

Historical Human-Caused Extinctions

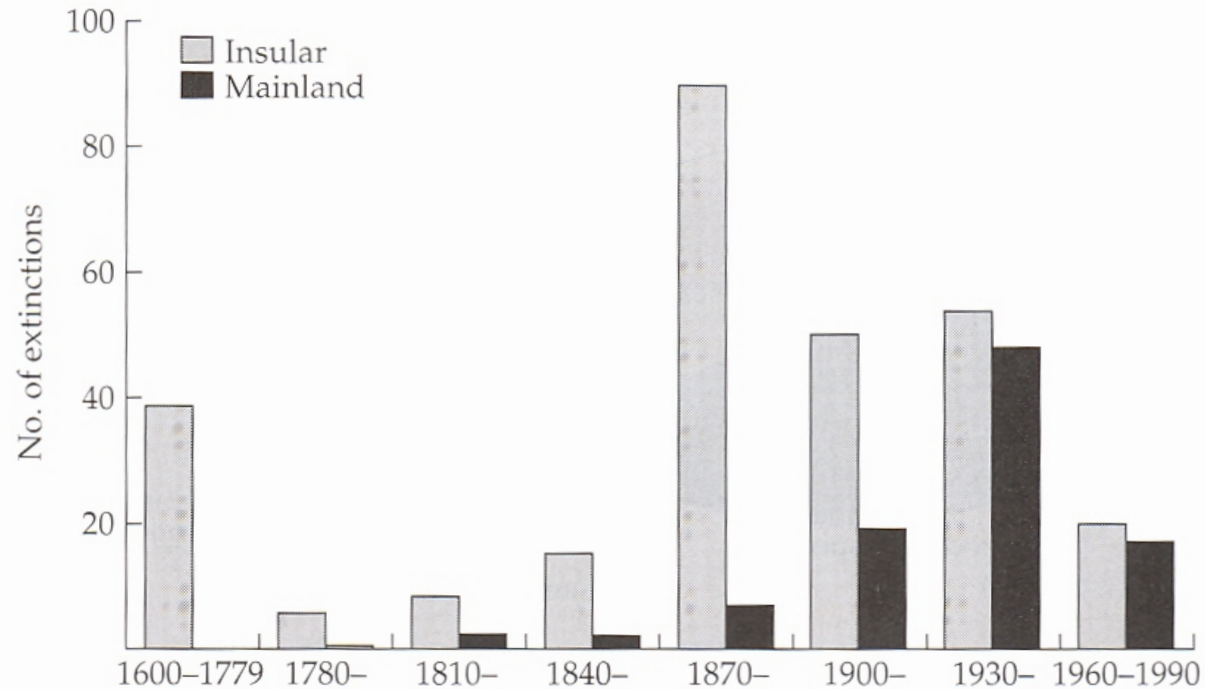


FIGURE 16.20 Historical trends in the relative numbers of insular and mainland extinctions (1600–1990) of animals worldwide. (After World Conservation Monitoring Centre 1992.)

Lomolino et al., 2006

- *Why the earlier extinctions on islands?*
- *Why the decline in extinctions in more recent years?*

Species Threatened with Extinction

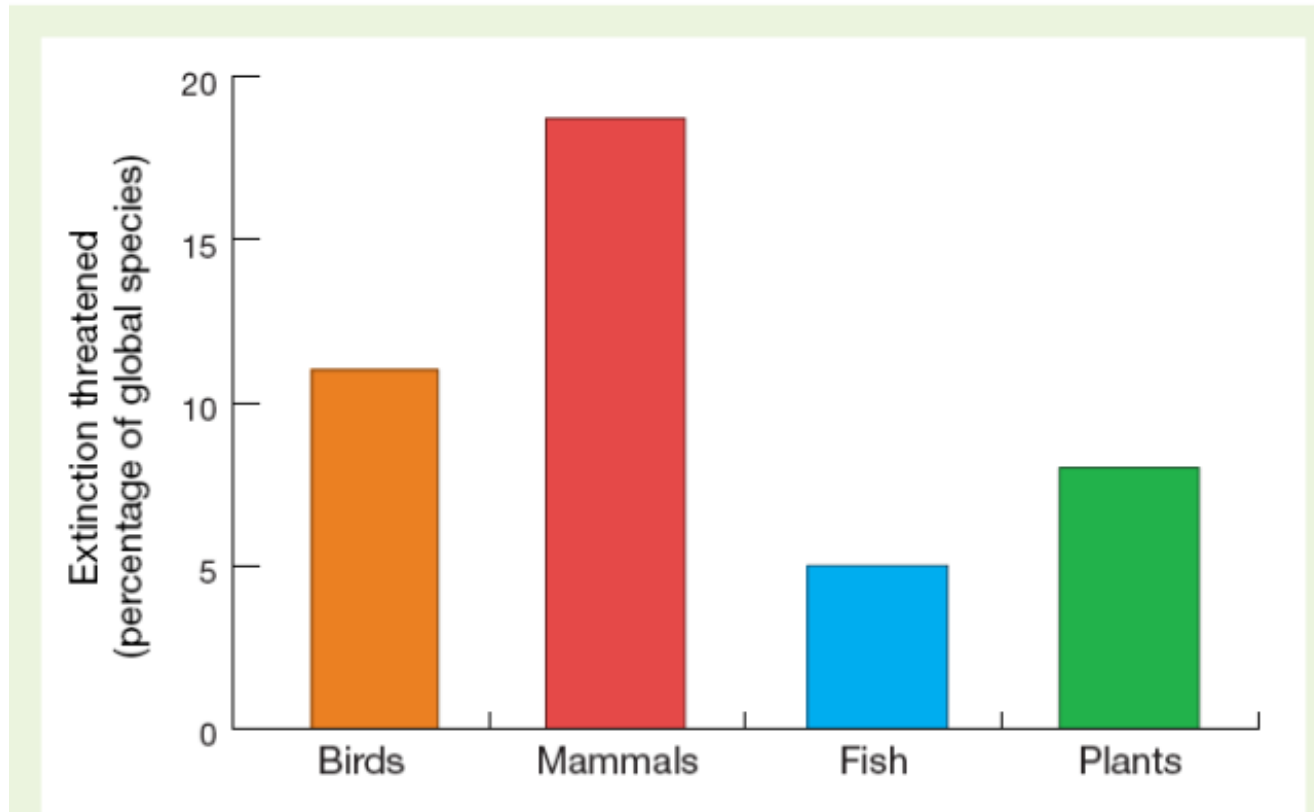


Figure 2 Proportion of the global number of species of birds, mammals, fish and plants that are currently threatened with extinction⁴.

Chapin et al., 2000; Pimm et al., 1995

OPINION

Are We in the Midst Of a Sixth Mass Extinction?

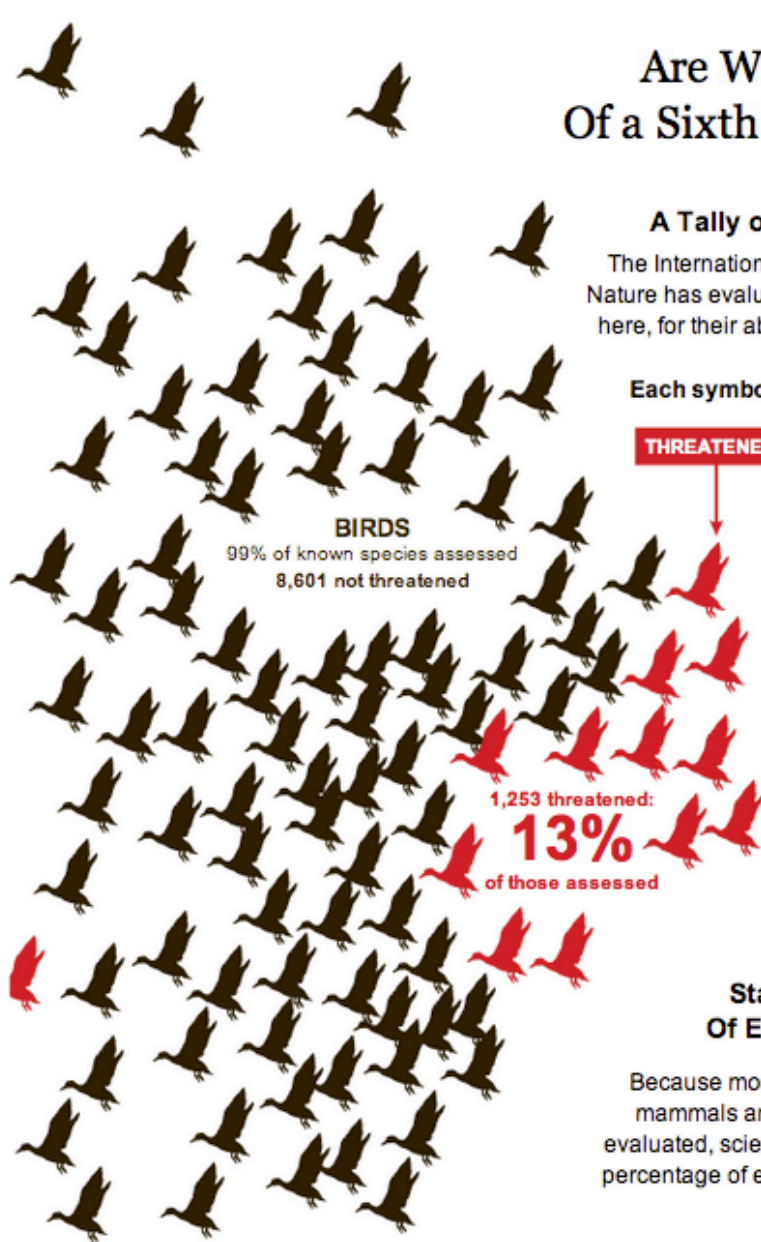
A Tally of Life Under Threat

The International Union for Conservation of Nature has evaluated 52,205 species, depicted here, for their ability to survive. [Related Article »](#)

Each symbol represents 100 species assessed:

THREATENED

NOT THREATENED



Stark Indicators Of Extinction Risks

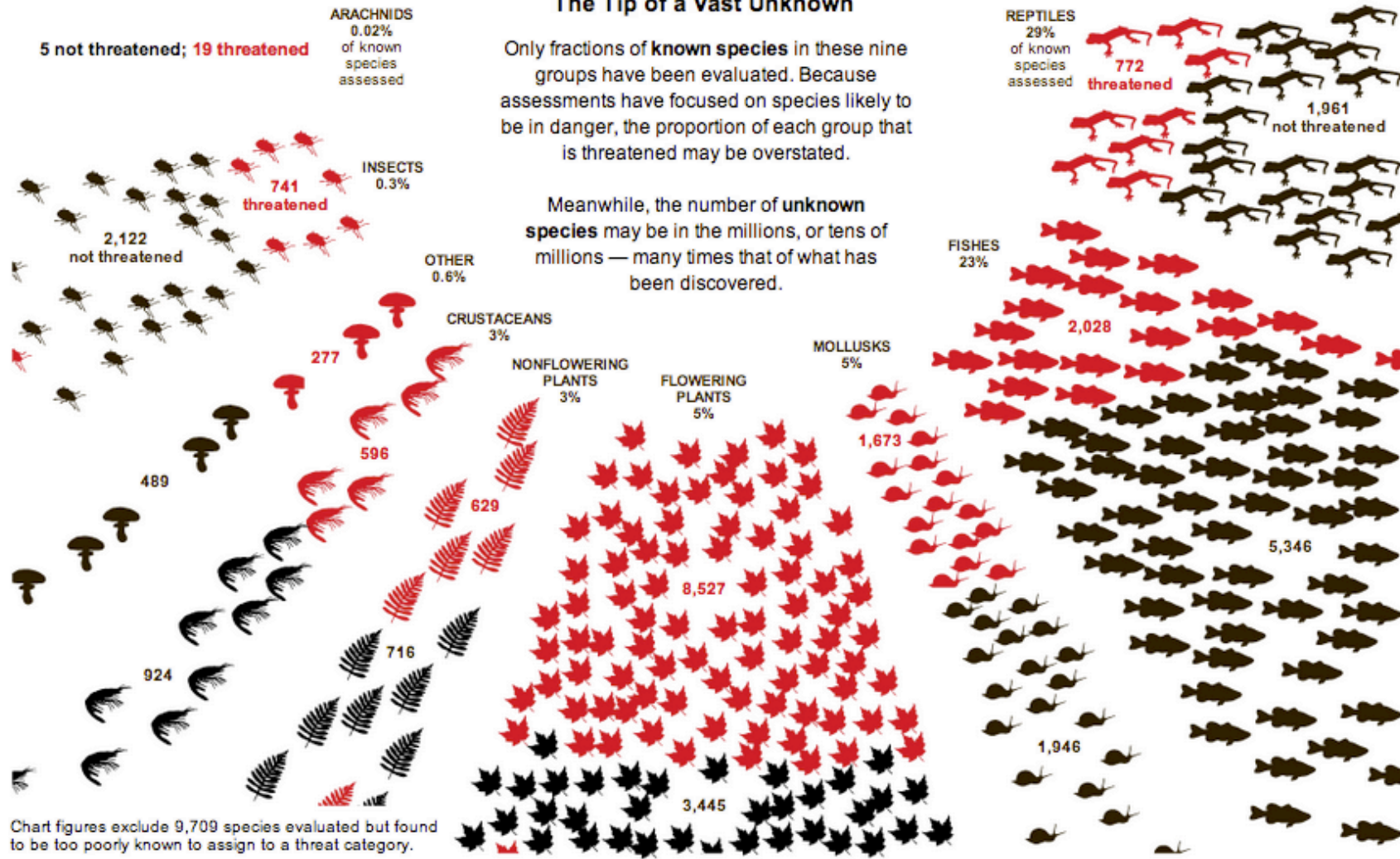
Because most **known species** of birds, mammals and amphibians have been evaluated, scientists are confident about the percentage of each group that is threatened.



Other Threatened Life: The Tip of a Vast Unknown

Only fractions of **known species** in these nine groups have been evaluated. Because assessments have focused on species likely to be in danger, the proportion of each group that is threatened may be overstated.

Meanwhile, the number of **unknown species** may be in the millions, or tens of millions — many times that of what has been discovered.



Already Gone

Species known to be extinct, or extinct in the wild, since 1500:

Mollusks	Birds	Flowering plants	Mammals	Fishes	Insects	Amphibians	Reptiles	Crustaceans	Nonflowering plants	Others	No known arachnid extinctions.
327	136	110	79	68	60	39	22	12	10	2	

Why are extinctions occurring?

Plants: Causes of endangerment

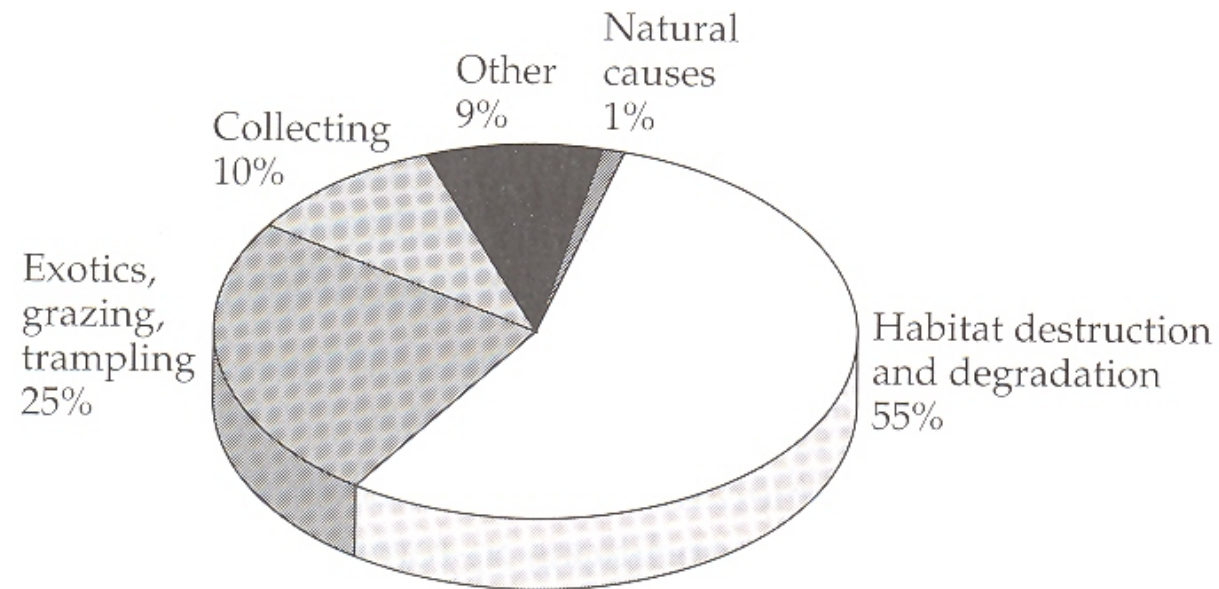
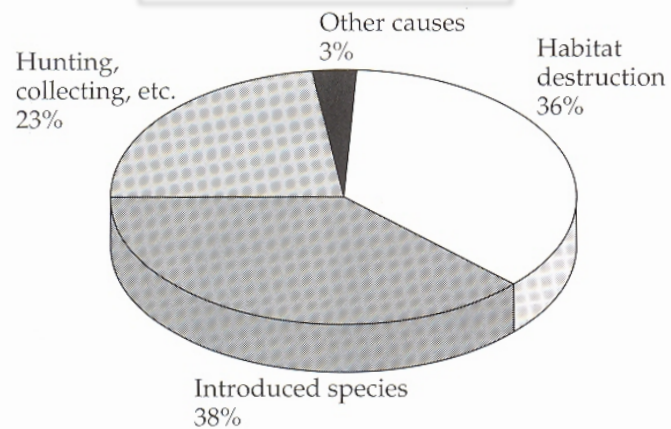


FIGURE 16.22 Causes of endangerment for plants of the United States. (After Schemske et al. 1994.)

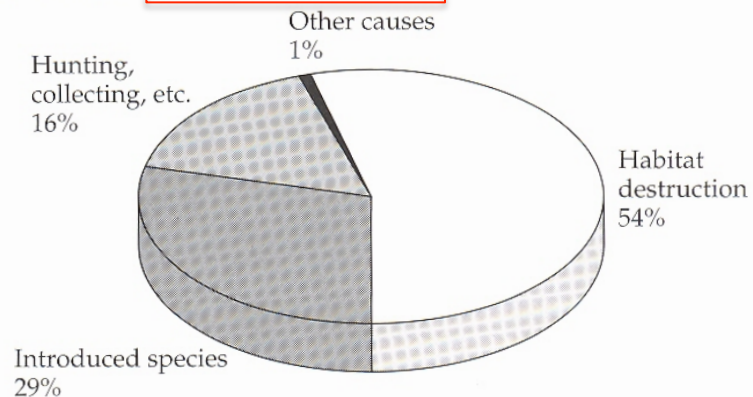
Lomolino et al., 2006

Why are extinctions occurring?

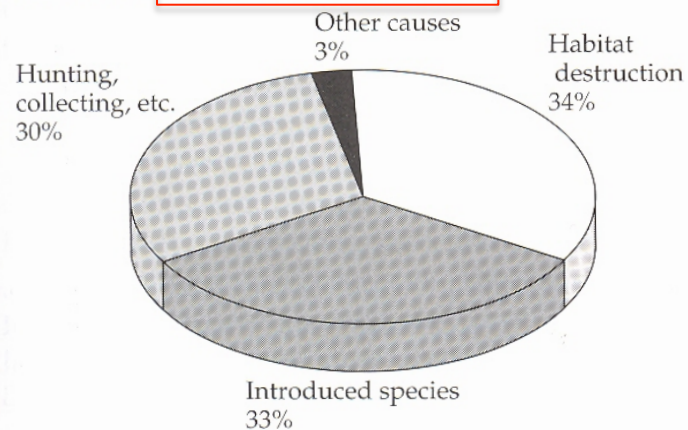
(A) Causes of **historical extinctions in animals**



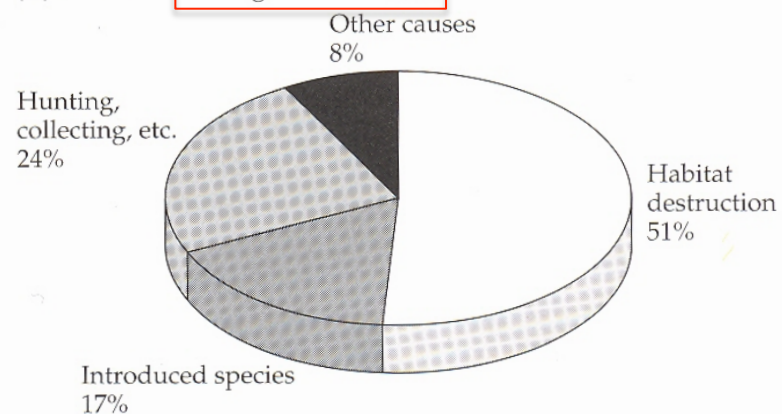
(B) Causes of **endangerment in animals**



(C) Causes of **historical extinctions in birds**



(D) Causes of **endangerment in birds**



Lomolino et al., 2006