

Research Article

Ranking and mapping Saudi Arabia's high conservation priority terrestrial vertebrates

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ABSTRACT

Globally, the resources devoted to biodiversity conservation are insufficient to prevent biodiversity loss, forcing conservation agencies to prioritize which species receive active protection. Accordingly, we developed an objective method for prioritizing the terrestrial vertebrates of Saudi Arabia, a country with limited baseline ecological data and limited conservation effort. Ninety-seven species were regarded as High Conservation Priority on the basis that they are listed as globally or regionally threatened and/or have more than 50% of their range within Saudi Arabia. We then scored these 97 species according to measures of extinction risk, level of endemism, national responsibility, and phylogenetic distinctness to create a ranked list of High Conservation Priority species. The ten highest conservation priority species in Saudi Arabia are all freshwater fish or small reptiles, with the highest ranked species being the critically endangered Arabian Bream *Acanthobrama hadiyahensis*. We developed GIS heat maps of the summed conservation priority scores for the 97 High Conservation Priority species, which reveal the Asir Mountains as the highest conservation priority area within the Kingdom. The method we developed can be used on any group of species in any geographic area and can be easily revised as additional data arise.

Key words: species prioritization, conservation triage, habitat modeling, Arabian Bream, Asir Mountains

