



# A NEW CONTRIBUTION TO ASSESMENT OF THREATENED SPECIES IN RED LIST OF LICHEN-FORMING AND LICHENICOLOUS FUNGI IN SPAIN AND PORTUGAL



Atienza, V.<sup>1</sup>, Fos, S.<sup>2</sup>, Burgaz, A. R.<sup>3</sup>, Etayo, J.<sup>4</sup>, Gómez-Bolea, A.<sup>5</sup>, López de Silanes, M. E.<sup>6</sup>, Navarro-Rosinés, P.<sup>5</sup>, Olariaga, I.<sup>7</sup>, Paz-Bermúdez, G.<sup>6</sup>, Pérez-Vargas, I.<sup>8</sup>, Prieto, M.<sup>7</sup>, Rodríguez, C.<sup>7</sup>, Salegui, A.<sup>9</sup>, Pérez-Ortega, S.<sup>10</sup> E-mail: M.Violeta.Atienza@uv.es

<sup>1</sup>Departament de Botànica i Geologia, Facultat de Ciències Biològiques, Universitat de València, 46100 Valencia Spain. <sup>2</sup>VAERSA. Avda. Corts Valencianes, 20, 46015 Valencia, Spain. <sup>3</sup>Departamento de Biología Vegetal I, Facultad de Biología, Universidad Complutense de Madrid, Spain. <sup>4</sup>Navarro Villoslada 16, 3. dcha, 31003 Pamplona, Navarra, Spain. <sup>5</sup>Departament de Biologia Evolutiva, Ecologia i Ciències Ambientals Secció de Botànica i Micologia, Facultat de Biologia, Universitat de Barcelona, 08028 Barcelona, Spain. <sup>6</sup>Departamento de Enxeñaría dos Recursos Naturais e Medio Ambiente, Enxeñaría Forestal, Universidade de Vigo, 36005 Pontevedra, Spain. <sup>7</sup>Departamento de Biología y Geología, Física y Química Inorgánica, Área de Biodiversidad y Conservación, Universidad Rey Juan Carlos, 28933 Móstoles, Madrid, Spain. <sup>8</sup>Departamento de Botànica, Ecología y Fisiología Vegetal, Facultad de Ciencias de la Salud, sección Farmacia, Universidad de La Laguna, 38071 La Laguna, Tenerife, Spain. <sup>9</sup>Departamento de Biología Vegetal (Botànica), Facultad de Ciencias Biològicas y Ambientales, Campus de Vegazana s/n, Universidad de León. 24071 León, Spain. <sup>10</sup>Real Jardín Botánico, CSIC. Plaza de Murillo 2, 28014, Madrid, Spain.



**Letharia vulpina (L.) Hue**  
Assessor: Simón Fos & Antonia Gómez

• Threats: Management and exploitation of forest and atmospheric pollution. Drier and warmer conditions in a climate change scenario can have serious consequences on high mountain ecosystems and its characteristic biodiversity.  
• Conservation: This species is legally protected in Catalonia (NE of Spain). Most of the populations are included in protected areas and Natura 2000 sites.



**Ramalina traustroa (Ach.) Nyl.**  
Assessor: Antonio Gómez-Bolea & Sergio Pérez-Ortega

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**Platygramme buxi (Etayo) Etayo**  
Assessor: J. Etayo, M.E. López de Silanes & G. Paz-Bermúdez

• Threats: Its only photophyte is *Buxus sempervirens* which formations are affected by human disturbances and since 2014 are highly affected by the *Cydalomia perspectivella* plague whose larvae defoliate the hawthorn, so that *Platygramme buxi* could not be adapted to those conditions and being in CR (critically endangered).

• Conservation: Populations included in several protected areas: in Navarra, Arbáizn Gorge is a Natural Reserve; in Huesca, Torla, it is also the Aliscio canyon and the Escallón gorges; in Tarragona, La Sénia, the Retaleua ravine, belongs to the Ports Natural Park.

**Cryptodiscus gloeocapsa (Arnold) Baloch, Gilenstam & Wedin**  
Assessor: Graciela Paz-Bermúdez

• Threats: loss of well conserved and old forests and forest clearing (producing drier and more illuminated environments). Also sensitive to atmospheric contamination with SO<sub>2</sub>, nitrogen deposition and chemical compounds used in agriculture.  
• Conservation: *Ricassola vires* appears to be in decline in several countries of Europe (Fischer & Killmann 2008). As such, it is red-listed in several countries, such as Italy (Nascimbene et al. 2013), Sweden (Skarp & Tranvik 2020) or Switzerland (Schoedinger & Clerc 2002)

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**Lethariella intricata (Moris) Krog**  
Assessor: M. José Chesa & Antonio Gómez-Bolea

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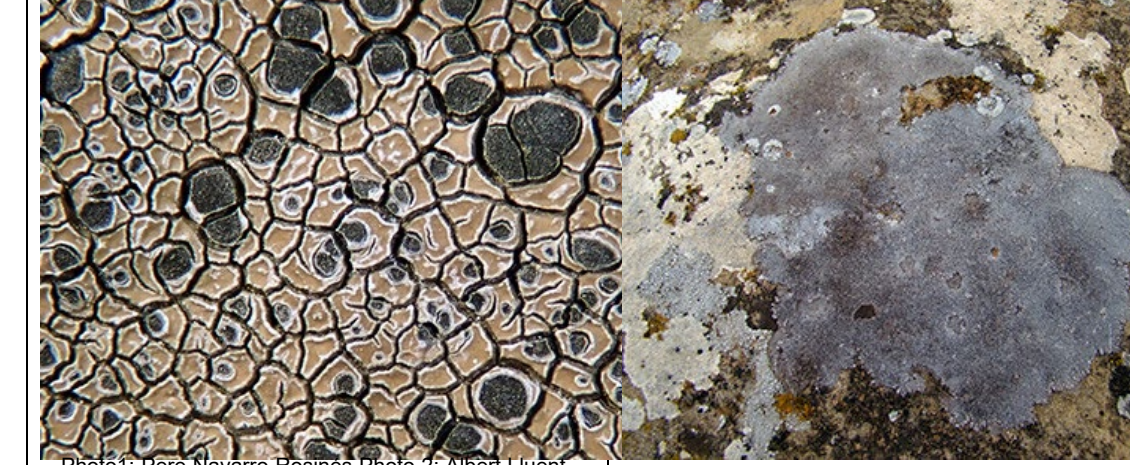


**Parmotrema sampolii Paz-Berm. & Elix**  
Assessor: Graciela Paz-Bermúdez

Threats and Conservation  
Since this taxon is only known from herbarium material collected over a century (in 1880), and it is an easily recognizable species both for its size and its morphological and chemical characteristics, we think that it may be an Extinct taxon.

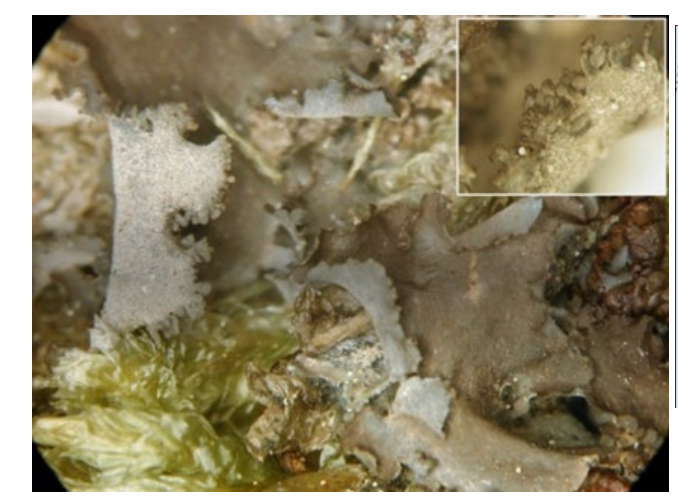
Threats: *Immersaria usbekica* is in regression due to fires and intensive land use. The detachment of thalli of this species has been observed in areas affected by forest fires.  
• Conservation: *Immersaria usbekica* is legally protected in Catalonia (NE of Spain).

**Immersaria usbekica (Hertel) M. Barbero, Nav.-Ros. & Cl. Roux**  
Assessor: Pere Navarro-Rosinés



• Threats: *Immersaria usbekica* is in regression due to fires and intensive land use. The detachment of thalli of this species has been observed in areas affected by forest fires.  
• Conservation: *Immersaria usbekica* is legally protected in Catalonia (NE of Spain).

• Threats: We consider that *Koerberiella pruinosus* may be in regression due to the destruction of part of its habitat, to be used for agricultural uses, a fact verified in one of its localities.  
• Conservation: This species is not locally protected except the locality Secans de Mas de Meders-Afles, which is a space that is included in the European Natura 2000 network since 2003 as a Site of Community Importance (SCI).



**Leptogium laeviores B. de Lesd**  
Assessor: M.E. López de Silanes & G. Paz-Bermúdez

• Threats: of this habitat with high humidity and well-preserved has disappeared and the remnants are fragmented. The scarce presence and abundance of *P. plumbeus* in the center of the Iberian Peninsula depends on human actors related mainly to habitat loss.

• Conservation: Populations included in several protected areas: in Minho, Serra do Gerês is included in the Peneda-Gerês National Park (PNPG) and in Beira Litoral, Biscoito, which according to the IChN is included in a type of Portuguese protection called Mata Nacional. Povoa do Lanhoso and Serra da Louisa are outside the Portuguese protection areas although today many of them are still forested and/or agricultural areas.



**Pectenium plumbeum (Lightf.) P.M. Jørg., L. Lindbrom, Wedin & S. Ekman**  
Assessor: María Prieto & Ibañ Olariaga

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**Sticta limbata (Sm.) Ach.**  
Assessor: María Prieto & Ibañ Olariaga

• Threats: Many localities are situated in areas with a high incidence of fires. Additionally, deciduous forests are severely fragmented and replaced by *Eucalyptus* and *Pinus* spp. in these regions.  
• Conservation: Assessed in several Red Lists: VU in Italy and Catalonia (Nascimbene et al. 2013; Institució Catalana de Història Natural, 2010), NT in Wales and UK in Great Britain (Woods & Coppins, 2012).



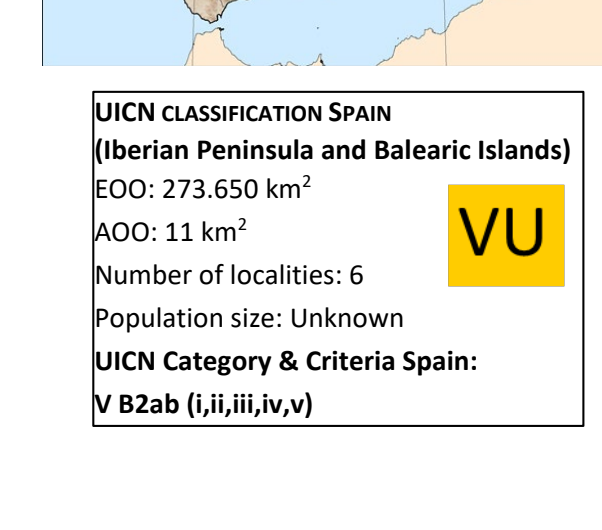
**Rinodina striatolunaticata** Matzer et H. Mayrhofer  
Assessor: Pere Navarro-Rosinés

• Threats: restricted population, only known from one locality and also alteration of the habitat, due to erosion and fires are the most important threats.  
• Conservation: The habitat of this species is not currently protected at a national or local level, but is within the Parque Natural dels Ports, a protected area in Catalonia (NE of Spain).



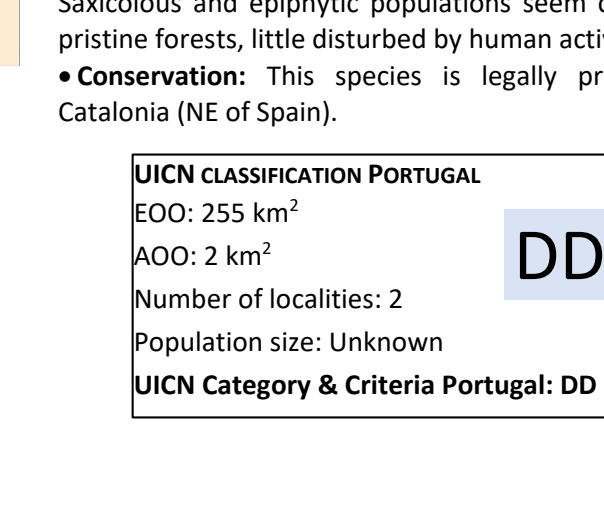
**Koerberiella pruinosus** Nav.-Ros. & Hafelin  
Assessor: Pere Navarro-Rosinés

• Threats: We consider that *Koerberiella pruinosus* may be in regression due to the destruction of part of its habitat, to be used for agricultural uses, a fact verified in one of its localities.  
• Conservation: This species is not locally protected except the locality Secans de Mas de Meders-Afles, which is a space that is included in the European Natura 2000 network since 2003 as a Site of Community Importance (SCI).



**Lecidea circinarioides Casares & Hafelin**  
Assessor: Simón Fos

• Threats: Reduction and loss of quality of gypsum habitats: urbanization, agricultural transformation, mining exploitation, installation of landfills, forest plantations, etc.  
• Conservation: Gypsum habitats are qualified as priority by Habitats Directive and so, are protected within the Natura 2000 network. In addition, several populations are included in other protected areas and, in the Valencian Community, this habitat is protected by regional regulations.



**Acarospora nodulosa (Dufouar) Hue var. rogens [Zährh.] Claude & Cl. Roux**  
Assessor: Antonio Gómez-Bolea, Simón Fos & Violeta Atienza

• Threats: The establishment of rubbish tips and mining in the area, and also logging are the main threats to this taxon.  
• Conservation: Iberian Peninsula gypsum soil lichen communities (gypsophilites) are considered a priority habitat within the Habitats Directive that has protection measures within the Natura 2000 network, providing effective territorial protection over the characteristic habitat of this taxon. In addition, in the Valencian Community, this habitat is protected by regional regulations.

The Spanish Lichen Society (SEL) has recently launched an initiative to create a Red Lists of lichen-forming and lichenicolous fungi for risk of putative menaced species by assessing threats according IUCN criteria and to provide accurate information for conservation measures. A first package of nineteen species was evaluated in 2019. Here, we present the threat assessments corresponding to 23 lichen-forming fungi. Profiles follow recommendations proposed by Atienza & al. (2017, British Bulletin 120). Datasheets include the following aspects: 1) Main characters for identification; 2) Ecology and habitat description; 3) Map of areas of occurrence including: extent of occurrence (EOO), area of occupancy (AOO), number of localities; 4) Main threats to species survival; 5) IUCN Red list category and criteria used for assessment; 6) Proposed conservation actions that are needed to mitigate these threats; and 7) Research needed.

For more information on species profiles, including bibliographic references, see the QR codes

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A grant from the British Lichen Society (BLS) to cover registration for the IAL9 meeting is appreciated. Thanks to Beatriz Vila for her assistance in preparing the QR codes.