INVERTEBRATES AUSTRALIA

ATTN: Biodiversity Coordination Unit
Department for Environment and Water
GPO BOX 1047
Adelaide SA 5001

13 February, 2024

Dear Susan Close,

Thank you for the opportunity to provide comment on the Developing a Biodiversity Act for South Australia Discussion Paper.

We are an Australian not-for-profit organisation, with a focus on invertebrate conservation. Our mission is to provide an integrated scientific approach to the conservation and promotion of all Australian invertebrates. This mission is closely aligned to the objectives and strategic priorities of the proposed Biodiversity Conservation Act and here we offer some feedback on the Discussion Paper. We hope that our scientific expertise helps the South Australian government to better recognise and protect SA's threatened species by ensuring that threatened invertebrates are identified, listed, monitored, and able to flourish into the future.

South Australia holds a rich and highly endemic invertebrate fauna with over 10,000 known species, with many others undescribed. The state is home to remarkable areas of invertebrate endemism, such as the Mount Lofty Ranges, Kangaroo Island, and the Nullarbor Plain, amongst others. Invertebrates make up a large proportion of SA's biodiversity and are the majority of animals (representing around 95% of terrestrial faunal diversity). From beetles, butterflies, and flies, to snails, crayfish, and oysters, invertebrates are of immense economic, ecological, and cultural importance to SA. They are worth millions of dollars in social and economic benefits, by underpinning many South Australian industries and providing critical ecosystem services through pollination, decomposition, filtration, and more.

In SA, there are currently no invertebrates listed under the SA National Parks and Wildlife Act, and only two listed federally (Species Profiles (SPRAT) (environment.gov.au)). This is *not* a reflection of their threat level and is in stark contrast to their importance and share of the state's biodiversity. The true number of imperilled invertebrate species in SA is likely to be high, but for many, data deficiencies in their distribution and biology, and an assessment system ill-equipped to cope with their immense diversity presents challenges to species assessment. However, for those species which do have sufficient data to allow assessment of their conservation status, assessment to allow for their conservation is urgent and imperative. We welcome a Biodiversity Act that can address this imbalance and protect a broader suite of biodiversity. The key challenge for the government and its partners is to address this bias to make decisions that better protect all of SA's biodiversity.

As invertebrate experts, here we provide some key recommendations for the development of a Biodiversity Act for SA, addressed in the order they appear in the Discussion Paper:

Topic 4: Threats to biodiversity

- We support the inclusion of a framework to identify threats to biodiversity and obligations for actions to reduce threats. We recommend that specialist invertebrate expertise is sought

when developing this framework, as there are recognised threats to biodiversity, such as inappropriate pesticide usage, which disproportionately impact invertebrates.

Topic 5: Assessing the risk of extinction

- We strongly recommend that the imbalance in threatened species listings is addressed with priority, through the assessment of invertebrate species that currently have sufficient data, and the prioritisation of species for surveys that are likely imperilled, but which currently have data deficiencies that prevent formal assessment. This will require more resourcing into research on invertebrate distributions, biology, and threatening processes.
- We recommend regular monitoring for all newly listed invertebrate species, including collation of data on distribution, biology, threatening processes, and population sizes to help understand population trajectories.
- We strongly support the development of a scientific committee, which should include representatives with specific invertebrate expertise.
- Invertebrate specific expertise is lacking in the Department and this needs to be addressed. We recommend expanding capacity to include personnel with specialist conservation expertise on diverse and data deficient taxa, such as the invertebrates.
- It is estimated only a third of SA's invertebrates are currently described, meaning most of SA's biodiversity is undocumented. This presents substantial challenges to conservation planning and response and means extinctions are likely occurring undocumented. Institutions that hold and manage biodiversity collections, such as the South Australian Museum, are crucial for facilitating taxonomic research, for closing some of these data gaps, and for enabling conservation of SA's biodiversity. Continuing and increased investment into collections management, research, and access to biodiversity collections and facilities at such institutions is critical for an active biodiversity research culture in SA.

Topic 6: Biodiversity planning and reporting

- We support the implementation of measurable, time-bound targets for improving the condition of priority species or places.
- Given the levels of data deficiency for the majority of SA's biodiversity, landscape-scale conservation is a crucial element for biodiversity and conservation planning and should be given a focal place in SA's Biodiversity Conservation Act, working in parallel to protection of listed threatened species and ecological communities. By facilitating the identification of key areas of importance for biodiversity at a landscape level, we can better identify those areas that are no-go for development, and those areas where development may occur, thus informing environmental planning and decision making. In addition, such an approach can be used in fire-management planning, to identify and maintain critical areas of long unburnt habitat within the landscape.

Topic 8: Achieving 30 by 30

- We strongly recommend the protection and restoration of "Priority places". Such places may include climate change refugia, critical long unburnt habitat, highly imperilled remnant ecosystems, centres of endemism, and / or unusual environmental types. These ecosystems are often hotspots of invertebrate endemism and diversity, harbouring groups of imperilled species. We know that such hotspots occur in SA, but they are not well defined, formally recognised, or protected. We therefore recommend the inclusion of a mechanism to formally identify, recognise, and protect these places. Prioritising actions for such places allows for the protection of a broad range of species, including of taxa whose threatened status is unknown due to data deficiencies, or a backlog in a system unsuited for coping with Australia's

immense invertebrate biodiversity.

Given that Invertebrates Australia's mission is closely aligned to the proposed objectives and strategic priorities of the Act, we envisage a range of opportunities in which we can be a partner to help deliver priorities over the next 5-10 years. We are currently working on a number of programs relating to increasing understanding of conservation-significant invertebrate taxa, with specific projects on South Australian taxa. We have expertise in species conservation assessments of invertebrates, at the state and federal level and for the IUCN Red List. Additionally, we have expertise on traits-based analyses, broad assessments of species threat profiles, and spatial analyses.

We at Invertebrates Australia have the expertise to guide the development of the new Strategy, and are available to meet with the Department to discuss further.

Sincerely,







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Conservation Lead

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Conservation Officer

Dr Kate Umbers
Managing Director