

Invasion of the Buggy Snackers (and Other Horrors)

By Steve Nash

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Page B02

A little beyond earshot of the Capitol, in the leafy suburbs of Maryland and Virginia, the chewing sounds may soon be getting loud. As spring arrives, a metallic green Asian beetle that feasts on ash trees may appear in the landscape as it did briefly last fall.



The emerald ash borer probably first arrived at a Great Lakes port in wooden packing material on Korean or Chinese freighters a couple of years ago; since then, it has destroyed 6 million trees in Michigan and has also shown up in Ohio and Canada. A few weeks ago, ash trees near Wolf Trap in Virginia that might have been infested were cut

down in an effort to halt any spread of the pest in this area. With luck, it'll work. But if it doesn't, there's a real possibility the borer could do to Eastern ash trees what an Asian blight did to chestnuts in the first half of the last century -- wipe them out.

Global travel and trade have created a superhighway into the United States for destructive foreign insects, plants, animals and diseases that scientists call alien invasive species. Yet we're pretending we don't have to pay much attention. Countless other destructive alien species are on their way here unless we enact immediate trade policy changes and tougher cargo inspections. The costs will be formidable, but the alternative -- more "free trade" in this biological pollution -- is far worse.

Folks who are paying attention to the bug scene in New York and Chicago have a fair idea of how difficult it is to eradicate new pests. In both those places, the Asian long-horned beetle has been drilling and killing maples and about 30 other kinds of trees. Despite nearly a decade of multi-agency quarantines, search-and-destroy missions and the removal of thousands of urban trees, it's still at large.

The problem isn't new, but its scale and frequency are. A 1999 Cornell University study estimated that the toll from damage by species that aren't native to the United States, and the costs of trying to control them, total \$137 billion every year. Not only the usual enviro-Democrats are alarmed. Republicans whose League of Conservation Voters' ratings typically hover near zero have also taken aim at the infestations in their states. Alaska Republican Sen. Ted Stevens has asked Congress for \$1.5 million to fight the mitten crab in his home state, while Idaho Sen. Larry Craig is railing against noxious weeds in the mountain states. Sen. George Voinovich of Ohio has introduced legislation to fight waterborne invasives, which he calls "aquatic terrorists," in the Great Lakes.

Congressional and agency initiatives tackle one invader after another, but the most effective and cost-efficient fight can't be waged after the pests are already on the loose. Instead, we need to block the pathways they use to get in.

Broadly speaking, there are two streams of invasive species. One is

imported plants and animals for the exotic pet or food trades and micro-critters in dumped ballast water. These are the beneficiaries of laissez-faire regulations that allow them legal entry. The other arrivistes are "stowaway" organisms that slip in inadvertently on or inside trade goods or packing materials.

Federal agencies such as the Department of Agriculture and the Fish and Wildlife Service maintain "dirty lists" that are supposed to keep unwanted organisms out. But among biologists, these lists are little more than a dirty joke. Remember the snakehead fish that rattled Marylanders a couple of summers ago -- four-and-a-half-foot-long, breeds like a champ, can walk on land for three days, etc.? It was a legal import at the time. Scientists warned 30 years ago that snakeheads should be banned, as they finally have been -- after showing up in nine states. But you can still import countless other kinds of potentially destructive fish, killer plants and exotic animals, such as the Asian swamp eel, a species that is bedeviling Florida's waterways and could easily spread all over the country.

International trade agreements and our trade-above-all politics practically guarantee more of this lethargy. They foster a species-at-a-time, innocent-until-proven-guilty approach. If we mean to do a better job of keeping invasives out, then the "clean list" approach adopted during the '90s by Australia and New Zealand, which have drastically cut the influx of biopollution, is a useful model. The logic's easy to master: No non-native species can legally enter those countries unless it has first been carefully assessed -- at the cost of the importer -- for its invasive potential. If it is proven to be unlikely to misbehave, it goes on the "clean list." If it's not on the list, it stays out.

The new National Invasive Species Council (NISC), an interagency group created by executive order in the waning days of the Clinton administration, is trying to orchestrate federal efforts here, but with a minuscule staff and a budget to match, it's overburdened. Indeed, science and management resources across the country are strained. "The people working on this issue, their dance cards are full," says Jamie Reaser, NISC's former international affairs specialist. "We need more people, more resources, more dedicated staff to get the job done."

The sobering chronology of the emerald ash borer makes Reaser's case. The borer is a cargo stowaway, a pest no one intended to import but no one's trying hard enough to stop. Despite the dire warnings of the Michigan extension agent who discovered the ash borer, it took officials more than a year to develop a hazy sense of the problem. By the time a moratorium on shipping ash trees across the country was declared, the genie was out of the bottle, and the borer had spread through Michigan and Ohio. In any case, the moratorium wasn't serious. A Maryland nursery took delivery of more than 100 infected Michigan ash trees last August and sent them out to be planted in Virginia and southern Maryland.

Similarly, inspection regimes at U.S. ports are of the do-more-with-less school of self-delusion. Only 1 to 2 percent of the millions of cargo containers that enter U.S. ports each year are given a look. Compare that with a get-serious program: Dr. Carolyn Whyte, a biometrician and risk assessor with New Zealand's border management agency, says that in that country "each and every container is now unpacked in the presence of a person that has been trained and accredited."

Recent changes in U.S. trade rules require Hong Kong and Chinese shippers to certify that they have heat-treated or fumigated wood packing materials to ensure that more live beetles like the borers aren't coming over. But the follow-through has been questionable. Late last year, the Columbus Dispatch of Ohio quoted federal inspectors as saying, "Our officers don't place much faith in the fumigation certificates" and "Some importers tell us that Chinese shippers will ask them if they want the fumigation certificate or the fumigation." A reporter and photographer for the newspaper said that officials in China refused their repeated requests to visit wood packaging fumigation sites.

A recent General Accounting Office report notes that federal efforts lopsidedly target invasives affecting agriculture rather than forests, rangelands, lakes, rivers and other natural areas, whose fate is just as crucial. Nearly half of all endangered and threatened species in the United States are at risk because of invaders that are severely disrupting natural ecosystems. These losses don't show up on the trade-balance sheets, even when they are vital to maintaining clean

water and clean air, not to mention habitat for wild species. Even so, the tally of what we're losing in natural areas is becoming hard to ignore.

In recent years, alien insects and diseases have wiped out nearly all butternut trees and Fraser firs in the Appalachians and half or more of all native dogwoods. Native hemlocks have been disappearing from Connecticut to the Carolinas during the past couple of decades because of a European insect, the hemlock woolly adelgid. It turned up in Great Smoky Mountains National Park last summer, and studies indicate that the prospects of survival for the park's groves of 400-year-old hemlocks are nil. Shenandoah National Park, in Washington's backyard, has more than 200 alien plant species, many of which are spreading and are, for now, ineradicable.

"Whatever we're doing now, it's not working," says Richard Kinney of the Florida Citrus Packers, who is a veteran of several federal advisory panels. "We've got a Band-aid over a cancer that is eating us up. Long-horned beetle? We ought to be enraged in this country over the potential devastation."

If that indignation takes hold, there's plenty to be done. We need more public education and volunteer anti-invasives campaigns, and both national and local programs for early detection of new invasions. We need an emphatic "rapid response" system to eradicate problem species before they become established. We need more stable, long-term funding for research on prevention and control. But the first order of business should be clear: Plug the holes in trade regulation that allow too much easy, free entry to too many new, unwelcome arrivals.

Author's e-mail:

snash@richmond.edu

Steve Nash teaches journalism and environmental studies at the University of Richmond and is the author of "Blue Ridge 2020: An Owner's Manual" (University of North Carolina Press).

Asian Silver Carp to Zebra Mussels: A Quiz

The aliens are coming! Or are they already here? Think you know a little about the extent and variety of alien invasive species ac creep on our shores? Take this quiz and find out just how much pesky information may have buzzed right past while you weren't looking:

1. True or false? The snakehead fish, which can walk on land and survive for days out of water and has been found in nine states, is native to South America.
2. How many acres of the western United States have been lost to nonnative weed infestations? A. 3 million; B. 70 million; C. 800,000; D. 25 million
3. New alien species arrive in San Francisco Bay, which vies with the Chesapeake for the title of most biologically polluted, about how often? A. Twice a year; B. Every month; C. Every 14 weeks; D. Every 6 weeks
4. Karnal bunt is a pest from India that has been found in Arizona, California and Texas. What is it? A. A wheat fungus; B. A tree virus; C. A grass-eating insect; D. A choking weed
5. True or false? The Chesapeake's native oyster population has been all but wiped out by over-harvesting and an Asian disease introduced into the bay's waters.
6. True or false? Plants from a California nursery infested with the sudden oak death fungus have been shipped to 39 states.
7. Caspian Sea zebra mussels, which have transformed the Great Lakes ecosystem, have also been found in which non-Great Lakes state? A. Mississippi; B. Tennessee; C. Virginia; D. All three

8. True or false? Asian silver carp, a highly invasive species that can weigh up to 50 pounds and competes with native species for food, have a habit of leaping from the water and hurling themselves at fishermen and boaters.

Sources: U.S. National Fish and Wildlife Service, Western Governors' Association Report 2000, Science, Virginia Institute of Marine Sciences, U.S. Department of Agriculture, infolink.cr.usgs.gov/Science/Documents/invasive_carp.pdf

1. *False. Snakeheads come from Africa and Asia;* **2.** *B;* **3.** *C;* **4.** *A;* **5.** *True;* **6.** *True;* **7.** *D;* **8.** *True*

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