



AQUATIC INVASIVE SPECIES NEWS

6/22/21

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SPOTLIGHT:

[Ruskin lab creates invasive species scoring system to direct policy and prevention \(6/16/21\)](#)

For quite some time, Florida has faced a battle with some invasive species, including pythons and lionfish.

From the environmental impacts to the cost of trying to deal with them, non-native, invasive animals can be a drain on state and local resources.

"Think about pythons, lionfish; some of those big high-profile invaders," said Jeff Hill, a professor of fisheries and aquatics from the University of Florida.

A professor of fisheries and aquatics at the University of Florida, Jeff and his team have been studying invasive species at UF's Tropical Aquaculture Lab in Ruskin.

"We can use the science we've gained, really worldwide, to be able to try and predict what species are going to be a real problem if they get loose in a certain area," he said.

Hill's team has turned that knowledge into a tool kit, or a scoring system to identify some of the worst invaders worldwide.

[\[Continue Reading\]](#)

PUBLIC COMMENT

Public meeting scheduled on planned rotenone treatments of Eastern Washington waters

State fishery managers will host an online public meeting in early June to discuss plans to treat two lakes and a stream in Eastern Washington with rotenone, a naturally occurring pesticide commonly used to remove undesirable and illegally stocked fish species from lakes and streams. The Washington Department of Fish and Wildlife (WDFW) is proposing to treat Fish Lake and Schalow Pond in Okanogan County.

“These lakes will be treated with the goal of restoring popular trout fisheries by removing brown bullhead,” said Kenneth Behen, WDFW warmwater fish program manager. “These fish compete with and sometimes prey on stocked trout fry, rendering our trout stocking efforts ineffective.”

WDFW is also proposing to treat a 5-mile section of Flume Creek to remove non-native eastern brook trout and restore native westslope cutthroat trout, Behen said.

WDFW has scheduled an online public meeting to discuss the planned lake and stream treatments from 6 to 7 p.m. on Wednesday, June 9, 2021.

Information on how to log in and participate in this meeting will be posted at
<https://wdfw.wa.gov/get-involved/calendar/event/rotenone-treatments-eastern-washington>

In addition to input received at the public meeting, WDFW will also consider written comments received no later than **June 22, 2021**. The public can submit comment through WDFW’s State Environmental Policy Act webpage at <https://wdfw.wa.gov/licenses/environmental/sepa/open-comments> or send comments by mail to:

Kenneth Behen
Washington Department of Fish and Wildlife
P.O. Box 43200
Olympia, WA 98504-3200

A decision on whether to proceed with the planned treatments will be made by the WDFW director in late June.

NOAA Fisheries Seeking Comments on draft Programmatic Environmental Impact Statement (PEIS) for offshore aquaculture in federal waters of the Pacific Islands Region

NOAA Fisheries is seeking comments on a draft Programmatic Environmental Impact Statement (PEIS) evaluating the potential environmental impacts of a management program for offshore aquaculture in federal waters of the Pacific Islands Region. The draft PEIS is available at:

<https://www.regulations.gov/docket/NOAA-NMFS-2021-0044>

The agency is accepting comments through August 5, 2021

Aquaculture plays an important role in the region's and the nation's fisheries, contributing to seafood supply, fostering economic growth and development, restoring fish habitats, and helping preserve indigenous cultural practices.

The draft PEIS analyzes the potential direct, indirect, and cumulative effects of several management alternatives on the human, physical, and biological environment. This is an opportunity for the public to provide input on the environmental analysis and alternatives within the PEIS, which NOAA Fisheries will consider in any final PEIS and within any future management action by NOAA Fisheries and the Western Pacific Fishery Management Council.

NEW SPECIES SIGHTINGS

Want to get more new species alerts?

USGS NAS: <https://nas.er.usgs.gov/AlertSystem/default.aspx>

IMAP INVASIVES: <https://wwwimapinvasives.org>

DREISSENIDS

OTHER AIS

[British Columbia] Invasive Asian Clams found in Central Kootenay waters (6/10/21)

The Ministry of Environment (MOE) has confirmed that invasive Asian clams (*Corbicula fluminea*) were found in the Pend D'Oreille River this spring. This is the first confirmed presence of live invasive freshwater clams in the Central Kootenay region. However, this is not the first confirmation of these clams in B.C.: they exist in the lower mainland, and in 2020, they were found in Shuswap Lake. The MOE is assessing distribution and have conducted preliminary surveys near the *Salmo* River confluence.

[Colorado]

New Zealand Mudsail (*Potamopyrgus antipodarum*) have been positively identified in Sutherland Ditch Near Pueblo. The populations were initially reported by USGS Staff, identified by ANS Lab Staff and confirmed through molecular analysis by Pisces Molecular.

New Zealand Mudsail (*Potamopyrgus antipodarum*) has been positively identified in the Arkansas River immediately downstream of the known population in Badger Creek. The samples were initially detected by CPW ANS Staff, identified by ANS Lab Staff and confirmed through molecular analysis by Pisces Molecular.

[Wyoming]

Faxonius rusticus (Rusty Crayfish) was found in Lower Laramie River, near Tunnel Road
[USGS NAS]

Rusty Crayfish have been positively identified in the Laramie River below Wheatland Reservoir #2 and Bluegrass Creek. The populations were initially reported by University

of Wyoming research scientists, identified by WGFD AIS Staff and confirmed through molecular analysis by Pisces Molecular.

WATCH LIST

[Giant Asian 'murder hornet' found in Snohomish County for first time \(6/16/21\)](#)

An Asian giant hornet has been discovered in Snohomish County for the first time, and scientists say they are perplexed by the finding because the insect appears to be unrelated to the highly publicized giant hornet invasion in Whatcom County and southwest British Columbia.

[State to trap Asian giant hornets in Whatcom County. Citizen-scientist trappers are welcomed \(6/1/21\)](#)

[Montana Wants Help From Public In Reporting Snapping Turtle Sightings West Of Divide \(5/20/21\)](#)

[Wisconsin asks paddlers, hikers to report dangerous 'fig buttercup' flower \(4/28/21\)](#)

DREISSENIID MUSSELS

[Drought raises risk of invasive quagga mussels spreading to Utah bodies of water \(6/18/21\)](#)

The extreme drought is exposing quagga mussels on the walls of Lake Powell. They're getting knocked off and concentrating around boat ramps.

Olwer says up to 80 percent of boats leaving Powell for higher water carry hitch hikers.

[\[Texas\] Lake Brownwood, Medina Lake, and Inks Lake Now Fully "Infested" with Zebra Mussels \(6/17/21\)](#)

The Texas Parks and Wildlife Department (TPWD) has designated Lake Brownwood, Inks Lake, and Medina Lake in the Colorado and San Antonio River basins as 'infested' with invasive zebra mussels. Infested status signifies that there is an established, reproducing population of zebra mussels in the lake. The designation is a result of recent sampling efforts that revealed evidence that zebra mussels in Lake Brownwood and Medina Lake are now fully established and reproducing and detection of a new infestation in Inks Lake.

[University of Minnesota works on gene-editing techniques to stop zebra mussels \(6/11/21\)](#)

At the Minnesota Aquatic Invasive Species Research Center located on the University of Minnesota's St Paul Campus, director Nick Phelps is making progress developing genetic control strategies aimed at killing off zebra mussels once and for all.

"We can essentially snip out the gene that attaches to the rock. If it doesn't attach it falls to the bottom and dies," he explained. "Never been done in an aquatic setting like this, breaking ground here."

[\[Texas\] A lifetime problem: more zebra mussels have been found in Lake Brownwood \(6/9/21\)](#)

Addressing the Brown County Water Improvement District Board of Directors, John Allen displayed a plastic bottle with a small amount of water and two inch-long mollusks, easily visible at the bottom... There was no action for directors to take after hearing Allen's report. The water improvement district's engineering firm, Freese and Nichols of Abilene, is doing pre-design work to determine how to protect Lake Brownwood's infrastructure its pipes and pumps, Allen said.

[Looking for Mussels? A Dog Just Might Be Your Best Friend for That, Too. \(6/3/21\)](#)

Texas Tech researchers Nathan Hall and Matthew Barnes are undertaking a project to test canine olfactory abilities and eDNA technology to find invasive species... Their project, "Advancing Early Detection Technologies for Dreissenid Mussel Invasion in Texas," has received the backing of the U.S. Department of the Interior's Fish and Wildlife Service, which has funded the project through a \$233,641 grant. They hypothesize that detection canines and eDNA detection represent two state-of-the-art technologies that show similar sensitivity and capabilities, but that canines provide real-time results, and therefore represent a key advancement in detection technology.

BOAT INSPECTION/DECON/TECH NEWS

[\[Alberta\] Banff National Park to require watercraft permits in battle against invasive species \(6/17/21\)](#)

People who use non-motorized boating equipment in Banff National Park will have to have a permit filled out and ready to present to park officials starting Thursday.

The self-declaration permit is part of a larger campaign targeting aquatic invasive species in the park.

[Boaters required to stop at aquatic invasive species inspection stations in Oregon \(6/17/21\)](#)

All watercraft entering Oregon are required to be inspected at an aquatic invasive species station when the stations are open. Failure to stop at an open station could result in a \$110 fine.

Inspection stations located in Ashland and Ontario are open year-round and seasonal stations in Brookings, Klamath Falls, Lakeview and Umatilla are now operational.

[\[Texas\] The Zebra Mussel conservation dogs are back \(6/12/21\)](#)

Darby and her friends return to Lake Meredith on Thursday, June 10, 2021 through Sunday, June 13, 2021. If you haven't met Darby yet, she is a working conservation dog with a job detecting non-native Zebra Mussels on watercraft. Darby has been diagnosed with a tumor on her brain stem. She has taken radiation treatments and is doing well. The experts think she will live much longer to continue making a difference in the world and at Lake Meredith National Recreation Area.

[\[Wyoming\] Officials anticipate busy summer for DeSmet \(6/5/21\)](#)

In the summer of 2020, nearly double the number of boats were inspected at Lake DeSmet check stations than in 2019, and it's likely that this summer will be another busy one.

"Last year was through the roof. Between April 18 and Sept. 27, when Lake DeSmet check stations were open, over 10,000 watercraft were inspected," said Christina Schmidt, Wyoming Game and Fish Department public information specialist for the Sheridan Region. "In 2019, it was 5,768, so that number almost doubled."

[\[British Columbia\] Voluntary marine vessel pre-checks at Paddlewheel Park boat launch start Saturday \(6/4/21\)](#)

In addition to the safety checks, volunteers will be checking vessels for invasive quagga and zebra mussels. "This is a proactive initiative that will help keep our lakes and waterways protected and free from these invasive species," said Terleski.

BALLAST WATER/BIOFOULING

[Golden Bear joins accredited BWMS labs list \(6/22/21\)](#)

Golden Bear Research Center is located at the California State University Maritime Academy (Cal Maritime) and has testing facilities in the tidal waters around Vallejo and on board training ship Golden Bear. The facility has access to saltwater, brackish water and a nearby source of fresh water.

In addition to shoreside labs, there is the facility to conduct tests on 152-m long ship, Golden Bear. Golden Bear has travelled the world in the capacity of a training ship and Golden Bear Research Center has been able to test in real-life conditions. In 2020, testing has been limited to US waters using a mobile lab, but it has proven highly flexible.

In June 2021, Golden Bear Research Center received accreditation to ISO 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories.

[Tsunami of BWMS retrofits coming \(6/18/21\)](#)

EUMT Techcross Scandinavia consultant Per Nykjaer Jensen calculates 35,000 vessels still require ballast water management system (BWMS) retrofit installations over the next 40 months

[Investigation on Akademik Ioffe Grounding Calls for Additional Measures in Arctic \(6/14/21\)](#)

The Transportation Safety Board of Canada has concluded that the 2018 grounding of the passenger vessel Akademik Ioffe in the Canadian Arctic waters was caused by safety deficiencies and, therefore, called for additional sailing measures, according to an investigation. The Transportation Safety Board (TSB) has recommended developing and implementing mandatory mitigation measures in order to "ensure the safety of passenger vessels and to protect the vulnerable Arctic environment."

[Marine Safety Center issues Ballast Water Management System Type Approval Certificate to Evoqua Water Technologies Limited \(UK\) \(6/9/21\)](#)

The Coast Guard Marine Safety Center issued the 43rd U.S. Coast Guard Ballast Water Management System Type Approval Certificate to Evoqua Water Technologies Limited (UK) after a detailed review of the manufacturer's type approval application determined the system

met the requirements of 46 CFR 162.060. The treatment principle of the SeaCURE BWMS consists of filtration and electrolysis during uptake and neutralization at discharge. This approval covers 12 models with maximum treatment rated capacities between 500 m³/h and 6,000 m³/h.

[Wildlife sick of being dumped on by ships in Canada's marine protected areas \(6/8/21\)](#)

WWF-Canada is asking the federal government to finally develop a comprehensive definition of dumping that prohibits the release of all harmful substances from cruise ships and commercial shipping vessels in these ecologically sensitive areas. This includes sewage and grey water, both treated and untreated; scrubber effluent, which is the washwater from exhaust gas cleaning systems; solid waste like plastics and other garbage; ballast water; and oily mixtures.

[Danish Shipping designates ballast water requirements as "the convention from hell" \(6/4/21\)](#)

Danish Shipping is confident that Danish vessels will live up to stricter environmental requirements in time, although the organization calls it "the convention from hell." As a result, no statistical data is being recorded on how many vessels are still lacking a ballast water system, says executive director of Danish Shipping to ShippingWatch.

[This Deadly Coral Disease Is Threatening More Than Just Reefs \(6/3/21\)](#)

Whatever is behind the disease, the consequences of not stopping it would be dire. White band disease, first detected in the 1970s, eventually killed 80% of reef-building elkhorn and staghorn corals, which once provided critical habitat for marine life in the Caribbean. Stony coral tissue loss could result in comparable devastation, according to Lang.

Researchers have honed in on the \$176 billion global shipping industry as a possible culprit. Ballast water, which ships routinely take on and discharge to maintain stability as they on and offload cargo, has already been proved responsible for transmitting invasive species such as zebra mussels, as well as bacteria including Vibrio and E. coli.

As a precautionary measure, the U.S. Coast Guard issued a two-page bulletin in September 2019 reminding commercial vessels of mandatory ballast water practices and additional voluntary recommendations to mitigate the potential spread of the disease. One of the primary requirements is that ships conduct ballast water exchanges at least 200 nautical miles offshore in most cases. According to the document, some are conducting such exchanges as close as 12 nautical miles out.

Natalie M. Hull and Karl G. Linden. 2021. [On applicability of a cell proliferation assay to examine DNA concentration of UV- and chlorine-treated organisms – a rebuttal of Molina et al. \(2019\).](#) Management of Biological Invasions. 12(2): 240–245

Vanessa Molina, Scott C. Riley, Stephanie H. Robbins-Wamsley, Matthew R. First and Lisa A. Drake. 2021. [Response to Letter to the Editor from Hull and Linden \(2020\).](#) Management of Biological Invasions. 12(2): 246–252

MARINE

Unidentified sponge may be the latest marine species invading Island harbour (6/16/21)

A retired government marine biologist is trying to identify what may be an entirely new species, but is more likely the latest example of an ongoing marine invasion into Ladysmith Harbour. Rick Harbo, who worked for 36 years for the Department of Fisheries and Oceans and is now a research associate with the Royal Museum in Victoria, has discovered a unique sea sponge that may only be found at the head of Ladysmith's harbour. "We found a new species of sponge. I believe it was introduced. It's probably not a new species, but we've looked through the literature and have not been able to find a description of it," Harbo said.

Invasive Crabs Found in Squalicum Harbor (6/15/21)

Invasive European green crabs have been discovered in Bellingham's Squalicum Harbor. The Port of Bellingham says Marine Life Center Director Casey Cook found one specimen on June 2nd in a trap the center uses for educational purposes.

Plastic rafting: the invasive species hitching a ride on ocean litter (6/14/21)

Japan's 2011 tsunami was catastrophic, killing nearly 16,000 people, destroying homes and infrastructure, and sweeping an estimated 5m tons of debris out to sea. That debris did not disappear, however. Some of it drifted all the way across the Pacific, reaching the shores of Hawaii, Alaska and California – and with it came hitchhikers. Nearly 300 different non-native species caught a lift across the ocean in what can be thought of as a "mass rafting" event. The Smithsonian Environmental Research Center in 2017 counted 289 Japanese marine species that were carried to distant shores after the tsunami, including sea snails, sea anemones and isopods, a type of crustacean.

Sylvia Behrens Yamada, Jennifer L. Fisher, P. Michael Kosro. 2021. Relationship between ocean ecosystem indicators and year class strength of the invasive European green crab (*Carcinus maenas*). *Progress in Oceanography*. <https://doi.org/10.1016/j.pocean.2021.102618> [\$]

Study confirms invasive lionfish now threaten species along Brazilian coast (6/3/21)

Researchers say management of the predatory fish is critical to protecting Brazil's coral reefs and marine biodiversity.

Judith Pederson, James T. Carlton, Carolina Bastidas, Andrew David, Sara Grady, Lindsay Green-Gavrielidis, Niels-Viggo Hobbs, Cristina Kennedy, Jennifer Knack, Megan McCuller, Brandon O'Brien, Kristin Osborne, Sabrina Pankey and Thomas Trott. 2021. 2019 Rapid Assessment Survey of marine bioinvasions of southern New England and New York, USA, with an overview of new records and range expansions. *Bioinvasions Records*. 10(2) 227-237

AQUACULTURE

[Aquaculture advocates want to bring more Oregon-grown fish from farm to table \(6/21/21\)](#)

Fish farming could be key to feeding future generations — and some in Oregon are hoping the state can cash in.

[Discovery Island fish farms not allowed to restock \(6/17/21\)](#)

An application by fish farm operators in the Discovery Islands to restock or extend their licenses has been denied by DFO. On June 14, the Department of Fisheries and Oceans Canada announced that Cermaq Canada Ltd.'s April application to restock their fish farms in the area, as well as extend current licences until Feb. 2023 was denied.

[Salmon virus originally from the Atlantic, spread to wild Pacific salmon from farms \(5/26/21\)](#)

Piscine orthoreovirus (PRV) -- which is associated with kidney and liver damage in Chinook salmon -- is continually being transmitted between open-net salmon farms and wild juvenile Chinook salmon in British Columbia waters, according to a [new genomics analysis published today in Science Advances](#). The collaborative study from the University of British Columbia (UBC) and the Strategic Salmon Health Initiative (SSH) -- a partnership between Fisheries and Oceans Canada (DFO), Genome BC and the Pacific Salmon Foundation -- traces the origins of PRV to Atlantic salmon farms in Norway and finds that the virus is now almost ubiquitous in salmon farms in B.C.

FISH

[Predicting the spread of invasive carp using river water flows \(6/16/21\)](#)

University of Missouri engineers are partnering with the US Geological Survey to better understand how to stop invasive carp from damaging both the economy and the environment

[Asian Carp to Undergo Name Change \(6/7/21\)](#)

At the end of this month, Illinoisans will no longer hear the words “Asian carp.” After several years and hundreds upon hundreds of millions spent trying to keep them from the Great Lakes, how can that possibly be?

And why does this news have environmentalists and the state’s commercial fishing industry swimming in, or leaping with optimism? ...

“We’re trying to make the name more attractive, so people will be more inclined to purchase them and have them for table fare, have them for dinner,” said John Rogner, assistant director of the Illinois Department of Natural Resources.

So what exactly is wrong with the name Asian carp?

“You made a face when I said carp. When I say carp, everyone makes that face,” Fucik said on a recent visit to his store...

As for the naming criteria, Fucik has some ideas.

“You know, simple, short and not carp,” he said.

[\[California\] IID staff embraces ‘Carp’ediem \(6/4/21\)](#)

In a watery world of their own, six staff, one woman and five men, oversee hundreds of thousands of births, literally hands on. In a small building surrounded by ponds, a room is dedicated to six giant buckets filled with water and either a very pregnant female carp or male await their moment of contributing to clean, weed free canals. On the opposite side, five-gallon glass containers carry thousands of fertilized Asian Carp eggs floating in suspension, waiting for the fries to grow large and strong enough to break free of their gelatinous home.

This is the Imperial Irrigation District’s answer to cleaning up the canals and wetlands of aquatic weeds that quickly take over and impede the flow of water. After trying mechanized and chemical solutions, which were expensive and unproductive, the District tried Asian Carp with amazing results. Hydrilla once threatened to choke off the Valley’s life-giving water supply.

After one year of releasing the carp, 95 percent of the noxious weed was gone.

[Facial recognition for fish? Researchers test technology on Asian carp in battle to keep them out of Lake Michigan \(6/2/21\)](#)

Keeping invasive carp out of the Great Lakes has involved a series of less-than-silver bullets — from commercial fishing to carbon dioxide experiments to the forthcoming Brandon Road barriers near Joliet from the U.S. Army Corps of Engineers.

Now, fish recognition is entering the fray.

Illinois researchers are preparing for another test run of a system that could get Asian carp out of waterways while also helping native fish travel. The technology comes from Whooshh Innovations, a company “disrupting the world of fish passage” — and popularly known for the viral fish tube, or salmon cannon. The experiment is taking place at the Nature Conservancy’s Emiquon, a more than 6,000-acre wetland restored along the Illinois River that is teeming with wildlife, biodiversity and, like many places these days, Asian carp.

Graham E. Forrester, Kristian B. Dzilenski and David W. Gleeson. 2021. [Use of social-media networking to facilitate a grass-roots lionfish removal program in the British Virgin Islands.](#) Management of Biological Invasions. 12(2): 420–440

AQUATIC PLANTS

[Problem plants: 10 invasive species making a mess in Florida's ecosystem \(6/19/21\)](#)

The delicate white flowers and overlapping leaves of the aquatic Nymphoides cristata, commonly known as crested floating heart, can feel reminiscent of a Claude Monet painting. But don’t be fooled by its beauty — it’s one of the many invasive plant species found in Florida that experts say needs to go.

"People see green as good," said Jason Ferrell, a professor and director of the University of Florida's Center for Aquatic and Invasive Plants. "Just because it doesn't have scales, fangs and a forked tongue doesn't mean it's good for the environment." In 2017, one or more non-native plants were found in 96% of Florida's public waters that were inventoried, according to the center's website.

Carla Muller, Deborah Hofstra and Paul Champion. 2021. [Eradication economics for invasive alien aquatic plants](#). Management of Biological Invasions. 12(2): 253–271)

FRESHWATER

[The Science of Non-Native Species in a Dynamic Delta; a review by the Delta Independent Science Board \(6/21\)](#)

The Delta Independent Science Board (Delta ISB), which provides scientific oversight of programs that support adaptive management, has finished its review on the science of non-native species in the Sacramento-San Joaquin Delta (Delta). The review highlights the importance of anticipation – getting ahead of non-native species invasions for prevention and mitigation – as non-native species threaten Delta ecosystem services and the ability to protect, restore, enhance, and define the Delta ecosystem. The Delta ISB encourages a more ecosystem-level, forward-looking, integrated approach to non-native species science in the Delta with specific consideration of climate change. The review offers seven specific recommendations.

[Virginia On Alert For Invasive Nutria \(6/15/21\)](#)

The battle against invasive species never ends. Maryland is closing the book on its long battle with nutria, the beaver-sized rodent that devastated marshes on the Eastern Shore in and around the Blackwater National Wildlife Refuge. Virginia, however, is facing a threat from the South American furbearer, which may be expanding its range from the far southeast portion of the state up across the James River to the beautiful Chickahominy River, just west of Williamsburg.

[Watch out nutria, it ain't over yet: Marsh Dog getting new life under Minnesota pet food maker \(6/15/21\)](#)

Marsh Dog, the company that turned wetland-destroying nutria into high-end dog biscuits, is being sold just a month after its closure to national pet food manufacturer Chasing Our Tails in Minnesota. Chasing Our Tails expects to relaunch Marsh Dog's line-up later this month and expand into pet food from other invasive species. The purchase price was not disclosed.

[Fish of the Week podcast: Bad 'dads: Kodiak Island's Invasive Crawdads \(6/14/21\)](#)

Just in time for Alaska's Invasive Species Awareness Week: A conversation about the invasive signal crayfish on Kodiak Island. [[accompanying blog post](#)]

Related: [Kodiak's own unique invasive pest: crayfish \(6/16/21\)](#)

[\[Saskatchewan\] Aquatic invasive species coordinator on illegal releasing of pet fish \(6/8/21\)](#)

Saskatchewan Aquatic Invasive Species Coordinator Jeri Geiger talks about the negative impacts of illegally releasing pet fish into the province's water bodies.

[\[Florida\] UF Scientists Discover How A Native Fish Prevents The Establishment Of A Globally Invasive Species \(6/3/21\)](#)

In the battle of mosquitofish against guppies, University of Florida scientists found that the native mosquitofish won, and that's good for our ecosystems.

Invasive species are one of the greatest threats to biodiversity as they damage Florida's ecosystems. Recent University of Florida research shows managing invasive species costs \$45 million each year in Florida. Count guppies among the invaders.

A [new study led by a UF/IFAS researcher](#) sheds light on the role that native species can play in preventing the establishment of invasive species. After a species is introduced into a new environment, it can "establish" itself by forming a self-sustaining population. But most invaders do not survive.

[Invasive crayfish pose threat to Wyoming's native species, state says \(6/2/21\)](#)

An invasive species of crayfish has been discovered in the Laramie River after being illegally introduced.

The rusty crayfish has been found near Tunnel Road and the Laramie Wildlife Habitat Management Area, according to Wyoming Game and Fish Department's (WGFD) Laramie Region Fishery Supervisor Bobby Compton.

Although the first discovery of the invasive aquatic critters was made only in September, Compton said the crayfish were likely introduced between 15 and 20 years ago.

"They were likely brought in with other sport fish, which were stocked legally," he told The Center Square.

A fish hatchery likely brought the crayfish in as they provide good forage for larger fish like trout, he said.

[Invasive snails on the run leave behind DNA evidence \(6/2/21\)](#)

DNA sleuthing helped scientists spot early outcrops of a spreading snail invasion in Pennsylvania. The method could be used to spot the unwanted critters before they cause serious damage. That way, conservationists can stop them from conquering even more places.

New Zealand mud snails became a global pest in part because they can reproduce asexually — just one snail in a new area can essentially clone itself until there are 500,000 snails in a single square yard. They're about the length of a pencil eraser so they're hard to find until there are so many in a location that it's nearly impossible to stop their spread.

"It's kind of weird because as an invasive ecologist, I never really want to find this thing," says Edward Levri, a Pennsylvania State University-Altoona professor and senior author of [a new study published this week in the journal Biological Invasions](#). "It's sort of an exciting feeling, it opens the door for us to be able to use this technology to detect the snail at a much wider scale."

Alisha Dahlstrom Davidson, Andrew J. Tucker, W. Lindsay Chadderton and Cecilia Weibert. 2021. [Development of a surveillance species list to inform aquatic invasive species management in the Laurentian Great Lakes](#). Management of Biological Invasions. 12(2): 272–293

Samantha N. Tank, Seth J. Herbst and Daniel B. Hayes. 2021. [Evaluation of a qualitative survey for early detection monitoring of New Zealand mudsnail](#). Management of Biological Invasions. 12(2): 344–362

Margaret C. McEachran, Sunil Kumar Mor and Nicholas B.D. Phelps. 2021. [Detection of pathogens and non-target species in the baitfish supply chain](#). Management of Biological Invasions. 12(2): 363–377

Lynda R. LaFond, Jared E. House, Sabin J. Adams, Debbie L. Guelda and Charlotte L. Roy. 2021. [Freezing mortality of faucet snails, *Bithynia tentaculata*: a viable method for equipment decontamination to reduce aquatic invasive species spread.](#) Management of Biological Invasions. 12(2): 378–388

CLIMATE CHANGE

[Climate change fans spread of pests and threatens plants and crops, new FAO study \(6/2/21\)](#)

Due to the impact of climate change, plant pests that ravage economically important crops are becoming more destructive and posing an increasing threat to food security and the environment, finds a scientific review released on Tuesday.

[The Scientific Review on the Impact of Climate Change on Plant Pests - A global challenge to prevent and mitigate plant pest risks in agriculture, forestry and ecosystems](#) by Professor Maria Lodovica Gullino, University of Turin (Italy), and ten co-authors from around the world was prepared under the auspices of the Secretariat of the International Plant Protection Convention, hosted by FAO, and is one of the key initiatives of the International Year of Plant Health, which is coming to an end this month.

"The key findings of this review should alert all of us on how climate change may affect how infectious, distributed and severe pests can become around the world," said the Director-General of the Food and Agriculture Organization of the United Nations (FAO), QU Dongyu, at the launch.

"The review clearly shows that the impact of climate change is one of the greatest challenges the plant health community is facing," added Qu.

OTHER

[Albertans encouraged to "squeal on pigs" to help eradicate destructive invasive species \(6/15/21\)](#)

While many may have heard about parts of the United States being overrun by herds of wild boars, some would be surprised to find out that central Alberta is a hotspot for the destructive hogs as well.

Related: [Washington looks to head off potential invasion of feral pigs](#)

[\[Wyoming\]White-nose syndrome detected in bats at Devils Tower National Monument \(6/15/21\)](#)

Wildlife researchers have confirmed the presence of white-nose syndrome (WNS) in bats at Devils Tower National Monument. While this is the first confirmation of WNS in the state, the fungus that causes WNS, *Pseudogymnoascus destructans* (Pd), was potentially detected in southeast Wyoming as early as 2018.

[Invasive Species Can Sometimes Help an Ecosystem \(6/12/21\)](#)

In Hawaii, imported birds have taken on some of the roles once performed by those that have gone extinct—but there's a catch ...

[Be aware of invasive species, Yukoners told \(6/10/21\)](#)

The Yukon Invasive Species Council continues to work to inform Yukoners about the territories invasive, plant, animal and aquatic species

[\[Guam\] Invasive plants make a glamorous entry with consequences \(6/4/21\)](#)

Unfortunately, many plant nurseries do not sell many native species. Non-native tropical plants often have exquisite flowers and nurseries import them for landscaping purposes. Plants are also brought into Guam for agricultural purposes, while others hitchhike unnoticed along with these plants or in cargo.

[New Little Fire Ant Infestation Discovered in Huelo, Maui \(6/3/21\)](#)

A new infestation of stinging and invasive little fire ants was confirmed on a property in Huelo, Maui in early May. Despite the proximity of this site to another infestation in Huelo, experts from the Maui Invasive Species Committee say these sites do not appear to be related.

OUTREACH AND EDUCATION

[USFWS] Thrilled to let you know that Sam Stukel's invasive carp imagery is now openly available on the [USFWS' Mountain Prairie Flickr website](#). This collection is two years in the making in Sam's special photo lab at Gavins Point NFH. Thanks to Jennifer Johnson and Jason Kral for field collections of yoy carp last year. Thanks to Patrick DeHaan for sending additional species from the USGS-CERC lab this year. Many thanks of course to Sam for the photos and Nick Starzl, hatchery manager, for supporting the work. Sam is also maintaining aquaria with the carp, hoping to photograph them again if they'll grow in captivity. It is our hope that these photos will aid all of us in our invasive carp outreach. The media splash during NISAW was telling, with very few people able to identify the small carp (and most of those were professional fish biologists).

JOBS/GRANTS

[Canadian Council on Invasive Species Job Opportunity: "Communications Assistant"](#)

CCIS are looking for a highly motivated, detail-oriented, individual to assist the CCIS in enhancing our communications to engage Canadians to act against invasive species. Specific responsibilities include:

- Implementing and monitoring digital media including social, email and web.
- Assisting with the development and implementation of communications activities.
- Research and implement innovative communications strategies including for specific target audiences and media.
- Tracking and reporting social media, website, and other online engagements
- Writing newsletters, education materials and other communications materials
- Plan and host a series of educational webinars.
- Performing regular updates to the CCIS' website (WordPress).

Applications are being accepted no later than **Friday, June 25. 2021.**

[Invasive Species Council of British Columbia](#) offers a wide range of employment opportunities for people who are passionate about making a difference to BC's outdoors. Enjoy a rewarding career with ISCBC with great benefits. Most of our team works remotely in BC and full-time staff are provided a competitive package including benefits, annual vacation and flexible schedules. Open positions include:

[Community Science Facilitator](#)

[Invasive Species Action Team](#)

[Education Coordinator](#)

[Iowa State University: Research Scientist and MS Graduate Student Assistantship - Invasive Carp telemetry in tributaries](#)

Two (2) job opportunities for a full time Research Scientist and a MS Graduate Student investigating invasive carp (Bighead and Silver Carp) tributary movements and survival using acoustic telemetry. **Application period for both positions ends on June 25, 2021.** Start dates are flexible, between August 1, 2021 - January 1, 2022. Earlier start dates are preferred

Both positions will assist with the collection of fish in the field and processing samples in the laboratory. The successful candidates will deploy and maintain acoustic telemetry receivers in rivers and tag fish with acoustic transmitters to assess seasonal tributary movements, fish behaviors, and survival in relation to environmental characteristics. Additionally, these positions will work closely with state and federal partners, train students on appropriate use of field and laboratory equipment, and responsible for data quality control in the field and the lab. The successful candidates will conduct data analysis and assists in writing technical reports and scientific manuscripts.

Successful candidates will possess excellent organization skills, demonstrated technical writing skills, interpersonal communication skills, and the ability to meet deadlines. The candidates will be proficient in MS Office Suite and analysis (e.g., R, SAS) and graphing (e.g., R, SigmaPlot) software. These positions require in-state travel that may include overnight stays.

[PSMFC: Data Management Specialist 2 \(Natural Sciences\) Northern Pikeminnow and RecFIN Programs](#)

Position/Project Specifics:

Assists with the maintenance, enhancement and operation of the Northern Pikeminnow Sport Reward Program (Pikeminnow.org), the PSMFC RecFIN database, and other related fisheries data programs at PSMFC. Assists the Senior Program Manager with management and operation of these programs and others as assigned. Plans and carries out assignments independently under general program guidance of supervisor.

This program is part of the Pacific States Marine Fisheries Commission (PSMFC), which offers competitive compensation and a generous benefits package. Our office is located on the Willamette River in the Sellwood neighborhood of Portland, Oregon, just off the Springwater Corridor. We offer a casual and friendly workplace. **Closing date: Jun 27, 2021**

Seasonal Watercraft Inspector

Seasonal - \$14.00 - \$17.00 Hourly

Department: Land Services

Love our lakes? Help prevent the spread of aquatic invasive species and share our vision of being Minnesota's favorite place. Recruiting up to 70 watercraft inspectors to work May through September at various boat landings in Crow Wing County. Applications will be reviewed periodically to get our full team in place.

Invasive Plant Early Detection and Rapid Response Crew Member - Yosemite National Park

In cooperation with the National Park Service Yosemite National Park (YOSE), the Great Basin Institute is recruiting an Invasive Plant Early Detection and Rapid Response Crew Member who will work in the Invasive Plant Program at Yosemite National Park. The main duties of this position will be to survey for and treat invasive plants in recently burned areas in Yosemite National Park. The incumbent will work under the direction of a crew lead, and will be supervised by the Invasive Plant Program Manager within the Division of Resource Management and Science in the Branch of Vegetation and Ecological Restoration at Yosemite National Park. Primary duties of the Crew Member include:

- Communicate orally and in writing with crew lead, supervisor, and other staff who may have different duty stations.
- Correctly identify and train others to identify plants to the species level by sight ID and using dichotomous keys and other tools. Position requires strong botany skills to be able to identify new and/or previously unknown populations of many invasive plant species on a landscape level.
- Determine rates, mix, keep records of, and apply chemical herbicides.
- Collect geographic and plant population data using Collector for ArcGIS on a GPS enabled mobile device.

USDA Wildlife Specialist (Conflict Prevention) GS 4/5/6 in Oregon

Full-time, term position (seasonal) with possibility of benefits open. Individuals will organize and conduct direct control operations, including conflict prevention, to reduce wildlife damage. The chosen candidate will assist biologists by correctly identifying current problems and forecasting future damage, relating them to the species causing damage. The individual will also determine and select the most effective means of control. They will conduct all operations using approved safety procedures and in accordance with local, state and federal laws and regulations, and USDA/APHIS/WS policies.

Open through June 29.

Join Our Team! Central Kootenay Invasive Species Society is Hiring a Program Assistant

Are you passionate about environmental conservation? Do you want to join a dedicated and dynamic team to help protect the Central Kootenay region from the impact of invasive species? This is an exciting opportunity for someone with strong organizational skills who is looking for flexible, meaningful work with an established non-profit organization.

Overview

Title: Program Assistant

Term: Permanent position

Hours: Approximately 24h/week (flexible schedule)

Location: Nelson, BC

DEADLINE TO APPLY: Friday, July 9, 2021 by 5:00pm

GRANTS

[Water Resources Research Act Program Aquatic Invasive Species Competitive Grants FY2021 Program Announcement Notice of Funding Opportunity - Fiscal Year 2021 Funding Opportunity Number \(FON\) G21AS00520](#)

Closing Date: 06/24/2021

Section 104(g) of the Water Resources Research Act of 1984 requires that this competitive grant program focus on: “water problems and issues of a regional or interstate nature beyond those of concern only to a single State and which relate to specific program priorities identified jointly by the Secretary (of the Interior) and the (water resources research) institutes.” Objectives of this program announcement also include the following:

- A. Promote aquatic invasive species research as related to hydrodynamics, water quality, and/or social science in the Upper Mississippi River basin to address a critical need for this state multi- state research.
- B. Promote the dissemination and application of the results of the research funded under this program.
- C. Assist in the training of scientists in relevant water resource fields. Proposals that include a strong educational component (student support) are encouraged, as are proposals from faculty beginning their careers.

[2021 USDA APHIS VS Farm Bill NADPRP Funding Opportunity is Open](#)

The United States Department of Agriculture’s (USDA) Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) is announcing the 2021 competitive funding opportunity for the National Animal Disease Preparedness and Response Program (NADPRP).

Established in the 2018 Farm Bill, this program allows APHIS to collaborate with animal health partners to implement high-value projects that enhance prevention, preparedness, detection, and response to the most damaging emerging and foreign animal diseases that threaten U.S. agriculture. Funded proposals are managed via cooperative or interagency agreements.

In this funding opportunity, APHIS VS invites eligible entities to submit proposals for projects that will:

- develop and/or enhance State and Tribal foreign animal disease (FAD) vaccination plans to improve animal disease outbreak response capabilities,
- support animal movement decisions in an FAD outbreak, or
- strengthen outreach and education on animal disease prevention, preparedness, and response to specific audiences.

Additional information is available on the USDA APHIS NADPRP website. Proposals must be submitted by 11:59 PM EDT on **Aug 6, 2021**.

FEDERAL/STATE/PROVINCIAL LEGISLATION, RULES, ACTIONS

[**Advocacy**](#)

[**State/Province**](#)

[**Judicial**](#)

[**Executive**](#)

[**President's proposal would increase Interior funding \(6/2/21\)**](#)

Under the presidents' proposal, the [Department of the Interior](#) would see a 16% increase to \$17.4 billion. The proposal would increase funding from \$72.4 million to \$82.4 million for the [State and Tribal Wildlife Grants](#) program, which directly supports states, tribes and territories in keeping common species common and preventing wildlife from becoming threatened or endangered. The Wildlife Society [recommended](#) funding of \$100 million for State and Tribal Wildlife Grants in FY 2022.

For further information on the President's budget see:

- [FY 2022 President's Budget](#)
- [Fact Sheet: The President's Budget for Fiscal Year 2022](#)
- [Appendix Budget of the U.S. Government Fiscal Year 2022](#)
 - [Department of Agriculture](#)
 - [Department of Commerce](#)
 - [Department of the Interior](#)
 - [Corps of Engineers—Civil Works](#)

[**Congressional**](#)

[**Chair Grijalva Introduces Ocean-Based Climate Solutions Act – New Version Creates Virgin Plastic Fee \(6/8/21\)**](#)

Money collected from the new tax on virgin plastic manufacturers would go toward conservation efforts mentioned in the [bill](#), including \$50 million a year through 2026 for a NOAA program that promotes a living shoreline project.

AIS Language in the bill:

SEC. 302. CAUGHT IN THE USA. Section 2(c)(1) of the Act of August 11, 1939 (15 U.S.C. 713c–3(c)(1)) is amended to read as follows: “(1) The Secretary shall make grants from the fund established under subsection (b) to—

‘(B) assist persons to market and promote the consumption of—“(i) local or domestic marine fishery products; “(ii) environmentally and climate- friendly marine fishery products that minimize and employ efforts to avoid bycatch and impacts on marine mammals; “(iii) invasive species; etc., etc.

(B) Coastal Science And Assessment: Competitive External Research.—

(1) IN GENERAL.—The Administrator shall establish an annual competitive grants program that gives priority to interdisciplinary coastal resilience research projects that focus on developing scalable best practices for—

(K) evaluating potential outcomes associated with developing new commercial and recreational fishery resources, including aqua-culture and targeting invasive and range-expanding species;

Murkowski and Colleagues Stand Up for Wild-Caught Salmon; Reintroduce Bill for Clear Labels on Genetically Engineered Salmon (6/4/21)

U.S. Senator Lisa Murkowski (R-AK) reintroduced the [Genetically Engineered Salmon Labeling Act](#), which will allow consumers to make informed decisions when purchasing salmon. The bill works to ensure that any genetically engineered (GE) salmon products sold in the U.S. are clearly labeled “genetically engineered” in the market name. This requirement would apply to the entire lineage of salmon modified via recombinant DNA technology. The bill is co-sponsored by U.S. Senators Dan Sullivan (R-AK), Maria Cantwell (D-WA), and Jeff Merkley (D-OR).

Appropriations

House Democrats to kick off \$1.5 trillion spending process without budget (6/14/21)

House Democrats on Monday moved to advance the annual appropriations process for 2022 without a budget resolution. House Budget Committee Chair [John Yarmuth](#) (D-Ky.) filed with the House Rules Committee a \$1.5 trillion [deeming resolution](#), which would allow appropriators to begin writing their 12 annual spending bills.

An AIS federal legislative table is posted on the web on the www.westernais.org website. Go to <https://www.westernais.org/regulations> and scroll all the way to the bottom

TRAININGS, WEBINARS, CONFERENCES AND MEETINGS

Archived Materials

Events: Webinars, Trainings, Conferences and Meetings

Watercraft Inspection Training

For more information go to <https://www.westernais.org/> (under the “Training” tab) or contact Quagga D @ (702)236-3814 or quaggadee@cox.net

Because of continued concerns due to COVID-19 upcoming meetings and events listed below may be postponed, cancelled or converted to teleconferencing events. Please check directly with the organizers of these events for the most up-to-date information.

2021

June

Ballast Water Webinar Week June 22 – June 24

Beginning Tuesday 22 June, we will be holding a series of daily webinars, each meticulously researched and focused on different facets of ballast water. The webinars are designed to strike the right balance between transmission of key information and interaction with the expert panel assembled.

July

2021 Summer Student Seminar Series

The U.S. Geological Survey's Nonindigenous Aquatic Species Database presents a seminar series focused on providing undergraduate students and early career scientists insight into federal career options as well as how various federal agencies work on invasive species issues nationwide. All seminars start at 3pm (Eastern)

- July 9 - Dr. Cindy Tam (U.S. Geological Survey)
- July 14 - Dr. Doran Mason (National Oceanic and Atmospheric Administration/University of Florida)
- July 16 - Jolene Trujillo (U.S. Bureau of Reclamation)
- July 21 - Chelsea Bahaty (U.S. Army Corps of Engineers)
- July 23 - Kaitlin Kovacs (U.S. Geological Survey)

- July 28 - Yale Passamaneck (U.S. Bureau of Reclamation)
- July 30 - Dr. Rochelle Sturtevant (National Oceanic and Atmospheric Administration)
- August 4 - Mike Ielmini (U.S. Forest Service)
- August 6 - Dr. Earl Campbell (U.S. Fish and Wildlife Service)
- August 11 - Dr. Craig Martin (U.S. Fish and Wildlife Service)
- August 13 - Katie O'Donnell (U.S. Geological Survey)
- August 20 - Dr. Jacoby Carter (U.S. Geological Survey)

NAISMA Monthly Webinar:

[July 21, 1 p.m. CT - Best Management Practices for Pesticide Applications](#)

Description: To use pesticides legally and efficaciously the first step is to identify the pest. Then determine your pest management strategy. If a pesticide or mixture of pesticides is the best choice, the pest manager must read, understand and follow the pesticide product's label. This presentation will "walk-through" a number of key label statements. Emphasis will be placed on the importance of assuring the site is allowed on the label, environmental hazard statements, mixing compatibility and jar tests, and sprayer clean-up procedures.

August

[2021 Pacific Northwest Economic Region 30th Annual Summit](#)

Date: Aug 15, 2021 to Aug 19, 2021

Venue: Big Sky Resort

Location: Big Sky, Montana

Notes: Rescheduled from 2020 to 2021

NAISMA Monthly Webinar:

[August 18, 1 p.m. CT - Racial Equity & Environmentalism](#)

Description: This presentation will provide the history of the construction of race, (a key component in driving these inequities), while also examining environmental policies that have had a layered impact on the environmental movement and contributed to the racial homogeneity we see today. The goal of this presentation is to help participants understand why these inequities exist and develop shared language for how to discuss these issues and interrogate the intricate relationship between race and institutional outcomes.

September

The [Western Regional Panel on ANS](#) will be hosting their Annual Meeting in Salt Lake City, UT the week of September 20-24. If you are interested in presenting at the Annual Meeting, please provide an abstract outlining the content of your presentation using this [Google form](#). All presentations must be relevant to AIS with particular attention to innovative, forward-thinking research and technology. The deadline for submitting abstracts will be May 30th, 2021. The WRP Annual Meeting Planning Team will decide which presentations are accepted by June 2021, and you can expect a notification around that time.

[North American Invasive Species Management Association Annual Conference](#) September 27-30, 2021; Missoula, Montana (with online options) The only invasive species management conference to... Bridge geographic divides between West and East, North and South, land and water, Connect science to action through research, policy, and outreach initiatives and opportunities across North America. cohosted by Montana Invasive Species Council

October

The Invasive Species Council of BC is pleased to host the [2021 Invasive Species Research Conference: Turning Science into Action](#) October 6-7, 2021 If you didn't manage to submit your abstract for the 2021 Invasive Species Research Conference “ *Turning Science into Action*”, we bring good news: the [abstract submission deadline](#) has been extended to **June 30!** For any inquiries please contact Nick - projects@BCinvasives.ca

[World Fisheries Congress](#) 11-15 October, 2021 Adelaide, Australia

[Save the date: WALPA is heading to the Tri-Cities this fall!](#) WALPA is returning to the east side in 2021 to host its 34th annual conference in Richland from October 20-22. Please join us at the newly remodeled Holiday Inn Richland on the Columbia River. This year's theme, “It Takes a Village,” was chosen to highlight collaborative efforts to understand, protect, and restore our lakes. Stay tuned for the call for abstracts, registration, and hotel reservation information. We are looking forward to seeing you in Richland!

November

[Alaska Invasive Species Workshop](#) November 3-4, 2021; Anchorage, Alaska and virtual

AFS has changed the dates for the 151st [AFS Annual Meeting](#) in Baltimore to November 6-10, 2021, from the original date of August 8-12. Please note that this is a Saturday to Wednesday meeting schedule rather than the traditional Sunday to Thursday. This change is being made with the desire to safely host an in-person meeting and to celebrate our 150th anniversary, albeit one year late. The meeting will also include remote participation options and AFS will transition to a full virtual option should the COVID-19 situation make that the appropriate and safe choice. New deadlines will be provided soon for symposium and abstract submissions. Please check the meeting website for updates.

Valuing Water: Economics, Ecology, & Culture 41st International Symposium of the [North American Lake Management Society](#) November 15–18, 2021 • Oklahoma City, Oklahoma

[Innovations in Invasive Species Management Conference and Training](#)

We welcome everyone back to the Gaylord Opryland Resort and Convention Center in Nashville, TN for the 4th annual 2021 Innovations in Invasive Species Conference.
When: November 29th through December 2nd, 2021

2022

April

April 18-22 ICAIS Oostende Belgium: The [International Conference on Aquatic Invasive Species \(ICAIS\)](#) is the most comprehensive international forum to address new and emerging issues related to aquatic invasive species in freshwater, marine and estuarine environments. ICAIS provides an international platform for the presentation of aquatic invasive species research that pertains to species biology, risk assessment, prevention, management and control methods, ecological and ecosystem impacts and restoration, outreach and policy.

May

[11th International Conference on Marine Bioinvasions](#) May 15-19, 2022; Annapolis, Maryland

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