

Happy Holidays
from the...

NEBRASKA INVASIVE NEWS NETWORK

DECEMBER 2010

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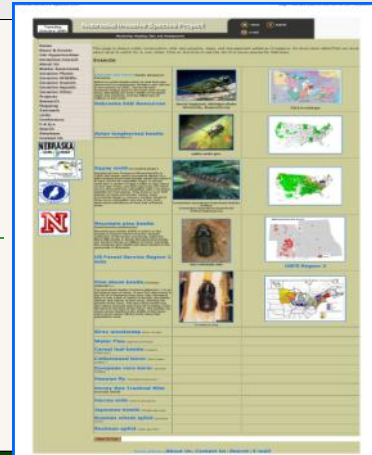
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UPDATES TO THE NEBRASKA INVASIVE SPECIES WEBSITE!

[HTTP://WWW.SNR.UNL.EDU/INVASIVES](http://www.snr.unl.edu/invasives)

IF YOU HAVE A SUGGESTION FOR THE WEBSITE, PLEASE EMAIL US:

INVASIVES@UNL.EDU



Interested in attending a conference on invasive species?

Nebraska Invasive Species Project Calendar: <http://snr.unl.edu/invasives/events.htm>

National Conference Information: <http://www.invasivespeciesinfo.gov/news/calendar.php>

Missed a Conference? Proceedings here: <http://www.invasivespeciesinfo.gov/news/proceedings.shtml>

PEST-FREE CHRISTMAS TREES IN HAWAII

By Stephanie Yao

When it comes to Christmas trees, Hawaii residents are just like residents on the mainland: They want the best trees they can get. But their quest to find the perfect tree could be hindered by pests, including yellowjackets, that hitch along for the ride from the Pacific Northwest to the Island State.

Although yellowjackets usually nest in the ground, mated queens who haven't yet built their nests sometimes make Christmas trees their home during the winter. So, come November, when trees are rounded up for shipment to Hawaii, these queens get rounded up right along with them.

The western yellowjacket (*Vespula pensylvanica*) is an invasive insect that has already established itself throughout the Hawaiian islands. A voracious predator, it competes with native birds for insect prey, greatly reducing native insect populations. Scientists and regulators are particularly concerned because other yellowjacket species not yet established in Hawaii could also hitchhike in Christmas trees and cause ecological damage in their new home.

[Read more about how they're dealing with this pest...](#)



Shaking trees can dislodge some of the yellowjackets.
Photo: Robert Hollingsworth



Nebraska Invasive Species Project:

<http://snr.unl.edu/invasives>

CONFERENCES/EVENTS IN NEBRASKA

Nebraska Green Expo

Jan. 10 - 12: Council Bluffs, IA

Great Plains Fishery Workers Association Meeting

Jan. 31 - Feb. 2: Sidney, NE

Nebraska Arborists Association Winter Conference

Feb. 28 - March 1: Lincoln, NE

Ornithological Conference

March 9 - 13: Kearney, NE

Invasive Plant Ecology and Management Short Course

July 6 - 8: North Platte, NE

Check out what's going on in Nebraska!

INVASIVE SPECIES: ONE OF BIODIVERSITY'S BIGGEST THREATS



Predation by the invasive brown tree snake has driven birds like this Guam Micronesian Kingfisher to extinction. Photo: Ken Ilio

By Jeremy Hance
On Friday, October 29th, 193 member nations of the Convention on Biological Diversity (CBD) reached a possibly landmark agreement on saving the world's suffering biodiversity in Nagoya, Japan. The agreement was especially notable after nations failed—by all accounts—to live up to the goals from the previous CBD agreement, including stem-

ming the global loss of biodiversity by 2010. According to scientists, the world's species continue to vanish at mass-extinction rates due to habitat loss, deforestation, overconsumption, pollution, climate change, and invasive species. To address this crisis, the new CBD agreement sets out 20 goals for 2020. But given the global chal-

lenges in saving the world's species and the voluntary nature of the agreement, will the CBD make a difference or in ten years time will goals be again unmet and life on planet Earth worse off than ever?

[To answer this, mon-gabay.com](http://mon-gabay.com) turned to a number of experts in the conservation world...

INVASIVE MUSSELS SUSPECTED TO BE CAUSE OF BIRD DEATHS

By Joel Hood

The hunt is on in the upper reaches of Lake Michigan to count what's believed to be thousands of bird carcasses that have washed ashore this fall — a staggering toll blamed on the disruptive powers of invasive species that have taken root in the Great Lakes. All invasive species bring consequences that few can predict, leading scientists to ponder the thousands of gulls, loons, mergansers and other migratory

birds whose remains wash ashore along the white-sand beaches in northern Wisconsin and Michigan's upper peninsula each fall. There is a somewhat controversial theory for this annual die-off, which by some estimates has claimed more than 100,000 birds in the past 15 years, involving a type of naturally occurring but deadly botulism linked to the spread of invasive zebra and quagga mussels, which entered the Great Lakes decades ago

aboard ocean vessels. "There's still a lot about this we don't know," said Joe Kaplan, of the Michigan-based nonprofit Common Coast Research & Conservation. "The one thing we do know is that it's killing a lot of birds that are important to us." Zebra and quagga mussels reproduce rapidly and overwhelm their environment. They filter naturally occurring botulism and other toxins from the water. Round gobies, another problematic invasive species, eat the mussels,

and birds, in turn, eat the gobies. "The evidence is there to suggest this is happening, but it's circumstantial evidence because we haven't found any proof of it," said Tom Cooley, a biologist at the Michigan Department of Natural Resources. "All we can really do at this point is to continue to monitor what's happening and maybe something in the lakes will turn around."

[Story from the Duluth News Tribune.](#)

SCOUT DETECTS NEBRASKA'S FIRST PUBLIC WATER ZEBRA MUSSEL INFESTATION

By Kelly Helm Smith
Communication & Drought Resources Specialist
University of Nebraska-Lincoln

A Boy Scout collecting cans for his troop at Zorinsky Lake near Omaha found and reported the state's first known zebra mussel in a publicly accessible lake earlier this month, said Karie Decker, coordinator of the Nebraska Invasive Species Project.

If not contained, the rapidly multiplying mussels can clog water intake pipes, ruin fishing and make lakes more hospitable to the toxin in blue-green algae.

Addison Krebs, 13, of Omaha, told Decker he knew what it was and

how to report it because his favorite lake in Kansas, Marion Reservoir, has zebra mussels and signs around the lake warn people of the problem. "I didn't realize the impacts that zebra mussels can have until this year when we visited Marion Lake," Addison said. "Now you can see them on all the rocks around the lake."

On November 9, Addison, a Boy Scout from Troop No. 282, was cleaning cans out of Zorinsky Lake and noticed a zebra mussel on one of the cans. Having seen the problems they caused in Kansas, he went online to find out what he could do, and reported the zebra mussel to Ne-

braska Invasive Species Project. "I collected a whole garbage bin full of cans, and this is the only one that had a zebra mussel on it," Addison said. "Hopefully this means that the infestation is minimal," said Decker. Steve Schainost, an aquatic invasive species expert with the Nebraska Game and Parks Commission, confirmed on Nov. 18 that Addison's find



Addison Krebs found this zebra mussel attached to a beer can on the shore of Zorinsky Lake.
Photo: Karie Decker

was definitely a zebra mussel. Zorinsky Lake is managed and leased by the Omaha Parks and Recreation Department, and is owned by the U.S. Army Corps of Engineers. Decker said that while the relevant agencies gather information and decide on a course of action, the public can help by reporting any more mussel sightings, and by practicing the "clean, drain and dry" rule after every boat use. Mussels hitch rides on boats, either by sticking to the sides or in water that should be drained

from the hull after use.

"A lot of people go back and forth between these public lakes for fishing," Decker said.

"People need to know how to prevent zebra mussels from spreading: clean, drain

and dry the boat before going to the next lake."

The fact that the mussel has

been detected toward the natural end of the fishing season is good, in that it gives the Invasive Species Project and partner agencies a chance to teach people more about preventing the spread before boating picks up again in warm weather, Decker said. The Invasive Species Project is

based in the School of Natural Resources at the University of Nebraska-Lincoln.

The zebra mussel and a related species, the quagga mussel, are native to the Caspian Sea, and were first found in the Great Lakes in the 1980s, having apparently arrived in ballast water discharged from a ship.

The lack of natural predators in North America has allowed them to spread and cause millions of dollars in damage to power plant and water supply intake pipes, and to affect fish habitat and water quality.

With known zebra mussel infestations in Kansas and Colorado,

Nebraska has been bracing for an invasion, and keeping a close eye on Harlan County Reservoir and Lake

"By finding them early, we still have a fighting chance."

McConaughy. The Nebraska Aquatic Nuisance Species Management Plan was approved by

the Game and Parks Commission and signed by the governor in recent months. The plan provides a reporting mechanism, which worked very well in this case, Decker said.

"We hope more people with an interest in protecting Nebraska's waters will step up and help by reporting invasive species like Addison has," Decker said. "By finding them early, we still have a fighting chance."

The Invasive Species project is also seeking funds for inspection and decontamination stations at Harlan County Reservoir and Lake McConaughy. In addition, Decker said that legislation is being introduced to create the Nebraska Invasive Species Advisory Council, which would provide tools and advice to help research and manage invasive species.

This story has been reported by both the Lincoln Journal Star and the Omaha World Herald. Click the links below to access those stories and learn more.

[Invasive Mussel Confirmed... Invasive Mussel Shows Up... Invader May Force Lake... Zorinsky Lake Closes](#)

BEETLES OFFER EFFECTIVE WEED CONTROL, BUT NATIVE VEGETATION HARD TO REESTABLISH

With the help of the weed-eating flea beetle, researchers significantly reduced infestations of a non-native plant, leafy spurge, on Montana rangeland. The good news is that this biological method of weed control worked effectively over the course of a 9-year study. The bad news is that rather than native plants returning to flourish in the absence of leafy spurge, other non-native species became dominant in its place.

The study, presented in the current issue of the journal *Rangeland Ecology & Management*, sought to evaluate the responses of native vegetation once the invasive species was

removed using classic biological control. Black and brown flea beetles have previously been used successfully as biological control agents to manage leafy spurge on a large scale.

In the current study, the weed-eating flea beetles were released in 1998 in southeastern Montana on privately owned land used for cattle grazing. About 6,000 flea beetles were introduced onto 32 plots of leafy spurge, while 20 more plots went untreated. Over time, the beetles dispersed to the untreated plots, suppressing leafy spurge there as well.

By the study's end in 2006, leafy

spurge foliar cover was reduced 80% to 90% compared to 1998 assessments. While other vegetation did increase once this invader was controlled, another non-native plant, *Poa* spp., became the dominant species. Once established, strong invaders like leafy spurge may make the native plant community more susceptible to invasion by other non-native species. Any new infestations should be treated as soon as possible to reduce long-term effects such as contributions to the seed bank, native species loss, and ecosystem modification.

[Story from ScienceDaily.](#)



Leafy spurge is effectively controlled by the weed-eating flea beetle.
Photo: USDA

OPEN ENROLLMENT FOR AN ONLINE INVASIVE SPECIES MANAGEMENT TRAINING PROGRAM



Chinese wisteria is a beautiful—but invasive—plant in NC that students will learn how to control.

Photo: Michael L. Charters

Introduced invasive species are the number two threat to native plants and animals in the U.S., and they cause over \$150 billion in losses to the American economy, annually. Efforts to control invasive species are piecemeal and underfunded. Compounding the problem is a lack of trained technicians to assist with control and management efforts. People seeking invasive species management positions generally have training in biology, forestry, agronomy, or related fields—but generally no training or field experience in controlling invasive species.

In response to this need, Southeastern Community College in Whiteville, NC is offering the first ever college-level program to train invasive species field managers. Under this program, students may complete classes for continuing education requirements, a Certificate of Invasive Species Management, or an Associate in Science degree in Environmental Science Technology with a second year focus in invasive species management. The program series, which includes a full complement of online training materials, has been developed by

Randy and Rebecca Westbrooks over the last 3 years. Randy has spent 32 years working with invasive species specialists from around the world, and he intends to utilize this program to pass on his knowledge to the next generation of invasive species managers. Any interested individuals should contact Randy for more information or contact Rebecca for details about enrolling in the program.

Randy: rwestbrooks@Intrstar.net
Rebecca: rwestbrooks@sccnc.edu
910-642-7141 (Ext. 291)

TURNING AN INVASIVE SPECIES INTO A LIVELIHOOD

By Molly Theobald

In Kenya, for the over 5,000 people living in rural communities on or near its shore, Lake Victoria—the largest body of freshwater in Africa—is a life line. It is the main source of water for bathing, drinking, and cooking in the area and its fish populations provide both protein and income to families. “But the shores of Lake Victoria are choking,” says Shana Greene, founder and director of Village Volunteers, a Seattle-based organization that partners with rural communities around the world to create environmentally sustain-

able solutions for hunger and poverty.

“The shores of Lake Victoria are solid with water hyacinths,” continues Shana, and the invasive plant is having a disastrous effect on the wildlife and people who depend on it for survival. As a result, Village Volunteers is helping local communities to fight back and turn a potentially devastating situation into a financial boon.

“Water hyacinth is actually a really great raw material for so many things,” says Shana. “We are helping communities in Kenya harvest

it and use it to create tools to use in the home and to sell. We are using it to make fuel briquettes for cook fires and turning it into a very effective fertilizer.” Village Volunteers is also helping local entrepreneurs produce chairs, baskets, and other pieces of furniture that can be made by weaving together the tough stems and leaves of the hyacinths, as well as biodegradable sanitary napkins.

“The hyacinth invasion is an overwhelming problem,” says Shana, “but it is becoming a business.”

[Read the complete story.](#)



A villager weaves a couch out of water hyacinth stems.
Photo: Kipchumba Some

SEX TRAP THE NEXT WEAPON AGAINST CARP

In an Australian-first trial, adult carp in Lake Sorell are being implanted with hormones that stimulate the production of sex pheromones. The hormone-fueled carp are then used as a bait to lure wild carp into traps, preventing further mating. Professor Peter Sorensen from the University of Minnesota developed the implant. "When there's only a few dozen fish left in the lake, you're down to the residual population they're not limited

by food, but they are limited by reproductive opportunity," he said. "So sex trumps food." Environmental journalist Dan Egan says Asian carp are a big problem in the United States and nobody knows what to do about it. "Australia is known for being very progressive about invasive species problems and the fact that they've put this much effort and have come this close to eliminating all the carp in a lake this big is really interesting

and I think it's something we (the US) can learn from." "If they can do this without chemicals, then that's a first. That's important and that's going to have repercussions in the United States and beyond." The eradication team hopes to have Lake Sorell carp-free within five years.

[See the article from Australian Broadcasting Corporation \(ABC\) News.](#)



Pheromone implanted carp.
Photo: ABC News

EDDIES: REFLECTIONS ON FISHERIES CONSERVATION

The Fall 2010 issue of Eddies, a magazine by the U.S. Fish and Wildlife Service, is now online, and the focus for this edition is on aquatic invasive species. Read the articles to learn how the Service's Fisheries Program is combating invaders, including giant salvinia, "rock snot," pythons, common carp, and more.

[Click here to access the newest issue of Eddies.](#)

FOREST SERVICE TO RESEARCH HAWAII INVASIVE-NATIVE 'HYBRID ECOSYSTEM'

By Audrey McAvoy
Invasive species are so pervasive in Hawaii's low-lying areas that the U.S. Forest Service says it's not cost-effective or practical to eradicate them all. Instead, it's launching new research into developing "hybrid ecosystems" that will incorporate some non-native plants but allow native plants to thrive. The service has received a \$1.6 million grant from the Defense Department's strategic environmental research program to study the possibility.

"Invasive species are so prevalent. You're hand weeding, trying to eliminate them and aren't able to keep up with them. It feels like you're fighting a losing battle," said Susan Cordell, research ecologist with the Forest Service. "Restoring these lowland tropical forests to a historic native state is not financially or physically feasible." Hawaii's low-lying native trees and plants were wiped out by cattle, goats and other non-native mammals that were set free to graze after the arrival of the first Europeans in the

islands in the late 1700s. The animals trampled on ferns and undergrowth, drying the soil and tree roots. Later reforestation efforts resulted in the planting of fast-growing non-native trees like eucalyptus instead of native trees. To see intact native ecosystems, you have to climb high into the mountains. Cordell said the grant will allow researchers to find ways for native species to "coexist" with some non-native species.

[Learn more here.](#)

CANE TOAD DISCOVERED IN PERTH SUBURB

The Department of Environment and Conservation (DEC) is urging residents in Bayswater and surrounding suburbs to check their gardens for cane toads, following the discovery of the invasive pest in the front garden of a Bayswater residence. Mr Madgwick said it was unknown as to how the cane toad arrived in Perth. "DEC is investigating all possibilities, but the cane toad must have been transported from a population in Queensland,

northern New South Wales, the Northern Territory or the east Kimberley," he said. "We have set traps in the garden and are on the lookout for evidence of eggs. "The resident who discovered the cane toad should be praised for her quick response in capturing the toad and alerting authorities." DEC principal zoologist Peter Mawson said it was important for nearby residents to be on the lookout for cane toads. "The garden in which this toad

was found is extremely frog-friendly, and this toad has clearly sought the area out so we are urging people to check their gardens, especially if there is water around," he said. "Cane toads have been listed by the Invasive Species Specialist Group of the World Conservation Union as among 100 of the world's worst invasive alien species."

[Click here to get the full details.](#)



Cane toads can weigh over 4 pounds and live to be nearly 40 years old.
Photo: Bob Elsdale

The Nebraska Invasive Species Project

The Nebraska Cooperative Fish & Wildlife Research Unit, along with partners both state-wide and nationally, have joined together to provide information to the public and private sector on invasive species issues. This information includes basic invasive species biology, monitoring and management methods, and actual and potential impacts and risks of invasive species throughout the state.



NEBRASKA INVASIVE SPECIES PROJECT

NE Coop. Fish & Wildlife Research Unit

909 Hardin Hall, 3310 Holdrege

University of Nebraska-Lincoln

Lincoln, NE 68583-0984

Phone: 402-472-313

Fax: 402-472-2772

E-mail: invasives@unl.edu

<http://snr.unl.edu/invasives>



YOU CAN HELP PREVENT THE SPREAD OF INVASIVES



Gardeners—Plant Native...If you don't know it, don't grow it! Native plants often require less water!

Boaters and Fishermen—

Don't dump your bait buckets into the water supply. Drain and clean your boat and equipment.



Burn it where you buy it!

Never transport firewood—it can harbor harmful insects like the Emerald Ash Borer.

Pet Owners—never release your pets into the wild. They can release exotic diseases and damage habitats.

GET INVOLVED!!!

Stay informed; share your knowledge with others. You are our first line of defense.

The Nebraska Invasive Species Council

The purpose of the *Nebraska Invasive Species Advisory Council* is to coordinate invasive species management and research across the State for the prevention and detection of invasive plant and animal species. Through a coordinated effort, we intend to provide land managers with the information needed to utilize funding and resources more effectively and efficiently. Our goal is to minimize the effects of harmful invasive species on Nebraska's citizens and ensure the economic and environmental well-being of the state.

Nebraska Invasive Species Project:

<http://snr.unl.edu/invasives>