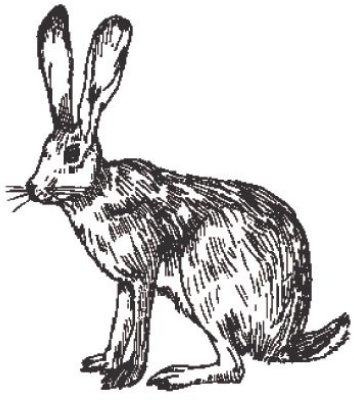
EDUCATOR PAGE: ANSWERS TO ALIEN IMPACTS—WHAT REALLY HAPPENED

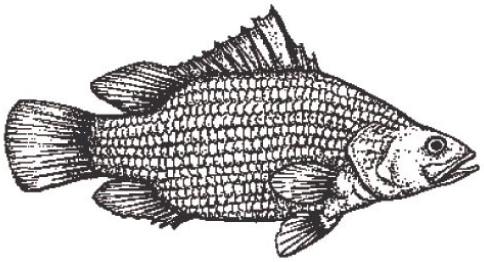
1. *Hydrilla* has been called "the perfect aquatic weed" because it is capable of spreading so fast and so far. (In its native Asian habitat, *Hydrilla* is kept in check by the periodic dry seasons, which cause it to die off because of lack of water.) Although ill suited to deep water, it is perfectly suited to shorelines, shallow ponds, and the many shallow lakes that cover the state of Florida. It has also spread rapidly along the coastal areas of the United States. Where *Hydrilla* has become established, it forms dense mats on the water's surface. It displaces native plants, impedes water flow, suppresses some native fish populations, and interferes with aquatic recreation activities such as fishing, scuba diving, and boating. While some people favor *Hydrilla* because it provides food for waterfowl, it poses significant problems for the majority of wildlife in the ecosystems it has invaded.

2. The black-tailed jackrabbits have been able to get enough food to survive and reproduce at Kennedy Airport, and have established a moderate-sized but harmless population. The hares are prevented from spreading into other regions by the road and water barriers on each side of the airport.

3. Nile perch were part of the Lake Victoria ecosystem for about 20 years before they began to feed heavily on native fish. Since then, more than 80 native species have become extinct. But are the Nile perch to blame? Some scientists think that pollution, overfishing, and other environmental problems are responsible for most of the decline in fish populations. In fact, things have gotten so bad in Lake Victoria that adult Nile perch are now eating juveniles of their own species, and some people think the perch may also be headed toward extinction. Another environmental problem came about after the Nile perch were introduced. When the local people began eating the perch, they found that these oily non-native fish had to be dried over an open fire, so the people decimated the forests all around the lake in the process of gathering firewood. Until then, local people had eaten native fish, which dried easily in the sun.

4. The green crab has proven to be an extremely damaging invasive species. Spreading slowly up the Atlantic Coast, the crab has destroyed Maine's soft-shell crab industry and now threatens scallops from Maryland to Massachusetts. The green crab is a popular seafood in parts of Europe, but not in the United States.





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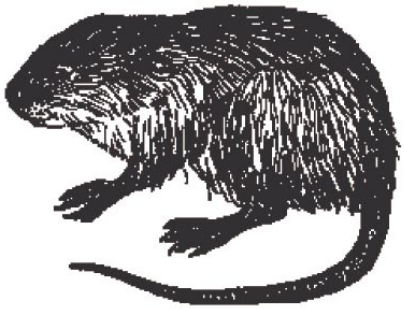
5. The Pacific, or Japanese, oyster is in certain ways an example of a successfully introduced species. Even today, these oysters are cultured in Willapa Bay and Puget Sound and produce a significant portion of Washington's $40-million-a-year oyster revenues. Unfortunately, importers did not just bring Pacific oysters: The oysters' packing crates also contained the Japanese oyster drill. Oyster drills bore into oyster shells and then eat the oyster, so the drills have to be handpicked out of oyster beds. What's more, some of the earliest shipments of oysters brought *Spartina*, or cordgrass, to the region-an invasive species that displaces oyster beds.

6. Nutria have spread steadily throughout the Gulf Coast region since their early introductions in the 1930s and 1940s. Although populations are somewhat controlled when nutria are trapped for their meat, these non-native mammals still cause a great deal of damage to their newfound habitat. Nutria reduce native vegetation, destroy sugar cane and rice crops, and are believed to have contributed to declines in native muskrats and water fowl.

7. Ring-necked pheasants are said to be among the most successful of introduced game animals. Despite annual restocking by wildlife agencies and hunting organizations, they have never become a serious nuisance. In fact, the pheasants can create significant economic benefits because of the value they provide as a prized upland game bird. Their populations are kept in control by predation, and in some places their populations are declining because of bad weather, pesticide use, and the reduction of suitable habitat. (Pheasants thrive where crops are interspersed with hedges and wetlands, but they suffer when wetlands are drained and hedges are removed.)



Note to Teachers: This lesson and others relating to National Geographic's Strange Days on Planet Earth can be found online at **www.pbs.org/strangedays/**