

## DEFINITION OF EXOTIC NUISANCE ALIEN INVASIVE SPECIES AND NATIVE INDIGENOUS SPECIES

*From Maine DEP website <http://www.maine.gov/dep/water/invasives/invmaterial.html>*

Discussions of Invasive Aquatic Plants include many words we all recognize, but the context can be unfamiliar and confusing when applied to plants. In addition to the common usage, biologists use these terms to describe the ecological status of plant or animal populations and how they fit into a particular geographical region. Some terms are used interchangeably, such as nuisance and invasive, both with a negative connotation. Four categories (Binggeli 1994) serve to cover the concepts used to describe the status and the distribution of a particular species.

1. **Native, Indigenous:** species naturally occurring or originating in a geographical region since prehistoric time;
2. **Introduced, Alien, Exotic:** deliberate or accidental release of a species into an area in which it has not occurred in historical times;
3. **Invasive:** the establishment of self-regenerating and spreading populations of a naturalized species in a free-living state in the wild, takes possession and may affect injuriously;
4. **Nuisance, Noxious, Weed:** any plant, either native or introduced, with a harmful or destructive influence on existing natural communities, interfering with the objectives or requirements of people.

These categories apply to biological communities, which are always evolving or changing due to fluctuating environmental conditions. Some species may be considered invasive if they occur in Maine but have been transported between watersheds and their introduction has caused detrimental effects to existing populations (e.g. introduction of white perch to brook trout waters has severely curtailed the beneficial values of brook trout in the affected waters). Some species in Maine fit into one or several of these categories, for example:

- Variable milfoil: a common plant in its native range, is invasive and a nuisance when spread to new waterbodies
- Bladderwort: a common native aquatic plant that is occasionally considered a nuisance
- Purple Loosestrife: a rapidly spreading exotic invasive in wetland habitat
- Brook Trout: a desirable native that is not a nuisance
- Brown Trout: an introduced species that is not invasive or considered a nuisance
- Gold Fish or Carp: exotics that are also considered noxious invasives

Binggeli, P. (1994) Misuse of terminology and anthropomorphic concepts in the description of introduced species. *Bull. Brit. ecol. Soc.* 25, 10-13.

## DEFINING THE TERM “INVASIVE SPECIES”

*Excerpted with permission from a letter to Lori Williams, Executive Director, National Invasive Species Council, U.S. Department of the Interior, from E. Shippen Bright, Interim Chairman, Invasive Species Advisory Committee, dated April 23, 2004*

At a number of recent policy forums, the ambiguity of the term “invasive species” has been cited as a reason for delaying new federal programs to combat the problem. Confusion over this particular term is understandable, given the globally diverse terms used in describing the issue. However, the use of the term “invasive species” and its meaning pertaining to U.S. federal programs within the Invasive Species Advisory Committee (ISAC) and the 2001 National Management Plan for Invasive Species (NMP) has been debated and agreed upon. While some areas remain unclear or “gray”, they need not hinder action to prevent and control those organisms that clearly fall within the boundaries of the NMP definitions. This letter is to summarize these important distinctions, hoping that the member agencies of the National Invasive Species Council (NISC) can quickly and decisively respond to programmatic criticisms stemming from definitional concerns, allowing discussion to proceed on more important questions of policy.

Executive Order 13112, which established NISC, utilizes the terms “alien,” “invasive” and “native” species. It defines the term “*alien species*” as:

*“any species, including its seeds, eggs, spores or other biological material capable of propagating that species, that is not native to that [particular] ecosystem.”*

The order defines “*invasive species*” as:

*“an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.”*

It further defines “*native species*” as:

*“a species that, other than as a result of an introduction, historically occurred or currently occurs in that [particular] ecosystem.”*

In continuing this convention, the NMP clarifies the difference between “alien” and “invasive” by stating that the latter are those that cause or are likely to cause harm to the nation’s economy, environment, or public health. It provides a set of examples to illustrate the distinctions between these concepts, and calls for a clear set of screening criteria which will consider potential societal benefits, as well as risks associated with organisms that fall into the gray area.

The consistency between these documents was hard won, but highly worthwhile. To counteract any continuing uncertainty, NISC should actively and clearly reaffirm that actions to manage invasives will focus only on those alien species that cause or are likely to cause economic or environmental harm, or harm to human health. NISC agencies should also ensure that this information is widely disseminated to all relevant field personnel.

In conclusion, the challenges posed by invasive species are already daunting. Eliminating the vagueness associated with the issue’s terminology will contribute greatly to developing new policies and management strategies to protect the economy, environment, and public health of the United States.