Supplemental material for

"The Afromontane Research Unit: Driving Connections and Capacity Building for the Sustainable Development of Southern African Mountains", by V. Ralph Clark, Geofrey Mukwada, Melissa Hansen, Sam Adelabu, Grey Magaiza, Aliza le Roux, Emile Bredenhand, Patricks Voua Otomo, Sandy-Lynn Steenhuisen, Angelinus Franke, Johan van Tol, Neo Mathinya, and Rodwell Makomb, published in *Mountain Research and Development* 41(2), 2021. (See https://bioone.org/toc/mred/41/2)

BOX S1: The ARU contributes to invasive plant species research in southern African mountains

In a research node led by Dr Sandy-Lyn Steenhuisen, the ARU has a strong focus on non-native species in southern African mountains—one of the largest threats to the sustainable provision of ecosystem services, notably water production. This focus is an active and productive collaboration with two South African centers of excellence—the Centre for Biological Control (CBC; Rhodes University—represented by Dr Grant Martin and Dr Kim Canavan), and the Centre for Invasion Biology (CIB; University of Stellenbosch—represented by Professor Dave Richardson)—and one South African Research Chair Initiative (SARChI), the Chair in Ecosystem Health and Biodiversity at the University of KwaZulu-Natal, represented by Professor Colleen Downs. Focus species groups at present include *Pyracantha* (Firethorns; Chari et al 2020), *Cotoneaster*, and *Nassella* (Argentine Tussock Grasses; Mapaura et al 2020), with smaller projects on *Berberis* (Barberry) and the mapping of non-native species in the landscaping of Golden Gate Highlands National Park (GGHNP) (both projects being financially supported by the South African National Biodiversity Institute). A book chapter (accepted) on invasive plant species in South African mountains brought together collaborators from the four universities, and will contribute a valuable review of invasive plant impacts and use in South African mountains. These problem species negatively impact montane rangelands, displace endemic and endangered biodiversity, increase fire hazards, and render farms financially unviable—but also contribute to local livelihoods and subsistence economies. From 2021, the ARU will physically host Dr Grant Martin (Deputy-Director, CBC) for the *Southern African Mountain Weeds Working Group* program—an ARU–CBC collaboration that will extend non-native species research to mountains across southern Africa.

BOX S2: ARU mountain biodiversity and biogeography research crosses borders in southern Africa

The ARU contributed significantly to mountain biodiversity research in southern Africa in 2020, with a first plant checklist of the Bvumba mountains (Zimbabwe–Mozambique; Timberlake et al 2020); a contribution by incoming "ARU Professor-in-Residence" Peter Taylor on bushpig genetics in Madagascar (Lee et al 2020) and rodent evolution (Eiseb et al 2020, Nengovhela et al 2020); and foundational contributions to spider and arthropod diversity in Golden Gate Highlands National Park (GGHNP) by graduated ARU doctoral students Ms Sylvia van der Merwe and Mr Jason Botham, and their supervisors Dr Emile Bredenhand, Dr Vaughn Swart, and Professor Charles Haddad (Botham et al 2020, van der Merwe et al 2020).

BOX S3: First multiseason soundscape of a montane wetland in southern Africa

In 2020, the ARU and BirdLife South Africa finalized a Memorandum of Understanding around montane wetland research, opening the potential for partnering on surveying poorly studied montane wetlands for rare biodiversity—notably in partnership with the new Rockjumper Fellow of White-winged Flufftail Conservation, Dr Kyle Lloyd. The first collaborative project is an ARU-led documenting of bird bioacoustics in a 200 ha wetland at 1700 m elevation in Golden Gate Highlands National Park (GGHNP), from (austral) mid-summer 2019 to (austral) autumn 2021. Led by Master's student Mr Toka Mosakidi, and assisted by Professor Aliza le Roux, Dr Ralph Clark, Dr Sandy-Lynn Steenhuisen, Dr Nicholas le Maitre, and Mr Anthony Mapaura, this represents the first multiseason soundscape for a southern African montane wetland, and includes daily recordings over all nine individual seasons. The total dataset exceeds 2 million individual bird song recordings. The project also emphasized the need for fire management in GGHNP, as a wildfire through the wetland in spring 2019 destroyed all the song-meter equipment—and with unknown ecological impact on the avifauna. Knowledge on the fire activities within GGHNP—an ARU research group led by Professor Sam Adelabu ("Fireman Sam")—is assisting in developing a GGHNP fire management plan that can address the increasing impacts of fire events from climate variation and change.

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