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Ancient ferns highly threatened in Europe – IUCN Red List

Brussels, 27 October 2017 (IUCN) – A fifth of European fern and lycopod species, a group of vascular plants that underpins healthy ecosystems, are threatened with extinction and declining, as a result of urbanisation and expanding infrastructure, according to a new report published today by the International Union for Conservation of Nature (IUCN).

The new IUCN report – *European Red List of Lycopods and Ferns* - assesses, for the first time, the extinction risk of all 194 European lycopod and fern species, 53 of which only exist in Europe. It shows that a fifth of these ancient species, which date back to over 400 million years ago, are at risk of extinction, with the same proportion showing a declining trend. Aquatic ferns and lycopods have been found to be more at risk than terrestrial species. This report shows that ferns and lycopods are the most threatened plant group of those assessed by IUCN so far in Europe. Previous European assessments have covered medicinal plant species, all other aquatic plant species and wild relatives of crop plants.

“Ferns and lycopods have been among Europe’s favourite horticultural plants for centuries, sometimes resulting in overharvesting from the wild as happened during the Victorian ‘fern craze’ in the 1800s” says **Luc Bas, Director of IUCN’s European Regional Office**. *“Today’s IUCN Red List report shows that despite being known for their resilience, ferns and lycopods continue to be severely affected by human activities, with aquatic species most at risk. This new information must guide the implementation of European legislation and policy to reverse this devastating trend before Europe loses what are among its most important and diverse plant species.”*

The findings reveal that European fern and lycopod species are primarily threatened by urbanisation and expanding infrastructure, which leads to the fragmentation and reduction of their habitats. For example, the Dwarf Moonwort (*Botrychium simplex*) is found in several countries including France, Sweden and Austria, and is now listed as Endangered as a result of habitat loss through land conversion to forest plantations or tourist developments.

Pollution from urban and agricultural waste also poses a serious threat to many ferns and lycopods. As a result, many terrestrial and aquatic ecosystems suffer from eutrophication – an increase in nutrients which causes local species to be outcompeted by other native or invasive alien species. This threatens aquatic species in particular, including the Critically Endangered Piedmont Quillwort (*Isoetes malinverniana*). This species is endemic to Italy and has declined by more than 80% in the last 30 years, mainly as a result of pollution through inappropriate irrigation channel management.

Karmenu Vella, European Commissioner for the Environment, Maritime Affairs and Fisheries, commented: *“This European Red List data shows that there are many fern and lycopod species threatened with extinction. These species are a living link to the time before even dinosaurs. EU Member States should use the tools we have developed to ensure such species’ protection. Now that the EU has, with considerable rigour if I may say so, assessed our nature legislation and found it fit for purpose, Member States should implement that legislation robustly”*.

Ferns and lycopods are a group of vascular plants that produce spores for reproduction, rather than using seeds and flowers like many other plants. They provide essential ecosystem services, such as preventing soil erosion, removing pollutants from the environment, taking in carbon from the atmosphere and providing shelter for small animals, such as insects or rodents. They also colonise disturbed habitats, following forest fires for example, enabling more species to inhabit the area. European hotspots of fern and lycopod species are the Macaronesian Islands, Corsica and several mountainous areas in Europe.

“It is difficult to overestimate the importance of these ancient plants, and regional and national conservation action is urgently needed to improve their status across Europe,” says **Jean-Christophe Vié, Deputy Director, IUCN Global Species Programme**. *“Protected areas, such as the Natura 2000 sites, must ensure better protection for these species, and their habitats must be restored, especially in aquatic areas and wetlands affected by pollution, canalisation and drainage. A recently established monitoring programme will highlight population trends, and inform future actions to ensure the long-term survival of ferns and lycopods in Europe.”*

More than 20 experts participated in the two-year assessment project, which was partially funded by the European Commission LIFE funding instrument.

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About The IUCN Red List of Threatened Species™

[The IUCN Red List of Threatened Species™](#) (or The IUCN Red List) is an invaluable resource to guide conservation action and policy decisions. It is a health check for our planet – a Barometer of Life. It is the world’s most comprehensive information source on the global conservation status of plant, animal and fungi species. It is based on an objective system for assessing the risk of extinction of a species should no conservation action be taken.

Species are assigned to one of eight categories of threat based on whether they meet criteria linked to population trend, population size and structure and geographic range. Species listed as Critically Endangered, Endangered or Vulnerable are collectively described as ‘threatened’.

The IUCN Red List is not just a register of names and associated threat categories. It is a rich compendium of information on the threats to the species, their ecological requirements, where they live, and information on conservation actions that can be used to reduce or prevent extinctions. The IUCN Red List is a joint effort between IUCN and its Species Survival Commission, working with its IUCN Red List partners – Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; NatureServe; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; and the Zoological Society of London.

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About IUCN

IUCN is a membership Union uniquely composed of both government and civil society organisations. It provides public, private and non-governmental organisations with the knowledge and tools that enable human progress, economic development and nature conservation to take place together. Created in 1948, IUCN is now the world’s largest and most diverse environmental network, harnessing the knowledge, resources and reach of more than 1,300 Member organisations and some 10,000 experts. It is a leading provider of conservation data, assessments and analysis. Its broad membership enables IUCN to fill the role of incubator and trusted repository of best practices, tools and international standards.

IUCN provides a neutral space in which diverse stakeholders including governments, NGOs, scientists, businesses, local communities, Indigenous peoples’ organisations and others can work together to forge and implement solutions to environmental challenges and achieve sustainable development. Working with many partners and supporters, IUCN implements a large and diverse portfolio of conservation projects worldwide. Combining the latest science with the traditional knowledge of local communities, these projects work to reverse habitat loss, restore ecosystems and improve people’s well-being. www.iucn.org <https://twitter.com/IUCN/>

About the European Commission LIFE project

The LIFE programme is managed by the European Commission and is the EU’s funding instrument for the environment and climate action. The LIFE programme aims to contribute to the implementation, updating and development of EU environmental and climate policy and legislation by co-financing projects with European added value. Since 1992, LIFE has co-financed some 3964 projects across the EU, with a contribution of approximately €3.1 billion to help protect the environment. The LIFE programme is helping to fund the assessment of all bryophytes, ferns, and trees, a selection of shrubs, saproxylic beetles and all remaining terrestrial molluscs, led by the IUCN. [The European Red List](#) project is co-financed by other donors/organizations and supported by the Ministry of the Environment of the Czech Republic and ArtDatabanken from the Swedish University of Agricultural Sciences. These assessments are set to be completed by 2018.