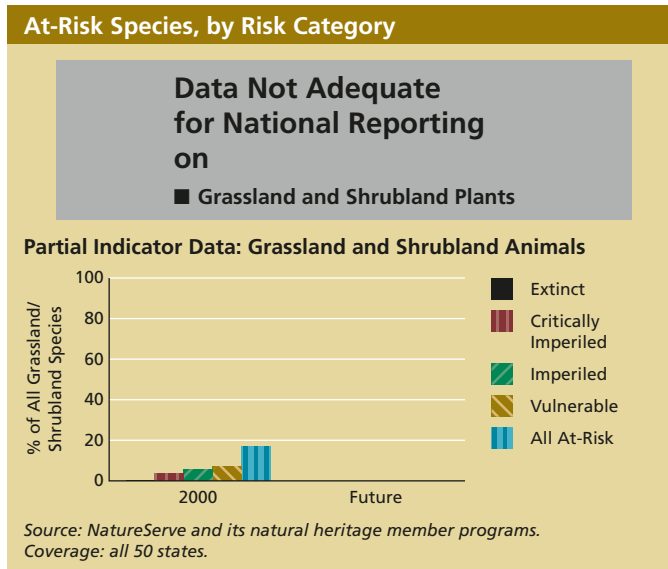




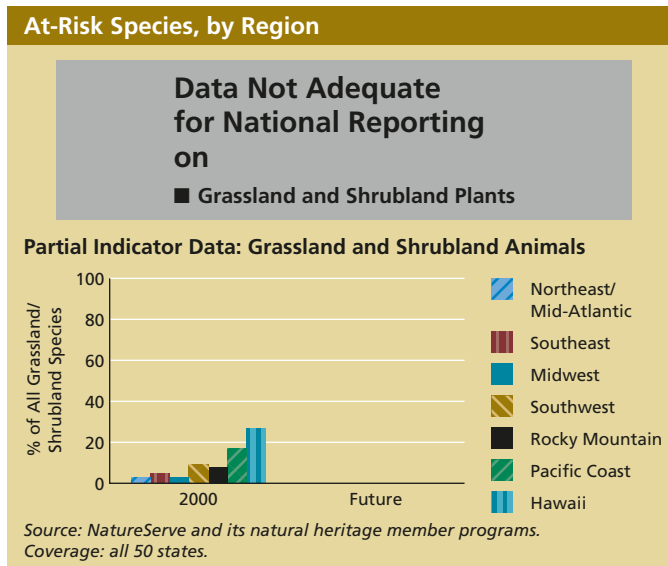
SYSTEM DIMENSIONS	CHEMICAL AND PHYSICAL	BIOLOGICAL COMPONENTS	HUMAN USES
Extent Pattern	Nutrients, Carbon, Oxygen Contaminants Physical	Plants and Animals Communities Ecological Productivity	Food, Fiber, and Water Recreation and Other Services

At-Risk Native Grassland and Shrubland Species



What Is This Indicator, and Why Is It Important? This indicator reports on the status of native grassland and shrubland species with respect to their *relative risk of extinction*. These status ranks are based on multiple factors: the number and condition of individuals and populations, the area occupied by the species, population trends, and known threats. Degrees of risk reported here range from very high (“critically imperiled” species often are found in five or fewer places or have experienced very steep declines) to moderate (“vulnerable” species often are found in fewer than 80 places or have recently experienced widespread declines). In all cases, a wide variety of factors contribute to overall ratings. “Grassland and shrubland species” live in these habitats during at least part of their life cycle and depend on them for survival.

Species are valued for a variety of reasons: they provide valuable products, including food, fiber, and, more recently, genetic materials; they are key elements of ecosystems, which themselves provide valuable goods and services; and many people value them for their intrinsic worth.



Why Can't This Entire Indicator Be Reported? This indicator reports on mammals, birds, reptiles, amphibians, grasshoppers, and butterflies. Data on other groups have not been included either because too little is known to assign to risk categories or, as with most plants, because determinations as to which are associated with forests, or grasslands, or other habitats has not been completed.

What Do the Data Show? About 3.5% of native grassland/shrubland animal species are critically

imperiled, 6% are imperiled, and 0.5% are or may be extinct. When vulnerable species (7%) are counted, about 17% of grassland/shrubland animal species are considered “at risk.” Hawaii has a much larger percentage of at-risk grassland and shrubland species than any other region.

Interpreting these figures is complicated, however, because some species are naturally rare. Thus, the rankings are influenced by differences in the number of naturally rare species among regions and species groups as well as different types and levels of human activities that can cause species declines. Interpretation of these data will be greatly enhanced when it is possible to present information on population trends for these at-risk species.

See also the national at-risk species indicator (p. 52), plus those for coastal, forest, and freshwater species (pp. 75, 124, and 144), and for species in farmland (p. 103) and urban/suburban areas (p. 191).

The technical note for this indicator is on page 214.