



## **ANURAN DIVERSITY AND CONSERVATION DEFICITS FOR THE GREATEST BRAZILIAN MOUNTAIN RANGE: A GAP ANALYSIS BASED ON SPECIES DISTRIBUTION MODELS.**

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We investigated patterns of richness and endemism of anurans in the most extent Brazilian mountain range and evaluate species conservation trends by accessing the adequacy of protection (representation) and habitat loss of each endemic species. We used a large point locality data set and three distribution modeling technics to produce detailed maps of the predicted range of 47 Espinhaço range anuran species. Then, we compared predicted distributions with the current Brazilian reserve system to assess the adequacy of protection (based on species-specific representation targets) for each endemic species and detect gaps in protection. After that, we accessed the amount of habitat already lost within species range. Species richness, endemism richness and endemism levels aggregated into two main hotspots localized in the southern portion of the range and in the Chapada Diamantina at its northern portion, but less inclusive areas of great richness and endemism levels were also pinpointed. We reported one of the most worrying cases of species representation in reserves ever reported, considering gap analyses performed at different continents and various taxonomic groups (87% of the endemics are not properly protected). The vast majority (94%) of species have been already affected by habitat loss, in a way the fulfillment of the protection target of nine narrowly endemic species became unreachable. Forest anurans lost more of their range than species that reproduce in open habitats. Considering multiple criteria (species richness, endemic richness, weighted endemism, habitat loss indexes and representation deficit indexes) we point out several areas of special concern for habitat protection. Our findings also highlight the urgent need to extend field efforts towards exploration on other Neotropical mountains because of their great relevance for the scientific research and biodiversity conservation.