



BEASTLY INVADERS!

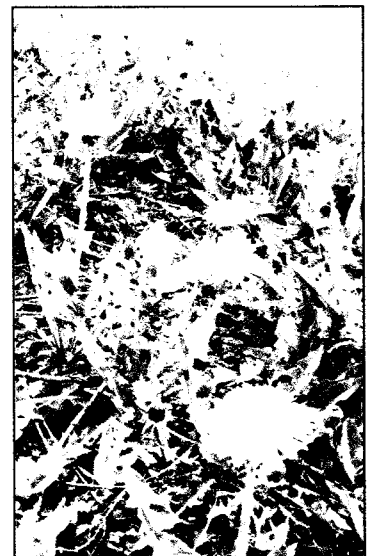
The Europeans Who *Really* Conquered America

When Dutch and other Europeans landed in northeastern America in the early 1600s, they brought with them guns and wars and a great hunger for land. They also brought a new bunch of **organisms** – plants and animals and tiny disease cells – that this continent had never seen. Native American people had a lot of trouble with the human newcomers. But native plants and animals had an even worse time!

The Trouble with Evolution

Now, you'd think that native **species** (types of organisms) would have the Home-Team Advantage. They had been living here a long time and adapted to this place. This is what we call **evolution**. The newcomers should have been out of place – and out of luck.

But this isn't how it worked. The newcomers came from the Old World, where there were many millions of people. Continents were covered with human farms and cities, and this made it a constant struggle for plants and animals to survive – unless they were the plants and animals

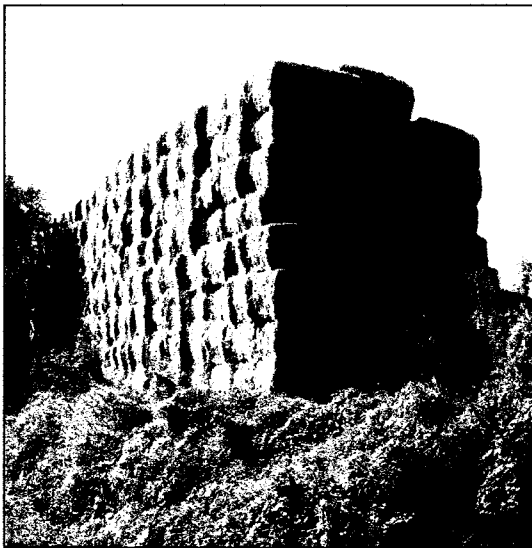


that people chose to raise. Old World organisms had it tough, and they evolved tough. And when they met the easy-living organisms of the forests and meadows of the American Northeast, the result was a massacre.



Did you ever stop to enjoy the many species of wild flowers and animals around us? The dandelions in the lawns; the purple loosestrife along the roads in ditches; the wild roses and lilies?

The most common bird around us is probably the house sparrow (above) – or the pigeon. The honey bees used to rule the gardens, though they're not doing so well these days. Most of these "wild" things were actually imports from Europe. So are many types of mice, rats, cockroaches! The native species could only be safe in places far from people.



The Trouble with Farming

It wasn't just pushy organisms that came here from Europe. Powerful life styles evolved there, too. With all those people and all those powerful countries fighting over supplies, the Old World needed to evolve ways of producing great quantities of food. They created what we call **agriculture** (raising grain plants like wheat and rice) and **husbandry** (raising animals). Technically, **farming** is what you do when you do either or both, though we often use the word just like "agriculture."

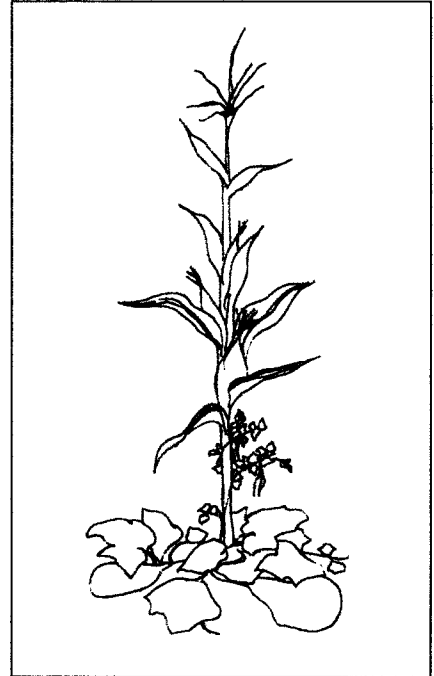
The northeastern Native Americans didn't have husbandry, but they did raise corn or **maize**, a major grain plant. In fact, they raised corn in a way that worked really well with the **environment**, namely the plants and animals and climate around them. Old World agriculture and husbandry, on the other hand, thrived by destroying the environment.



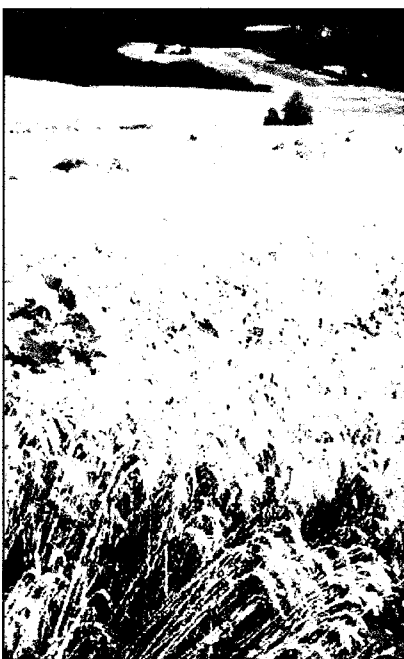
The Three Sisters

The northeastern Native Americans produced food in three ways: (1) they hunted wild animals; (2) they gathered wild fruits and plants; and (3) they planted and raised the "three sisters." (They also grew tobacco but that was for ceremonies, not dinner.)

The **three sisters** are corn, squash, and beans. (See the drawing to the right.) Native people first cleared a field by setting fire to trees; this not only got rid of the tree, but left charcoal that was good **fertilizer** (food for plants). Then they made little mounds and planted a corn kernel in each of them, with bean and squash seeds around it. The beans used the corn stalk as something it could grow up, while the broad squash leaves covered the ground and helped keep out weeds. The bean plants also produced valuable nitrogen that fertilized the soil. The corn was good not only for eating but for making into breads and porridge. Working together, the three sisters grew nicely, and left the native people much time for hunting and gathering. Even though they only ripened at one time of the year, the **domestic** plants provided about half of the food that Native Americans ate. (Domestic organisms are those that are raised by people.)



All three ways of getting food were absolutely necessary for the people's survival. Therefore it was necessary for the Native Americans to make sure that wild plants and animals had plenty of room in which to live.



Old World Farming

For the incoming Europeans, wild foods were just extras – they had been taught to raise all their food themselves. This meant that European people needed plenty of room to live, so they could spread out their fields for agriculture and pastures for their animals.

And, to the native people, these animals were something else! The cattle (and horses) were huge, and ate the same things needed by the deer that native people hunted. The sheep tore up plants while they ate, instead of biting off the tops; this meant that sometimes there were no plant roots left in the areas where they'd been eating. The pigs ate everything, including animals, and were nasty

about it; they chased away a lot of wild animals and dug up all the ground around them. This digging was good for the farmers, because it made the soil loose for planting. But it meant death for the plants and animals trying to live in it.



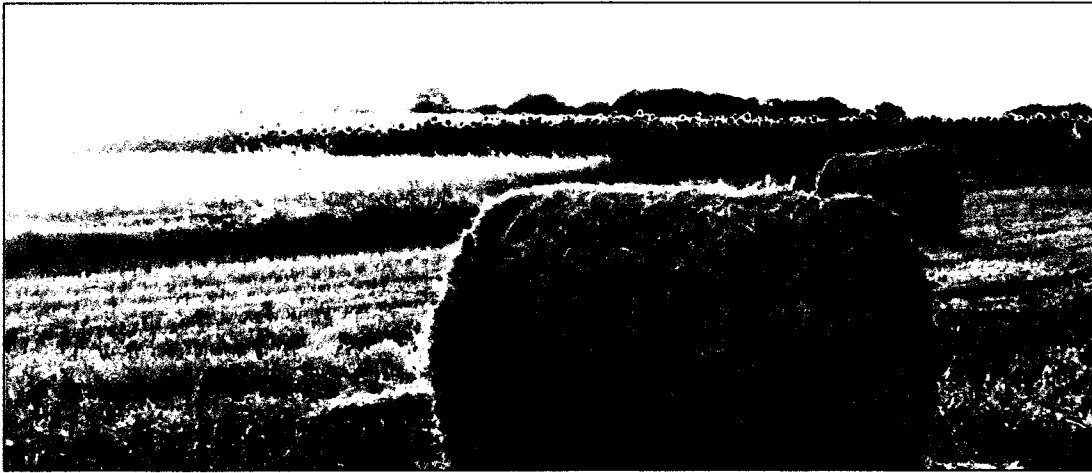
When the newcomers plowed their fields it created **erosion**, which let winds and rains wear away much of the land. Their fertilizers – and the droppings of their animals – **polluted** the streams. Also, there were lots of Old World plants and animals that had evolved along with farming. These included mice and rats and pigeons and hundreds of species of insects and dozens of species of weeds like dandelions and crabgrass. These things really like to be around people, even though people hate to have them around. They took over the ground and trees and air space where the New World organisms used to live. So the New World species couldn't live here anymore.

Death of a Life Style

The Europeans brought more pests than just their plants and animals – and themselves. They brought their home-grown diseases. Native Americans had diseases too, and they had evolved some amount of resistance to them. But the Old World people — Europeans, Africans, Asians — carried all the diseases from three large interconnected continents. Old World people had evolved all sorts of resistance to these diseases. Native Americans had none. Not long after Europeans arrived, maybe half of the native people had died of the new diseases. Many died of the common cold!

Still, the Native Americans were good soldiers and smart politicians. In the Northeast, they made strong alliances and did good business with the Europeans. This lasted for more than a century. Then the invasion really took its toll. It wasn't only the actions of the English and the new United States; the diseases killed the native people, and the fields and pastures killed their way of life. The **American Northeast** was now covered in farms, not trees. Wide lands, rich forests, and unpolluted streams had been as much a part of native **politics** and **culture** as it was their food supply. Now Native Americans had to become more like European Americans to survive.





Some Things to Think About:

1. What's an "organism"?
2. What are "domestic" plants and animals?
3. Did the Native Americans have domestic plants and animals?
4. How was European farming different from native ways of getting food?
5. How did European farming hurt the native ways of getting food?
6. What is the "environment"?
7. Why were sheep and pigs bad for the environment?
8. What do you think "politics" means?
9. How could the environment be important to politics?
10. What is "culture"?
11. How could the environment be important to culture?
11. How do you think a person could die of the common cold?



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