Branchiopoda of the Northern Cape ephemeral pans

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Very little is known about the biodiversity associated with ephemeral wetlands (pans) of the Northern Cape. This is because these systems have never been studied before and therefore it restricts their effective conservation, management and sustainable use of biodiversity. Furthermore, due to their natural hydrology and the unpredictable rainfall regime, these systems are rarely wet. Hence, their status as wetlands is misunderstood and they are often erroneously assumed to be dry and unimportant wastelands. This is illustrated through the example of land uses where the desiccated clay surfaces are ploughed to increase infiltration. From a biodiversity point of view, these ploughing actions are most likely eradicating the sediment egg banks and obliterating the ephemeral wetland ecosystem. Without studying the biodiversity of ephemeral wetlands we will never understand the impacts that these and other land uses might have on the systems in light of global change. Therefore, it is vital to study the biodiversity of these pans. Branchiopoda are known to play a critical role in the ecosystem functioning as keystone species of ephemeral pans globally. They are pivotal in the food web as prey, thereby facilitating stepping-stone corridors for predatory water birds, like flamingos, in an arid landscape. They are also famous for their special adaptations to ephemerality specifically by generating egg-banks to hedge against desiccation. Yet, they have hardly been studied in the ephemeral wetlands of the Northern Cape. This limits our understanding of biodiversity and ecosystem functioning in these systems. This project aims to collect extensive information on Branchiopoda regarding species distribution, diversity, abundance, and egg-bank composition from the ephemeral wetlands of the Northern Cape.