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New IUCN Species Survival Commission Colombia Fungal Specialist Group

The IUCN Species Survival Commission Colombia Fungal Specialist Group was launched on 19 April 2023. This national group aims to secure the conservation, management and, where necessary, the recovery of Colombian fungi by mobilizing technical and scientific expertise, building networks and partnerships, and raising awareness of the importance of fungi, their applications, and the benefits they bring to humanity, as well as the threats they currently face. This new Specialist Group comprises a diverse group of specialists who will act collectively for the conservation of fungi in Colombia, and facilitate evidence-based decision-making for preventing the extinction of species.

Colombia is home to 75,947 known species across the various Kingdoms and has two global biodiversity hotspots. With high rates of endemism, the country is a priority region for global biodiversity conservation, and it faces diverse anthropogenic transformations, including habitat fragmentation, loss and degradation, overexploitation, invasive species, pollution and climate change.

Although there has been an increase in the efforts of the Colombian mycological community to highlight the importance of fungal conservation, there is still a long way to go to ensure that fungi are included in conservation plans and actions. So far, 7,241 species of fungi have been reported for the country, but only 27 species have been assessed for the IUCN Red List of Threatened Species. There is still no official national Red List assessment for fungi in Colombia, and there are no records of threatened species in the Colombian government's Conservation Action Plan.

The Colombia Fungal Specialist Group seeks to promote actions such as holding IUCN workshops to assess the

extinction risk of species, training specialists in the application of the criteria and categories, and disseminating the importance of fungal conservation in Colombia. We invite researchers, students, communities, stakeholders and practitioners to contact us with questions, requests for support or ideas for new collaborations.

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Rediscovery of a tiny plant species reinforces the need to protect Serra do Padre Ângelo in south-east Brazil

Serra do Padre Ângelo, a quartzitic mountain complex in the Doce River valley, eastern Minas Gerais state in south-east Brazil, has recently attracted the attention of biologists as a result of the discovery of several new plant and animal species, many of them endemic to these mountains. These discoveries have mainly followed the description of the sundew *Drosera magnifica* (Droseraceae)—discovered through photographs posted on the social network Facebook—from these mountains. It is the largest sundew in the Americas, endemic to Serra do Padre Ângelo and categorized nationally as Critically Endangered (Gonella et al., 2015, *Phytotaxa*, 220, 257–267). These mountains nevertheless remain unprotected and are susceptible to wildfires and deforestation.

In the last 3 years, data have been collected to support the formal protection of Serra do Padre Ângelo, with > 4,000 plant specimens collected. Among these was a tiny plant of the family Eriocaulaceae, collected for the first time in June 2020. In May 2023 we identified it as *Paepalanthus minimus* after comparison with the type specimen in the herbarium of the National Museum, Rio de Janeiro. The species had previously been collected only once, over 100 years ago and nearly 250 km from the new record.

We assess the species as Critically Endangered, as it is likely to be locally extinct in the site where the type specimen was collected and, at the rediscovery site, the population is small, unprotected, and threatened by invasive grasses and



Serra do Padre Ângelo, in the Doce River valley, eastern Minas Gerais state in south-east Brazil, and the tiny *Paepalanthus minimus*.

wildfires. Our assessment will be submitted to the Brazil Plant Red List Authority, coordinated by the Centro Nacional de Conservação da Flora. Species surveys are fundamental for collecting data for conservation, especially in regions overlooked historically, such as Serra do Padre Ângelo. The rediscovery of this species in the area highlights the urgent need to protect this mountain complex. Areas such as Serra do Padre Ângelo play a critical role as refuges for threatened and endemic taxa. As natural and pristine areas in the country are rare and mostly confined to protected areas, the identification of such refugia further highlights the importance of conservation efforts.

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Mass mortality of bees as a result of improper application of pesticides in the state of Mato Grosso, Brazil

In July 2023, more than 100 million bees were found dead in the state of Mato Grosso, Brazil. It is also estimated that c. 600 beehives, containing a total of 170,000–200,000 bees, were poisoned in apiaries in the cities of Sorriso, Sinop and Ipiranga do Norte. The results of analyses carried out by the Institute of Agricultural Defence of Mato Grosso indicate that the pesticide Fipronil was the cause.

The use of this broad-spectrum insecticide is allowed in Brazil, but aerial spraying of it has been prohibited since 2012 by the Brazilian Environmental Licensing Agency (IBAMA). The toxicity of this product for bees and its illegal application by aerial spraying, with the action of wind amplifying the impacts, are the main causes of the high mortality. The farmer responsible was fined BRL 225,000 (c. USD 47,000).

Bees are essential for pollinating both agricultural crops and native plants. Four threatened bee species were found to have been affected by the misuse of the pesticide. However, the impact on bee assemblages is likely to have been even greater given that a single study recently recorded the presence of 134 species in areas of native habitat and adjacent soybean crops across agricultural landscapes in Mato Grosso (Ferreira et al., 2022, *Agriculture, Ecosystems and Environment*, 338, 15, 108084).

In addition to the environmental impacts on fauna and flora, beekeepers will lose significant income. Pollination services for food in Brazil have been valued at USD 45 billion annually (Giannini et al., 2015, *Journal of Economic Entomology*, 108, 3, 849). There is a need for new guidelines and regulations for the use of pesticides in Brazil, as in the last 4 years more than 2,000 substances have been approved for use in agriculture and industry. In addition, Brazil needs to strengthen the inspection process for the commercialization and use of pesticides, especially in Mato Grosso, an important state for agricultural production that encompasses three megadiverse biomes: the Pantanal, Cerrado and Amazonia.

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