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“HERE BE DRAGONS”: CONSERVING SRI LANKA’S UNIQUE AND ENDEMIC AGAMID LIZARDS OUTSIDE THE PROTECTED AREA NETWORK

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Sri Lanka is a global biodiversity hotspot, and also harbour a unique and largely endemic assemblage of reptiles, especially agamid lizards. Twenty (90%) out of the 22 species in the island are endemic and nearly 68% of these are threatened with extinction. Several species are restricted to a single, small range (<100 km²; i.e. micro-endemics). Due to ever-increasing habitat loss, even some of the broadly-distributed species are in decline. Sri Lanka’s wildlife protected area system is predominantly designed to protect large-bodied iconic animals and does not provide in-situ legal protection for most agamid lizards or reptiles in general. In this backdrop, we identified the critical need to understand the distribution of agamid lizards outside protected areas (“trees-outside-forests”), including novel ecosystems sustained by substantial anthropogenic influences. This need is more urgent and prominent in the biodiversity-rich, but also rapidly urbanizing wet zone of Sri Lanka where the lowlands and the three mountainous regions (Central Highlands, Rakwana Range, and Knuckles Range) harbour more than 80% of Sri Lankan agamids. Through systematic surveys at regional scale, we identified agamid hotspots within Sri Lanka’s conservation gaps and local and landscape-scale predictors of agamid diversity. This increased understanding of the species distributions would now provide quantitative and objective information for conservation assessments and spatially-explicit distribution maps, both which were not available before. The knowledgebase we develop could help conservation practitioners to promote conservation outside protected areas, restore degraded ecosystems and identify “trees-outside-forests” suitable for agamid life-histories.