

SUPPLEMENTARY MATERIAL

Table S1. List of identified cyanobacteria, lichen and bryophyte taxa in biocrusts of Argentina.

Tabla S1. Listado de taxones de cianobacterias, líquenes y briófitas identificados en biocostras de la Argentina.

Family	Species	Source
Cyanobacteria		
Aphanizomenonaceae	<i>Cylindrospermum</i> sp.	Navas Romero et al. 2020; Denegri et al. 2021
	<i>Dolichospermum circinale</i>	Navas Romero et al. 2020
	<i>Trichormus anomalus</i>	Navas Romero et al. 2020
Coleofasciculaceae	<i>Coleofasciculus chthonoplastes</i>	Halperín et al. 1976
	<i>Symploca muscorum</i>	Halperín et al. 1976
Leptolyngbyaceae	<i>Leptolyngbya angustissima</i>	Corvalán Videla et al. 2018; Navas Romero et al. 2020; **Tell 1971; **Tell 1976
	<i>Phormidesmis mollis</i>	Halperín et al. 1976; Navas Romero et al. 2020; *Murialdo et al. 2019; **Tell 1976
Microcoleaceae	<i>Limnoraphis cryptovaginata</i>	Navas Romero et al. 2020
	<i>Lyngbya cryptovaginata</i>	Navas Romero et al. 2020
	<i>Lyngbya birgei</i>	Corvalán Videla et al. 2018
	<i>Lyngbya borgerti</i>	Navas Romero et al. 2020
	<i>Microcoleus vaginatus</i>	Halperín et al. 1976; **Tell 1976; Gómez et al. 2012; Olivera et al. 2016; Corvalán Videla et al. 2018; *Murialdo et al. 2019; Garibotti and Polo 2021; Navas Romero et al. 2020; *Daga et al. 2024;
	<i>Porphyrosiphon notarisii</i>	Halperín et al. 1976
Nodulariaceae	<i>Nodularia</i> sp.	Navas Romero et al. 2020; Denegri et al. 2021
Nostocaceae	<i>Desmonostoc muscorum</i>	Halperín et al. 1976; *Murialdo et al. 2019; *Shinquel et al. 2018; Navas Romero et al. 2020
	<i>Nostoc calcicola</i>	*Shinquel et al. 2018; *Murialdo et al. 2019; Navas Romero et al. 2020
	<i>Nostoc commune</i>	Halperín et al. 1976; **Tell 1976; Corvalán Videla et al. 2018; *Shinquel et al. 2018; *Murialdo et al. 2019; Navas Romero et al. 2020; Denegri et al. 2021; *Díaz et al. 2022; *Daga et al. 2024
	<i>Nostoc paludosum</i>	Halperín, 1976; Navas Romero et al. 2020
Oscillatoriaceae	<i>Nostoc punctiforme</i>	Navas Romero et al. 2020; *Daga et al. 2024
	<i>Oscillatoria anguina</i>	Halperín et al. 1976
	<i>Oscillatoria corakiana</i>	Corvalán Videla et al. 2018
	<i>Oscillatoria obscura</i>	Navas Romero et al. 2020
	<i>Oscillatoria subbrevis</i>	**Tell 1971; **Tell 1976; *Shinquel et al. 2018; *Murialdo et al. 2019; Navas Romero et al. 2020; *Daga et al. 2024
	<i>Oscillatoria tenuis</i>	Halperín et al. 1976; Corvalán Videla et al. 2018; *Daga et al. 2024
	<i>Oscillatoria vaucher</i>	Gómez et al. 2012; Navas Romero et al. 2020; Denegri et al. 2021
	<i>Phormidium allorgei</i>	Corvalán Videla et al. 2018
<i>Phormidium ambiguum</i>	Corvalán Videla et al. 2018; *Shinquel et al. 2018*; Murialdo et al. 2019	
	<i>Phormidium bohneri</i>	Navas Romero et al. 2020

	<i>Phormidium breve</i>	Corvalán Videla et al. 2018; *Murialdo et al. 2019
	<i>Phormidium diguetii</i>	Halperín et al. 1976
	<i>Phormidium fragile</i>	Navas Romero et al. 2020
	<i>Phormidium rubroterricola</i>	Navas Romero et al. 2020
	<i>Phormidium simplicissimum</i>	Corvalán Videla et al. 2018
Scytonemataceae	<i>Scytonema coactile</i>	Navas Romero et al. 2020
	<i>Scytonema crispum</i>	Corvalán Videla et al. 2018
	<i>Scytonema guyanense</i>	Halperín et al. 1976
	<i>Scytonema hoffmannii</i>	Gómez et al. 2012
	<i>Scytonema millei</i>	Navas Romero et al. 2020
	<i>Scytonema schmidtii</i>	Navas Romero et al. 2020; Denegri et al. 2021
	<i>Scytonema tolypothrichoides</i>	Corvalán Videla et al. 2018; Navas Romero et al. 2020
Synechococcales	<i>Jaaginema pseudogeminatum</i>	Navas Romero et al. 2020
Tolypothrichaceae	<i>Tolypothrix phyllophila</i>	Navas Romero et al. 2020
	<i>Tolypothrix tenuis</i>	Corvalán Videla et al. 2018; *Murialdo et al. 2019
Trichocoleusaceae	<i>Schizothrix acuminata</i>	Halperín et al. 1976
	<i>Schizothrix beccarii</i>	Navas Romero et al. 2020
	<i>Schizothrix calcicola</i>	Halperín et al. 1976
	<i>Schizothrix stricklandii</i>	Halperín et al. 1976
	<i>Trichocoleus cavanillesii</i>	Halperín et al. 1976
Wilmottiaceae	<i>Potamolinea aeruginosaerulea</i>	Halperín et al. 1976
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Lichens		
Acarosporaceae	<i>Acarospora xanthophana</i>	Scutari et al. 2004
	<i>Acarospora</i> sp.	Corvalán Videla 2019
	<i>Trimmatothelopsis terricola</i>	Bustos et al. 2022
Caliciaceae	<i>Buellia elegans</i>	Navas Romero 2019
Candelariaceae	<i>Candelariella citrina</i>	Bustos et al. 2022
Collemaataceae	<i>Blennothallia crispa</i>	Gómez et al. 2012
	<i>Collema</i> sp.	García et al. 2015; Corvalán Videla 2019; Aranibar et al. 2022
	<i>Enchylium coccophorum</i>	Scutari et al. 2004; Gómez et al. 2012; Tabeni et al. 2014; Corvalán Videla 2019; Navas Romero 2019; Garibotti and Polo 2021; Aranibar et al. 2022
	<i>Enchylium tenax</i>	Gómez et al. 2012; Tabeni et al. 2014; Garibotti et al. 2018; Corvalán Videla 2019; Navas Romero 2019; Garibotti and Polo, 2021; Bustos et al. 2022
	<i>Enchylium</i> sp.	Corvalán Videla 2019
	<i>Leptogium caespitosum</i>	Corvalán Videla 2019
	<i>Leptogium</i> sp.	Tabeni et al. 2014; Corvalán Videla 2019; Aranibar et al. 2022
	<i>Scytinium</i> sp.	Corvalán Videla 2019
	<i>Scytinium subaridum</i>	Corvalán Videla 2019
Gloeoheppiaceae	<i>Gloeoheppia erosa</i>	Filippini et al. 2024
	<i>Gloeoheppia polyspora</i>	Corvalán Videla 2019
	<i>Gloeoheppia turgida</i>	Garibotti et al. 2018; Garibotti and Polo 2021
	<i>Gloeoheppia</i> sp.	Corvalán Videla 2019

Graphidaceae	<i>Diploschistes diacapsis</i>	Navas Romero 2019	
Heppiaceae	<i>Heppia adglutinata</i>	Filippini et al. 2024	
	<i>Heppia lutosa</i>	Tabeni et al. 2014	
	<i>Heppia</i> sp.	Corvalán Videla 2019; Navas Romero 2019	
Lecanoraceae	<i>Lecanora</i> sp.	Corvalán Videla 2019	
	<i>Lecidella</i> sp.	Corvalán Videla 2019	
	<i>Miriiquidica scotopholis</i>	Corvalán Videla 2019	
	<i>Polyozosia dispersa</i>	Scutari et al. 2002, 2004	
Lecideaceae	<i>Lecidea</i> sp.	Corvalán Videla 2019	
Lichinaceae	<i>Lempholemma chalazanum</i>	Bustos et al. 2022	
	<i>Lempholemma</i> sp.	Corvalán Videla 2019	
	<i>Lichinella intermedia</i>	Guiamet et al. 2019	
	<i>Lichinella stipatula</i>	Garibotti and Polo 2021	
	<i>Lichinella</i> sp.	Corvalán Videla 2019; Bustos et al. 2022	
	<i>Peccania subnigra</i>	Garibotti et al. 2018; Garibotti and Polo 2021; Bustos et al. 2022	
	<i>Peccania</i> sp.	Corvalán Videla 2019	
	<i>Thallinocarpon nigrillum</i>	Gómez et al. 2012	
	Megasporaceae	<i>Aspicilia praecrenata</i>	Bustos et al. 2022
		<i>Circinaria contorta</i>	Scutari et al. 2002, 2004
<i>Fuscopannaria</i> sp.		Tabeni et al. 2014	
Pannariaceae	<i>Peltula euploca</i>	Corvalán Videla 2019; Garibotti and Polo 2021	
Peltulaceae	<i>Peltula hassei</i>	Corvalán Videla 2019; Guiamet et al. 2019	
	<i>Peltula obscurans</i>	Garibotti et al. 2018; Corvalán Videla 2019; Navas Romero 2019; Garibotti and Polo 2021; Bustos et al. 2022	
	<i>Peltula placodizans</i>	Garibotti et al. 2018; Garibotti and Polo 2021	
	<i>Peltula psammophila</i>	Gómez et al. 2012	
	<i>Peltula radicata</i>	Corvalán Videla 2019	
	<i>Peltula richardsii</i>	Corvalán Videla 2019	
	<i>Peltula</i> sp.	Corvalán Videla 2019	
	Pertusariaceae	<i>Porina</i> sp.	Gómez et al. 2012
		<i>Sagedia mastrucata</i>	Gómez et al. 2012
	Physciaceae	<i>Phaeorrhiza nimbose</i>	Garibotti et al. 2018; Garibotti and Polo 2021; Bustos et al. 2022
<i>Rinodina mucronatula</i>		Scutari et al. 2002, 2004	
Placynthiaceae	<i>Placynthium nigrum</i>	Tabeni et al. 2014	
	<i>Placynthium</i> sp.	Corvalán Videla 2019	
Psoraceae	<i>Psora decipiens</i>	Scutari et al. 2002, 2004, Navas Romero 2019; Bustos et al. 2022	
	<i>Psora icterica</i>	Navas Romero 2019; Filippini et al. 2024	
	<i>Psora tuckermanii</i>	Navas Romero 2019	
	<i>Psora</i> sp.	Gómez et al. 2012; García et al. 2015; Bustos et al. 2022	
	<i>Psorula rufonigra</i>	Aranibar et al. 2022	
Ramalinaceae	<i>Bibbya ruginosa</i>	Gómez et al. 2012	
	<i>Thalloidima sedifolium</i>	Navas Romero 2019	

		<i>Toninia tristis</i>	Navas Romero 2019
Teloschistaceae		<i>Gyalolechia subbracteata</i>	Scutari et al. 2002, 2004
Trapeliaceae		<i>Placynthiella uliginosa</i>	Gómez et al. 2012; Garibotti et al. 2018; Garibotti and Polo, 2021
		<i>Placynthiella</i> sp.	Gómez et al. 2012
Verrucariaceae		<i>Agonimia tristicula</i>	Corvalán Videla 2019
		<i>Anthracocarpon andinum</i>	Prieto et al. 2008a
		<i>Catapyrenium exaratum</i>	Prieto et al. 2008b
		<i>Catapyrenium lachneum</i>	Navas Romero 2019
		<i>Catapyrenium pilosellum</i>	Prieto et al. 2008b
		<i>Clavascidium lacimulatum</i>	Corvalán Videla 2019; Navas Romero 2019; Aranibar et al. 2022
		<i>Clavascidium</i> sp.	García et al. 2015
		<i>Endocarpon pseudosubnitescens</i>	Corvalán Videla 2019
		<i>Endocarpon pusillum</i>	Scutari et al. 2002, 2004; Gómez et al. 2012; Garibotti et al. 2018; Corvalán Videla 2019; Garibotti and Polo 2021; Aranibar et al. 2022; Bustos et al. 2022
		<i>Endocarpon simplicatum</i>	Corvalán Videla 2019
		<i>Endocarpon</i> sp.	García et al. 2015
		<i>Heteroplacidium acarosporoides</i>	Prieto et al. 2008b
		<i>Heteroplacidium divisum</i>	Filippini et al 2024
		<i>Placidiopsis</i> sp.	Corvalán Videla 2019
		<i>Placidium andicola</i>	Prieto et al. 2008b
		<i>Placidium squamulosum</i>	Scutari et al. 2002, 2004; Prieto et al. 2008b; Gómez et al. 2012; Navas Romero 2019; Bustos et al. 2022; Tabeni et al. 2022; Filippini et al. 2024
		<i>Placidium</i> sp.	Corvalán Videla 2019
		<i>Polyblastia sendtneri</i>	Corvalán Videla 2019
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Bryophytes			
	Amblystegiaceae	<i>Acrocladium auriculatum</i>	*Cottet and Messuti 2023
		<i>Amblystegium serpens</i>	*Cottet and Messuti 2023
		<i>Drepanocladus aduncus</i>	*Cottet and Messuti 2023
		<i>Drepanocladus polygamus</i>	*Cottet and Messuti 2023
		<i>Leptodictyum humile</i>	*Cottet and Messuti 2023
		<i>Leptodontium longicaule</i>	*Cottet and Messuti 2023
	Aytoniaceae	<i>Asterella chilensis</i>	*Cottet and Messuti 2023
	Bartramiaceae	<i>Bartramia stricta</i>	*Cottet and Messuti 2023
	Brachytheciaceae	<i>Brachythecium albicans</i>	*Cottet and Messuti 2023
		<i>Brachythecium rutabulum</i>	*Cottet and Messuti 2023
	Bryaceae	<i>Bryum caespiticium</i>	*Cottet and Messuti 2023
		<i>Bryum canariense</i>	*Cottet and Messuti 2023
		<i>Bryum lanatum</i>	Navas Romero et al. 2020
		<i>Imbribryum subapiculatum</i>	*Cottet and Messuti 2023
		<i>Rosulabryum billardieri</i>	*Cottet and Messuti 2023
	Chrysoblastellaceae	<i>Chrysoblastella chilensis</i>	*Cottet and Messuti 2023

Cryphaeaceae	<i>Cryphaea jamesonii</i>	*Cottet and Messuti 2023
	<i>Cryphaea patens</i>	*Cottet and Messuti 2023
Dicranaceae	<i>Anisothecium hookeri</i>	*Cottet and Messuti 2023
	<i>Dicranoloma capillare</i>	*Cottet and Messuti 2023
Dicranellaceae	<i>Dicranella vaginata</i>	*Cottet and Messuti 2023
Ditrichaceae	<i>Ditrichum heteromallum</i>	*Cottet and Messuti 2023
	<i>Ceratodon purpureus</i>	Funk et al. 2014
	<i>Ditrichum difficile</i>	*Cottet and Messuti 2023
Encalyptaceae	<i>Encalypta vulgaris</i>	Bustos et al. 2022
Eustichiaceae	<i>Eustichia longirostris</i>	*Cottet and Messuti 2023
Fabroniaceae	<i>Fabronia ciliaris</i>	*Cottet and Messuti 2023
Funariaceae	<i>Funaria hygrometrica</i>	*Cottet and Messuti 2023
Grimmiaceae	<i>Grimmia laevigata</i>	*Cottet and Messuti 2023
Hedwigiaceae	<i>Hedwigia filiformis</i>	*Cottet and Messuti 2023
Hypnaceae	<i>Hypnum cupressiforme</i>	*Cottet and Messuti 2023
Lembophyllaceae	<i>Weymouthia mollis</i>	*Cottet and Messuti 2023
Lepyrodontaceae	<i>Lepyrodon tomentosus</i>	*Cottet and Messuti 2023
Leskeaceae	<i>Haplocladium microphyllum</i>	*Cottet and Messuti 2023
Leucobryaceae	<i>Campylopus pilifer</i>	*Cottet and Messuti 2023
	<i>Pilopogon schileri</i>	*Cottet and Messuti 2023
	<i>Pilopogon schilleri</i>	*Cottet and Messuti 2023
Notothyladaceae	<i>Phaeoceros laevis</i>	*Cottet and Messuti 2023
Polytrichaceae	<i>Polytrichastrum longisetum</i>	*Cottet and Messuti 2023
	<i>Polytrichum juniperinum</i>	*Cottet and Messuti 2023
	<i>Ptychostomum pallescens</i>	*Cottet and Messuti 2023
Pottiaceae	<i>Aloina catillum</i>	Navas Romero et al. 2020
	<i>Aloina rigida</i>	*Jiménez et al. 2020
	<i>Crossidium</i> sp.	Tabeni et al. 2014
	<i>Didymodon oedocostatus</i>	*Jiménez et al. 2010
	<i>Didymodon umbrosus</i>	*Jiménez et al. 2020
	<i>Dydimodon vinealis</i>	*Cottet and Messuti 2023
	<i>Globulinella halloyi</i>	*Schiavone and Suarez 2009
	<i>Pseudocrossidium arenicola</i>	*Jiménez et al. 2020; Navas Romero et al. 2020
	<i>Syntrichia princeps</i>	Funk et al. 2014
	<i>Syntrichia ruralis</i>	Bustos et al. 2022
	<i>Tortula inermis</i>	Tabeni et al. 2014; Bustos et al. 2022
	<i>Tortula muralis</i>	*Cottet and Messuti 2023
	<i>Tortula</i> sp.	*Cottet and Messuti 2023
	<i>Trichostomum brachydontium</i>	*Jiménez et al. 2020
Rhabdoweisiaceae	<i>Oncophorus fuegianus</i>	*Cottet and Messuti 2023
Saulomataceae	<i>Sauloma tenella</i>	*Cottet and Messuti 2023
Scorpidiaceae	<i>Sanionia uncinata</i>	*Cottet and Messuti 2023

Seligeriaceae	<i>Blindia magellanica</i>	*Cottet and Messuti 2023
Splachnaceae	<i>Tayloria magellanica</i>	*Cottet and Messuti 2023
Thuidiaceae	<i>Herpetineuron toccoae</i>	*Cottet and Messuti 2023

*Taxa reported in soils, in a broad sense

**Cyanobacteria taxa reported in biocrusts associated with flooded soils

Note: complete references are listed in the main text of this work.