellatus* (Fr.) Norman
Gu: Carballal and Giménez-Coral (1981).
Xanthocarpia ferrarii (Bagl.) Frödén, Arup & Søchting
= *Caloplaca ferrarii* (Bagl.) Jatta
Gu: Carballal and Giménez-Coral (1981).
Xanthoparmelia conspersa (Ehrh. ex Ach.) Hale
= *Parmelia conspersa* (Ehrh. ex Ach.) Ach.
Ab: Egea and Llimona (1981), Aragón et al. (2001), **CR**: Sarrión et al. (1993), Aragón et al. (2001, 2006a), Aragón and Giménez (2012), **Cu**: Aragón et al. (2001), **To**: Crespo et al. (1976), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001).
Xanthoparmelia delisei (Duby) O. Blanco, A. Crespo, Elix, D. Hawksw. & Lumbsch
= *Neofuscelia delisei* (Duby) Essl.
CR: Aragón et al. (2006a), Aragón and Giménez (2012).
Xanthoparmelia isidiovagans O. Blanco, A. Crespo, Divakar & Elix
Gu: Divakar et al. (2012).
Xanthoparmelia loxodes (Nyl.) O. Blanco, A. Crespo, Elix, D. Hawksw. & Lumbsch
= *Neofuscelia loxodes* (Nyl.) Essl.
CR: Aragón et al. (2006a).
Xanthoparmelia mougeotii (Schaer. ex D. Dietr.) Hale
CR: Aragón et al. (2006a).
Xanthoparmelia pokornyi (Körb.) O. Blanco, A. Crespo, Elix, D. Hawksw. & Lumbsch
= *Neofuscelia pokornyi* (Körb.) Essl.
Gu: Blanco et al. (2004).
Xanthoparmelia protomatrae (Gyeln.) Hale
CR: Aragón et al. (2001, 2006a).
Xanthoparmelia pulla (Ach.) O. Blanco, A. Crespo, Elix, D. Hawksw. & Lumbsch
= *Neofuscelia pulla* (Ach.) Essl.

= *Parmelia pulla* Ach.
Ab: Egea and Llimona (1981), Aragón et al. (2001), **CR**: Sarrión and Burgaz (1995), Sarrión et al. (1995), Aragón et al. (2001, 2004b, 2006a), Aragón and Giménez (2012), **Cu**: Martínez et al. (2002), **Gu**: Aragón et al. (2001), **To**: Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b).
Xanthoparmelia ryssolea (Ach.) O. Blanco, A. Crespo, Elix, D. Hawksw. & Lumbsch
= *Neofuscelia ryssolea* (Ach.) Essl.
= *Parmelia ryssolea* (Ach.) Nyl.
Cu: Prieto et al. (2006), **Gu**: Crespo (1978).
Xanthoparmelia stenophylla (Ach.) Ahti & D. Hawksw.
= *Parmelia conspersa* var. *stenophylla* Ach.
= *Parmelia somloensis* Gyeln.
= *Parmelia stenophylla* (Ach.) Heugel
= *Xanthoparmelia somloensis* (Gyeln.) Hale
Ab: Egea and Llimona (1981), Aragón et al. (2001), **CR**: Sarrión and Burgaz (1995), Aragón et al. (2001, 2006a), Aragón and Giménez (2012), **Cu**: Aragón et al. (2001), Martínez et al. (2002), **Gu**: Navás (1901), Rowe and Espinosa Roji (1996), Divakar et al. (2012), **To**: Vázquez and Burgaz (1996), Aragón et al. (2001, 2004b).
Xanthoparmelia taractica (Kremp.) Hale
= *Parmelia taractica* Kremp.
To: Sarrión and Aragón (1995).
Xanthoparmelia tinctina (Maheu & A. Gillet) Hale
= *Parmelia conspersa* subsp. *tinctina* (Maheu & A. Gillet) Clauzade & Cl. Roux
= *Parmelia tinctina* Maheu & A. Gillet
CR: Sarrión and Burgaz (1995), Sarrión et al. (1995), Aragón et al. (2001, 2004b, 2006a), Aragón and Giménez (2012), **To**: Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001, 2004b).
Xanthoparmelia vagans (Nyl.) Hale
Cu: Crespo (1978), Aragón et al. (2001), Martínez et al. (2003), Prieto et al. (2006), **Gu**: Crespo (1978), Aragón et al. (2001), Martínez et al. (2003), Blanco et al. (2004).
Xanthoparmelia verruculifera (Nyl.) O. Blanco, A. Crespo, Elix, D. Hawksw. & Lumbsch
= *Neofuscelia verruculifera* (Nyl.) Essl.
= *Parmelia glomellifera* (Nyl.) Nyl.
CR: Aragón et al. (2004b, 2006a), Aragón and Giménez (2012), **Gu**: Crespo et al. (1976).
Xanthoria calcicola Oxner
Ab: Aragón et al. (2001).
Xanthoria elegans (Link) Th. Fr.
Ab: Aragón and Rico (1997), Aragón et al. (2001).
Xanthoria parietina (L.) Th. Fr.
Ab: Egea et al. (1985), Aragón and Rico (1997), Aragón and Martínez (1999), Aragón et al. (2001), **CR**: Sarrión et al. (1993, 1995), Aragón et al. (2001, 2010), Martínez (2002), Aragón and Giménez (2012), Matos et al. (2015), **Cu**: Aragón et al. (2001, 2006b), Martínez et al. (2002), **Gu**: Carballal (1976), Carballal and Giménez-Coral (1981), Aragón et al. (1999, 2001, 2015), **To**: Crespo and Atienza (1989), Garcia-Rowe and Saiz-Jimenez (1991), Martínez et al. (1993), Vázquez and Burgaz (1996), Aragón and Martinez (1997), Aragón et al. (2001), Matos et al. (2015).
****Xanthoriicola physciae*** (Kalchbr.) D. Hawksw.
CR: Martínez (2002), **Cu**: Martínez et al. (2002).
Xylographa parallela (Ach.) Fr.
= *Xylographa abietina* (Pers.) Zahlbr.
Cu: Martínez et al. (2002, 2003), **Gu**: Aragón et al. (1999), Martínez et al. (2003).
Xyloschistes platytropa (Nyl.) Vain.
CR: Aragón et al. (2004b), **To**: Aragón et al. (2004b).
****Zwackhiomyces berengerianus*** (Arnold) Grube & Triebel
Ab: Martínez and Hafellner (1998).

Conclusion

The present work provides a checklist of the lichen-forming and lichenicolous fungi of Castilla-La Mancha based on the review of 204 previous studies. Given that the epiphytic lichens have been the most studied group in the region, future works centered on saxicolous, terricolous and lichenicolous taxa have a great potential to increase our knowledge of these organisms in Castilla-La Mancha. Guadalajara is the province with the least taxa and shows a relatively low proportion of crustose species, which could be a hint of a poor knowledge of its lichen biota compared to the other provinces. Future studies carried out in this province would be valuable. Finally, the future compilation of the geographic data of the records here presented would be highly valuable to identify ecogeographical gaps in our knowledge of these organisms in the region.

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