

## **Assessment of Conservation Status of Montana's Wildlife and Implications for Inventory and Monitoring**

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The assessment of the conservation status of species provides valuable information for highlighting species that are undergoing declines or are threatened with extirpation in some or all of their range, allowing managers to prioritize actions to support conservation. In Montana, ranks for animals, plants, and ecosystems are calculated by the Montana Natural Heritage Program (NHP) using standardized NatureServe methodologies that account for the species rarity, threats to persistence, and trends in population. For terrestrial vertebrates, proposed changes to ranks and constituent criteria are reviewed by a committee of NHP and Montana Fish Wildlife and Parks staff with consultation of taxonomic experts before final ranks are accepted. Recently NHP staff have undertaken a comprehensive review of the methodology and systems that support rank calculation. During this process we have reviewed the rank data for all birds, mammals, reptiles, and amphibians, and developed database driven tools to increase the transparency of status ranks and better display this information to wildlife professionals. We identified data deficiencies within these ranks to provide recommendations for future research to address these deficiencies. Across the Species of Conservation Concern reviewed we found that all had data to assess rarity, 48 lacked short-term trend data and 26 more lacked current trend data, and 18 lacked data to assess threats to persistence. Identification of data deficiencies can help structure future research by providing clear goals for baseline inventories, monitoring intervals, collection of life history data and the precision required for any indices used in the ranking process.