

Hello fellow explorer!

Meriwether Lewis here—I explored a fair piece of North America back in the early 1800s. You may have heard of the Lewis and Clark Expedition of 1804-1806? We walked, boated, and rode horseback from St. Louis, Missouri, all the way to the Pacific Ocean and back. The land was fresh back then, and many of the plants and animals were new to me. As a naturalist, I took notes and made hundreds of drawings, describing in detail many species new to science. You can be a naturalist, too, by simply observing the plants and animals where you live, asking lots of questions, and seeking out answers.

Most noxious weeds in North America came from other parts of the world, mostly Europe, Asia, and the Middle East. Many came here 100 years ago or more as stowaways in shipments of grain or hidden in ship's ballast. For these invading weeds, North America is the "land of opportunity" because they've left their enemies behind. Most of our native animals and bugs aren't interested in eating the newcomers, and our native plants fall behind in the race for food, water, and sunlight. So these weeds sprout and grow like... well, like weeds!

You may not notice it, but the place you live is always changing. Sometimes the changes are small—a tree branch falls down in a windstorm. Sometimes the changes are big—a wildfire scorches an entire forest. Over a long time—years, or even hundreds of years—these changes form patterns. Chances are, the place you live has many more homes, buildings, roads, and parking lots than it did just 20 years ago. Look around you and imagine the landscape as it might have been 50 years ago, 100 years ago, or before settlers cleared the land. Was there a forest where your school now stands? Or did prairie grasslands stretch to the horizon? Make a drawing in your journal of what your landscape might have looked like a long time ago.

After school, I like to ride my mountain bike on the trails along the creek that runs through my town. And on Saturdays, I play soccer on a big field by the local swimming pool. What are some of your favorite outdoor places where you live? Make a list of your favorite places in your journal, or draw a map showing where all of these places are.

Dr. Groker says: More than 4,378 non-native plant species have been introduced into the United States. About 50 of these are considered major ecological and economic pests (noxious weeds). In the American West, the 16 worst noxious weeds infest more than 100 million acres of land.

Scientists tell us that spotted knapweed came all the way from Europe in bags of alfalfa seed to an Oregon farmer. The farmer reported spotted knapweed growing in his fields. Spotted knapweed has since spread to 74 million acres. How long does it take for a noxious weed to double the amount of land it infests?

Let's crunch the numbers! Start with an infestation of 100,000 acres. How many years does it take to reach 200,000 acres of a particular weed? Example: Dalmatian toadflax spreads at a rate of about 29% a year. That doesn't sound like much. Let's start with 100,000 acres. Multiply 100,000 by 0.29, for an

increase of 29,000 acres. Add those 29,000 acres to the 100,000 we started with. Now multiply 129,000 acres by 0.29 again, which gives you 37,410 acres. Add this to the 129,000 acres for a new total of 166,410 acres. Keep repeating these steps until you reach 200,000 acres or more.

Ask a grown up to help you search on the Internet to learn more about the specific weeds that grow where you live. Use a search engine (such as google or yahoo) and type in the name of the state you live in and the word "weeds." Many web sites have photographs of weeds to help you identify the problem plants in your neighborhood. Bookmark the web sites that you find most helpful and fun.