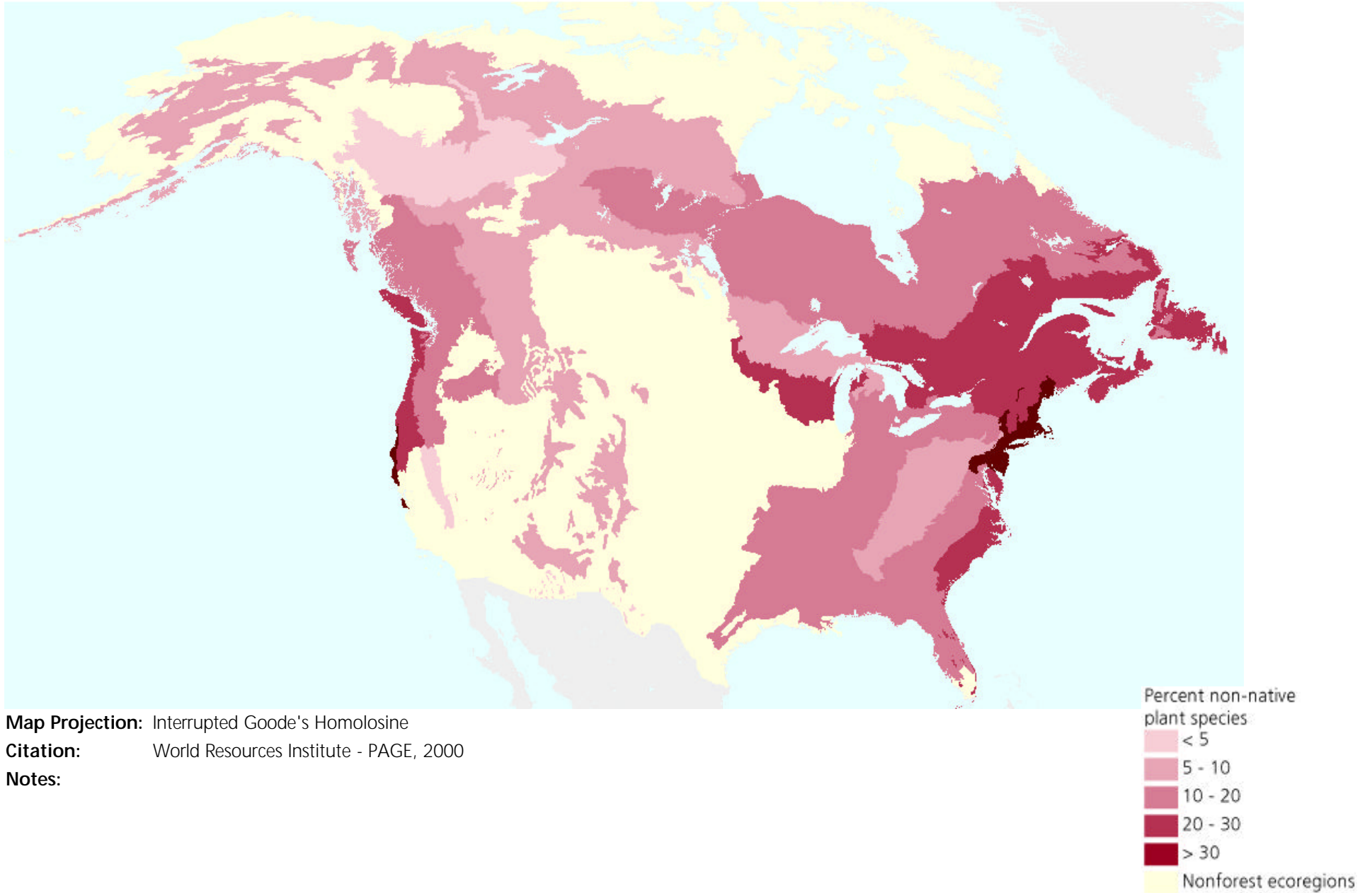


## Non-Native Plant Species in North American Forests



**Map Projection:** Interrupted Goode's Homolosine

**Citation:** World Resources Institute - PAGE, 2000

**Notes:**

**Map Description:**

The World Wildlife Fund (WWF-U.S.) has mapped the distribution of non-native plant species in North America (Ricketts et al., 1997). This map shows the percentage of non-native plant species occurring in North American forest ecosystems (For an explanation of ecoregions, see the map - Global 200 Forest Ecoregions). Humans are responsible for introducing, whether deliberately or accidentally, thousands of non-native plants and animals to new habitats. Many of them - food crops, livestock, ornamental plants, pets - are beneficial. A relatively small number have attacked or overwhelmed native species, or so altered the composition of native habitats that they can no longer support some species of native flora or fauna. Aggressive invasions by exotic species rank, by many estimates, as the leading cause of historically recorded extinctions, second only to habitat conversion as a threat to future global biodiversity. In North America, 40 percent of the insect pests that attack trees are of foreign origin, although these exotic insects compose only about 2 percent of the total insect fauna. This map shows that the highest concentrations of non-native plant species, relative to native species, are found in and around coastal cities, which have served historically as ports of entry for commercial goods, travelers and exotic species. High concentration rates are also found along major transportation routes and in fertile agricultural regions that proved hospitable to both introduced crops and their pests. Densely forested tundra regions, away from major human settlements, appear to be little affected, while the southeastern conifer forests have proved relatively resistant to invasion by exotic species. This pattern is in line with other evidence that suggests that human disturbance increases the susceptibility of ecosystems to invasions, although successful invasions of undisturbed ecosystems are also common.

**Analytical Overview:**

WWF-U.S. compiled non-native species data from county-level lists that document plants as native or non-native species. County-level information was then aggregated to the ecoregion level. However, the data do not distinguish between benign non-native species and aggressive species harmful to native flora and fauna. This seriously limits the usefulness of the data as an indicator of forest condition.

**Source:**

1. Ricketts, T.E., Dinerstein, D. Olson, C. Loucks, W. Eichbaum, K. Kavanaugh, P. Hedao, P. Hurley, K. Carney, R. Abell, and S. Walters. 1997. A Conservation Assessment of the Terrestrial Ecoregions of North America Volume I: The United States and Canada. World Wildlife Fund - United States and World Wildlife Fund Canada. Prepublication Draft. 547 pp. Title - Periods of Peak Fishery Catches and Declines Since the Peak Year