

Life



Drylands

Restoration of dry-acidic Continental grasslands and heathlands in Natura2000 sites in Piemonte and Lombardia.

*Cladonia portentosa*

HABITAT 2330

## A REINDEER LICHEN, BUT AT A LOWER ALTITUDE

**NAME:** *Cladonia portentosa* (DUFOUR) COËM.

**Common name:** no common name exists for this particular species, but the group of species to which it belongs is commonly referred to the reindeer lichens.

**Habitat** | In the Western Po Plain, the species is mainly found in H2330 - Mixed *Corynephorus* grasslands, while in the rest of its range, it is more typical of H4030 - European dry heaths.

**Location** | This species, which is very rare in Italy, is found from the Mediterranean belt to the mountainous belt, always in arid or semiarid environments (heathlands, garigues and mixed *Corynephorus* grasslands).

**Recognition** | *Cladonia portentosa* is a highly-branched fruticose terrestrial lichen, whitish, whitish-green, or whitish-yellow in color. Its trichotomous or tetrachotomous terminal branchlets distinguish it from an extremely similar species, *C. mediterranea*, which is found only in coastal environments and which has dichotomous terminal branchlets.

**Important to know** | It is a very rare species that has been designated as threatened following an assessment based on IUCN criteria used in the drafting of Red Lists of species of national conservation interest. Unlike other *Cladonia* species, it is not strictly a pioneer, but develops on substrates that already contain some organic matter, and it is typically found in mature stages of lichen vegetation.

Like other lichens, it produces some characteristic chemical compounds (secondary metabolites). Of these the most interesting are usnic acid and perlatolic acid, which seem to have allelopathic activity, inhibiting the germination of plant seeds and bryophyte spores in the immediate vicinity of this lichen's thalli.

**Did you know?** | The reindeer lichens - the species of *Cladonia* belonging to the subgenus *Cladina* - are so named because they are the only food available for reindeer during the long winter in the taiga and tundra. In Italy, the true reindeer lichens are those that live in high mountainous areas (*C. arbuscula*, *C. mitis*, *C. rangiferina*, *C. stellaris*), but *Cladina* also includes species that live at lower altitudes (*C. ciliata*, *C. mediterranea*, *C. portentosa*).

The reindeer lichens are also commercially exploited in other ways, e.g., they are treated and sold as trees and bushes for hobby modeling, and panels of stabilized lichen are used for interior decoration. Exploitation for reindeer husbandry and commercial purposes has led to their inclusion in Annex V (list of animal and plant species of community interest whose collection and exploitation may be subject to management measures) of the Habitat Directive, the only lichens to be listed.

- > **Intervention Sites:** *Cladonia portentosa* is not found at the intervention sites, but is present in some well-preserved *Corynephorus* grasslands near the Pombia and Castelnovate sites.
- > **Type of Intervention:** By restoring the habitat, the project interventions on the corynephorus grasslands of these areas will create new sites suitable for the needs of *Cladonia portentosa*; the hope is that, like other species have done, it will manage to colonize them.

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