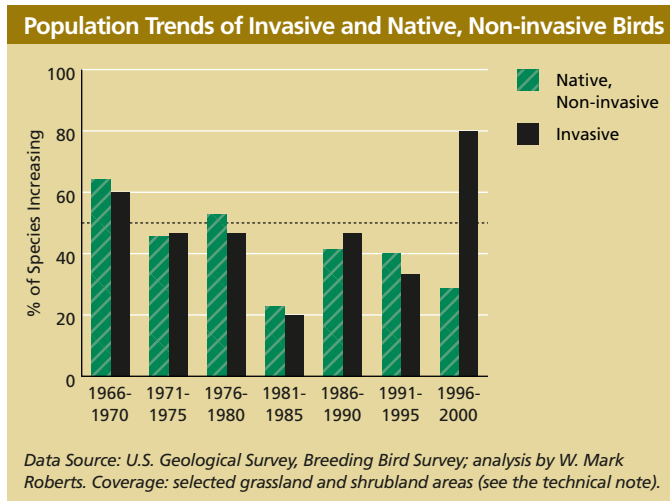




SYSTEM DIMENSIONS	CHEMICAL AND PHYSICAL	BIOLOGICAL COMPONENTS	HUMAN USES
Extent Pattern	Nutrients, Carbon, Oxygen Contaminants Physical	Plants and Animals Communities Ecological Productivity	Food, Fiber, and Water Recreation and Other Services

● Population Trends in Invasive and Non-invasive Grassland/Shrubland Birds



What Is This Indicator, and Why Is It Important?

This indicator describes population trends for selected grassland/shrubland bird species by comparing trends for selected “invasive” species with those that are not invasive. Invasive species spread aggressively and can disrupt established native bird populations. While many invasive species are non-natives, they can also be native species that, because of a change in conditions, are able to spread aggressively. This indicator reports the percentage of selected invasive and non-invasive native bird species that had increasing populations in grassland/shrubland ecosystems during 5-year intervals.

Birds respond quickly to environmental change.

Because they are highly mobile (they can fly to a new location), birds will simply leave grassland and shrubland

areas that no longer meet their environmental needs. The invasive species reported here are believed to be indicative of agricultural conversion, landscape fragmentation due to suburban and rural development, and the spread of exotic vegetation (see the non-native plant cover indicator, p. 169). Native, non-invasive species depend on relatively intact, high-quality native grasslands and shrublands.

What Do the Data Show? For most of the past 35 years, populations of invasive and native, non-invasive bird species were increasing in about the same proportion. However, from 1996 to 2000, significantly more populations of invasive species increased—a disparity that should be interpreted as a sign of changing ecosystem conditions only if it persists: many factors can cause short-term fluctuations in bird populations.

Discussion Bird populations fluctuate normally, even if only to a small degree. When about half the species are increasing and half decreasing over a given period, there will be no consistent increase or decline for the group of species. Populations of invasive birds that consistently increase compared to native birds would be interpreted as a sign that conditions favoring invasives—agricultural conversion, landscape fragmentation due to suburban and rural development, and the spread of exotic vegetation—are increasing. A higher percentage of native, non-invasive birds with increasing populations could indicate that conditions have not changed, or that these birds are adapting to changed conditions.

The technical note for this indicator is on page 262.