Rabbits in Australia

*What do **rabbits** in Australia have to do with noxious weeds in Washington?*

*The current infestation of rabbits in **Australia** originated with the release of just **24 wild rabbits** by **Thomas Austin** on his property in **1859. Austin** had been an avid hunter in **England,** spending most weekends rabbit shooting. When he moved to **Australia,** he had his nephew ship **24 gray rabbits** from **England** so he could continue hunting.*

***Rabbits are extremely prolific!** In **Australia,** they have **no natural predators** like wolves, coyotes, bobcats, hawks, or eagles. Kangaroos and wallabies don't eat rabbits. With mild winters, rabbits breed the entire year. So the rabbits quickly spread across the continent!*

*Ten years later, **more than two million rabbits** were shot or trapped **each year,** without making much of a dent in the rabbit population.*

*The rabbits eat any type of plant, as long as it is green. They cause tremendous losses to agriculture. One-eighth of mammalian species in Australia as well as thousands of plant species are now extinct due to rabbits. Rabbits are also responsible for serious **erosion problems** as they eat native plants which would have retained the soil.*

*To combat the destruction caused by rabbits, **three "Rabbit-Proof Fences"** were built across the continent, north to south. The Australian government is actively involved in the control of rabbits by hunting, shooting, poisoning, and introducing infectious viruses. Landowners are responsible for controlling rabbits on their property.*

Rabbits are a non-native or noxious pest that causes millions of dollars of damage to agriculture.

Noxious weeds in Lincoln County are non-native plants, also capable of causing lots of damage.

Native Plants often fill a *specialized* and *unique* niche in the natural environment.

***Two hundred years** ago, our part of the country was covered by white pine forests. Numerous patches of **Palouse Milkvetch, Astragalus arrectus,** grew in partial shade under tall pine tree canopies in an area south from the **Columbia River** through **Lincoln County** to the **Palouse.** This native plant needs an environment of partial sunlight. The plants died back as forests grew more dense, but periodic forest fires would clear the land allowing a re-emergence of the **Palouse Milkvetch.** As the land was cleared for farming in the **Palouse,** the land favorable to **Palouse Milkvetch** was reduced to a strip of forested park land along **Lake Roosevelt.** **Palouse Milkvetch** can only be pollinated by **bumblebees.** The **bumblebee** has a long, reddish-colored tongue that is hairy at the end and good for soaking up nectar. It is also **long enough** to pollinate **Palouse Milkvetch** blossoms.*

Distribution map of Palouse Milkvetch.

Lincoln County Noxious Weed Control Board
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Control noxious weeds and help preserve Lincoln County's natural environment.

Why We Have Noxious Weeds

Lincoln County
Noxious Weed Control Board

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What Are Noxious Weeds?

The blossom of Palouse Milkvetch

- **Noxious weeds** are **non-native plants** that have been introduced into our area, either accidentally or as ornamentals in gardens.
- ***Noxious weeds can be very aggressive!*** They tend to be plants that can **adapt to many different environments,** and they can **outcompete** most native plants.
- For example, **Canada Thistle** is typically found in wet bogs and river valleys, but it can also dominate dry scabland.
- In contrast, **many native plants fill a specialized and unique niche in the natural environment.** See the back-panel story about **Palouse Milkvetch**
- Most noxious weeds, once established, outcompete native vegetation for available water, nutrients, and sunlight.
- **Knapweed** and **Orange Hawkweed** exude an **herbicide-like enzyme** that prevents other plants from taking root. It kills competitors before the native plants can get established.
- Non-native plants seldom have natural controls or predators such as insects, viruses or bacteria that feed upon them and help control their spread.
- Many noxious weeds contain a sap that is toxic (like **Leafy Spurge**) or makes the plant unpalatable to most grazers such as cows (like **knapweed**).
- Since noxious weeds came from another part of the world, local animals, birds and insects often cannot eat or utilize these plants. Thus, their growth is unchecked while grazers eat the native plants.
- **Spotted Knapweed** seems to thrive in either dry or seasons. The weed adapts very well.
- Noxious weeds seldom have natural controls or predators eating them here such as insects, viruses, bacteria, birds, reptiles or animals.
- Noxious weeds are not a problem in their original homeland because, over the course of thousands of years, insects, birds and animals evolved that utilize these plants as a food source.
- Before bio-control insects are introduced here, scientists determine which insects, bacteria or animal controlled the noxious weed in its homeland.

Why Do We Have Noxious Weeds?

Human Intervention

- Immigrants **intentionally** brought the seeds of noxious weeds from their foreign homeland, not realizing the damage they could cause here.
- Noxious weed seeds were **accidentally** brought here with **contaminated seed** of wheat or other desired crops, or in ballast and stones discarded from ship hulls, or blown off rail cars transporting grain.
- The **natural environment has been dramatically changed** by developers resulting in **urban growth** and **big farms,** often with just one crop like wheat.
- With **increased opportunities for travel,** the **world has grown smaller** resulting in more opportunities for exotic plant species to spread.
- Weed seeds are often caught in the undercarriage of vehicles, ranch machinery, trains and logging equipment. For example, vehicles driven several feet through a knapweed site can pick up thousands of seeds, and then spread them over many miles.
- Road building, off-road vehicles, logging, and construction all **damage native vegetation** and **disturb the soil surface,** making it easier for noxious weeds to invade and become established.
- Noxious weeds seldom have natural controls or predators such as insects, viruses or bacteria, etc, that feed upon them and help control their spread. Once the weeds have dropped their seeds into the soil for a number of years, re-vegetation with native plants becomes exceedingly difficult.

Natural Causes

- As the natural environment changes, there will be more **stress on native plants,** leading to the extinction of many.
- Scientists predict that **weather** in the **Pacific Northwest** will dramatically change over the next few decades. Local weather will become **more erratic** with **drier, warmer summers** and **colder winters.** This **change in weather** will increase the stress on native plants.

Spotted Knapweed

- The **natural environment** is **changing too quickly** for native plants to adapt. This will lead to the extinction of many native plants and animals.
- Noxious weeds are better able to adapt to sudden changes in the environment.
- **Noxious weeds** create **mono-cultures** of just one weed. This **decreases the bio-diversity** needed by native wildlife. **Meadows full of knapweed** will drive deer and elk to other areas in seach of food.

Dalmatian Toadflax is probably an ornamental plant that escaped.

- Many **native plants** and **insects** are **co-dependent.** If one becomes extinct, the other will not be able to survive. For example, if there are **no bumblebees,** other bees are not capable of pollinating the **wild cream pea** and the plant will not survive.
- An unchecked infestation of noxious weeds may modify the natural environment **forever,** making **full restoration nearly impossible** as native plants become extinct.
- As the effects of global warming increase, native plants and wildlife will face a greater struggle for survival.
- With global warming, exotic plants that once could not survive cold **Washington** winters will move in from the **Southwest and Mexico** to thrive locally.
- **Texas Blueweed, *Helianthus ciliaris,*** is originally from the **Southwestern USA,** but with warmer winters, its range now stretches to **northern Utah** and **southern Idaho.** It is only a matter of time before it will invade **Lincoln County, Washington.**
- With increased global warming, there will be more and more noxious weeds in **Lincoln County** in the future.

Rush Skeletonweed