



**UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
ENDANGERED SPECIES PROGRAM**

CAUSES FOR SPECIES DECLINE (04:09)

NARRATED BY JOHN FAY

This transcript was produced from audio provided by FWS Endangered Species Program

P R O C E E D I N G S

(Music plays.)

I think everybody recognizes that there is some *background rate* of extinction that has been around as long as life has been on the planet. There are various opinions as to what that rate might be. But I think there is also a consensus that whatever that rate was we have vastly exceeded it today and the predominant reason for the increase in extinction risk that we see today is human caused. So, it is not that we are uncomfortable with having extinction at all, but it is the rate that is somewhat sobering and really dangerous to human life.

When I say human caused, what are we talking about? Well, predominantly or for the most part, we are talking about alteration of the natural environment by humans. So, we have land conversion for agriculture, for urban and other developments. Impoundment and withdrawal of water that prevents aquatic species from have an appropriate habitat. Very serious, particularly in some situations it the intentional or inadvertent introduction of invasive exotic species.

Something that we thought was very important at one time and less so today is the intentional persecution or exploitation of species. What I am talking about here is the persecution of wolves for instance, in North America that very nearly resulted in extinction or at least extirpation in the lower 48 states. Killing of elephants for ivory. This is very important for a minority of species that are affected by this. But, by and large, the greatest affects of human activity on the environment in terms of putting species at risk has been inadvertent and incidental to other human activities. Farming, ranching, building cities, building dams, and other interference with the natural world.

On top of this, there is something else that bears keeping in mind and that is not all species are equally vulnerable to risk of extinction and there are certain species that are disproportionately represented on the endangered species list. The state with the largest number of species is our Island state of Hawaii. Island species are particularly vulnerable, particularly vulnerable to the invasive exotic threat. That has been a large part of the story in Hawaii.

The native fauna and flora of Hawaii is rather disharmonic. This is in an area in the tropics with a very mild maritime climate. There is only one native mammal and that is the bat. There are probably fewer than a hundred native land birds, even if we go back into the species that disappeared during Polynesian settlement. There are only five native orchids in Hawaii, although Hawaii is a perfect place for orchids. It has to do with what was able to reach these very remote islands are the very remote high island chain on the earth.

There were no native ungulates, not hooved mammals consequently the plants that evolved there, most of which grow nowhere else on the planet have no defenses. And when cattle, sheep, pigs were brought in, these plants were extraordinarily susceptible.

The other disproportionally represented species are ecological specialists that have very narrow requirements for the environment in which they will thrive and generally are distributed over rather small areas. It does not take a great deal to put one of these species at risk.

This is John Fay for the US Fish and Wildlife Service.