

Dear Government of South Australia

In relation to South Australia's Draft Biodiversity Bill:

Biodiversity is animals, plants and fungi

I note that the following definition of biodiversity is provided: "Biodiversity is all the different kinds of life on Earth and how they work together, including the different species of plants, animals, microorganisms, and the ecosystems they form."

In order to bring South Australian legislation in line with current knowledge of biodiversity and standard approaches to describing life: "plants, animals, microorganisms ..." should be altered to "plants, fungi, animals, microorganisms ...". Any other references to animals and plants should similarly include fungi.

Lumping of fungi under plants, as in Clause 9 "plant includes—(a) fungi; and (b) algae ..." is a scientifically baseless definition and is out of step with international standard approaches. It risks making South Australian legislators look like they are out of touch in relation to a clear understanding of biodiversity.

Use of animals, fungi and plants is becoming the accepted way of describing biodiversity, particularly to acknowledge the major branches of the tree of life, and to recognise the fundamental differences between the three groups. This approach is well-established in scientific literature and school and university textbooks.

Indeed, fungi are more closely related to animals than they are to plants. In addition, the immense diversity found in the fungal kingdom, with an estimated 2.5 million species globally (of which around 160,000 species are currently known) means it is imperative to name fungi as a key component of biodiversity.

It is not sufficient to lump fungi under microorganisms. For one, many fungi are macroscopic (such as mushrooms and bracket fungi) and categorising the major components of life by their size is not acceptable in an act that aims to protect biodiversity.

There is growing consensus internationally to use the terminology plants, animals and fungi, such as expressed through the Flora, Fauna Funga initiative (<https://faunaflorafunga.org/>).

I note that the Species Survival Commission of the International Union for the Conservation of Nature (IUCN) officially supports separate reference to plants, animals and fungi (<https://iucn.org/news/species-survival-commission/202108/rewild-and-iucn-ssc-become-first-global-organizations-call-recognition-fungi-one-three-kingdoms-life-critical-protecting-and-restoring-earth>).

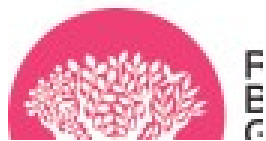
I further note the Pledge presented at the UN Biodiversity Summit (CBD COP 16) in Cali, Colombia in 2024 by the governments of Chile and the United Kingdom — "Towards the recognition of fungi as an independent kingdom of life in national and international legislation, policies and agreements, in order to advance their conservation and to adopt concrete measures that allow for maintaining their benefits to ecosystems and people in the context of the triple environmental crisis" (https://assets.ffungi.org/FungalConservationPledge2024_EN.pdf).

Explicit inclusion of fungi as an integral part of biodiversity will be a forward-looking approach to ensuring effective protection of South Australia's biodiversity. After all, to give just two examples, most plants rely on beneficial relationships with plants (mycorrhizas) and endangered mycophagous (fungus-feeding) mammals such as bettongs and potoroos subsist largely on fungi - and so conserving animals and plants relies on conserving animals, plants and fungi.

Dr [REDACTED]

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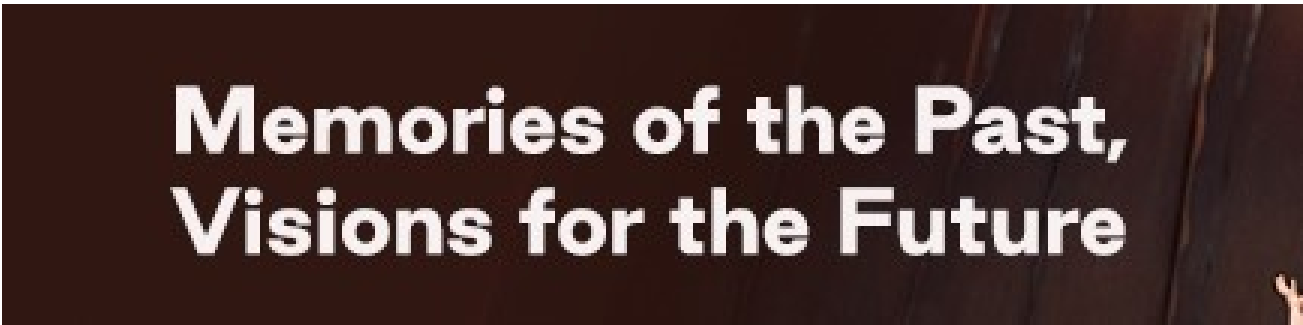
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