

Highlights:

- Feral hogs wreak havoc on wetlands
- Computer model tracks Asian carp eggs in streams
- USDA tests new python live trap
- Mysterious Asian carp die-off
- Treefrog trap precautions

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Focal Species: Feral Hogs

Scientific name:

Sus scrofa

Size:

Average 100-150 lbs; males may exceed 200 lbs.

Native range:

Europe and continental Asia to Malaysia; also Java and Sumatra

Notes:

Normal life expectancy of a hog is 6-8 years.



Kuhukuhu, kune-kune, petapeta, Wildschwein, or just plain old feral hog--whatever you call them, the fact that there is a name for feral hogs in so many languages is testament to the extent to which they have been introduced around the world. Feral hogs adapt to nearly any habitat from the semi-arid rangelands of Australia to the brackish marshes of the southeastern US, although they prefer forested areas with nearby marshes or ponds. In areas where crops are present and water is available, the density of feral hogs can be up to 100 times higher than in areas without a readily available food source. Hogs are opportunistic omnivores and their diet includes roots, tubers, fruits, corn, rice, vegetables, fungi, worms, insects, amphibians, reptiles, small mammals, and even carrion. Mature females can produce 2 litters per year, with each litter usually consisting of 5-7 piglets. Hog rooting and wallowing can severely damage native vegetation, decrease water quality, and lead to erosion and provide opportunities for invasive plants to take root. Similarly, feral hogs can cause significant damage to a wide variety of agricultural crops.

Hogs also carry a wide variety of diseases, including cholera, botulism, salmonella, and anthrax that can infect not only wildlife but also livestock and humans. Hogs can also become aggressive when cornered or when nursing young.

Management options include poisoning, hunting, and trapping; however relatively few eradication efforts—mostly those on islands—have been successful.



Feral hog rooting.

Photo by: W.M. Giuliano (UF)

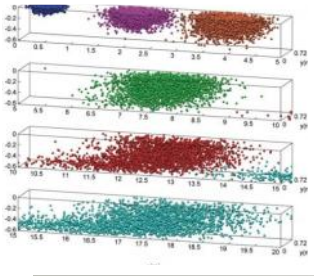
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Science: Tracking Carp Eggs

University of Illinois researcher Tatiana Garcia and her colleagues have developed a new computer model called FluEgg--short for the Fluvial Egg Drift Simulator to evaluate invasive Asian carp spawning. FluEgg was used to evaluate hydrodynamic and water quality data and determined that rivers such as the Sandusky, which were previously thought to be too short to allow egg hatching, could support spawning under the right conditions. This information showed that more Great Lakes tributaries than previously thought could serve as spawning sites for invasive Asian carp and allows resource managers to adjust control measures accordingly. In addition, this tool can incorporate temperature, flow, velocity, and turbulence to simulate the movement and dispersal of the eggs in a specific river over time and determine when and where hatching might occur. This information could prove critical to efforts to prevent the spread of Asian carp and manage their populations. The finding that sites previously deemed unlikely can support Asian carp spawning is consistent with a study published by Purdue University researchers earlier this year. They found evidence that Asian carp were spawning in waters more slow-moving and narrow than previously thought optimal, suggesting that the invasive carp may be able to become established in a wide range of environmental conditions.

[Learn More...](#)



*Fluvial Egg Drift Simulator (FluEgg)
Image by: Tatiana Garcia*

Science: True Dispersion Potential

A team of researchers recently analyzed movement patterns of radio-tracked invasive cane toads (*Rhinella marina*) in Australia. Their results suggest that studies of movement patterns of established populations of invasive species could severely underestimate the potential of these species to disperse and expand their ranges. The researchers were able to identify two distinct phases of toad movement--encamped and dispersive phase. During the dispersive phase, toad movements were longer and more directed. Toads moved twice as far at the invasion front as the same toads did after being encamped in the same area for a few years. As cane toads and other invasive species expand their range as climate change continues, estimation of dispersive potential may be the key to management efforts. [Learn More...](#)



Recent Rodent Eradication

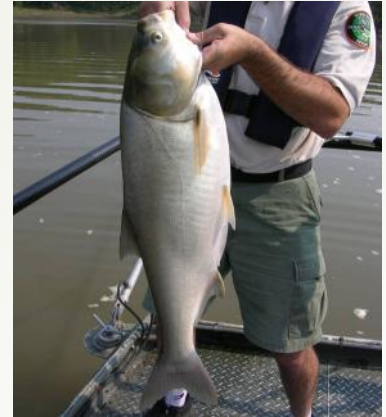
A recent invasive rodent eradication should provide native bird populations an opportunity for recovery. On South Georgia Island, a large island located off the tip of South America in the Atlantic Ocean, scientists were able to take advantage of unique topography and glaciers that are rapidly receding to achieve the world's largest rodent eradication effort, which involved helicopters spreading 183 tons of rodent poison. Before rats invaded, South Georgia may have been the most important bird-breeding island in the world. After rodents invaded, each rat ate hundreds of chicks a year and many endemic bird species were barely avoiding extinction. After two years of monitoring, there is no sign of invasive rats on the island and there are positive signs that suggest bird populations may recover. See Resources for more information.



Photo by: Roland Gockel

Unexplained Carp Die-Offs

In May of this year, hundreds of decaying silver carp began fouling the backwaters of the Missouri River in South Dakota and Nebraska. These invasive fish have also been turning up dead in Missouri in large numbers and are believed to have drifted down from the North Platte River in Nebraska. Months later, biologists still aren't sure what caused these fish kills but the poor physical condition of the carp dying in the Missouri River in Missouri suggests that they are starving. However, fish dying in the upper Missouri are in good body condition, suggesting disease may be a factor. Although a disease that kills Asian carp may seem beneficial, a new disease could potentially mutate and infect native species. Major fish kills are important to the overall health of the river even when the species killed are invasive and cannot be overlooked. However, further research may lead to future management options.



*Large Silver Carp Caught in Tennessee
Photo by: Jim Negus, Tennessee Wildlife Resources Agency*

USDA Tests Python Trap

John Humphrey, a scientist at the USDA National Wildlife Research Center (NWRC) in Gainesville, has developed a special live trap for pythons in collaboration with Tomahawk Live Trap. The trap is similar to the Tomahawk traps that are used to catch feral cats and have been modified to trap invasive Nile Monitor Lizards. However, the python trap will be much longer, requiring two trigger plates to be activated simultaneously to close the trap – thus preventing the trap from closing on smaller, native snakes. One end of the trap will consist of a bag to hold the snake, a design that should facilitate removal of the snake. The python trap was patented in August and will now undergo additional testing with a variety of baits. The python trap is not likely to be used extensively to remove pythons from the Everglades but rather will be a tool for nuisance wildlife trappers as they face a growing python problem in South Florida. For more info, see Resources.



Photo by: USDA Wildlife Services

Noteworthy: Florida Python Hunters

[Florida Python Hunters](#) (FPH) was founded in 2012 by Ruben Ramirez with the main goal to remove invasive reptiles from South Florida. The FPH participated in the 2013 Python Challenge™, winning the grand prize for permit holders, and are dedicated to raising public awareness to foster responsible pet ownership. Funded solely by Ramirez and apparel sales, the FPH managed to hunt and remove 200 tegu lizards, 60 pythons and 300 chameleons in 2013. The captured reptiles are provided, along with collection data, to Mike Rochford at The University of Florida for research and to The Florida Fish and Wildlife Conservation Commission.



Photo by: Florida Python Hunters

Treefrog Trap Precautions

In Florida, where [invasive Cuban treefrogs](#) have all but replaced native treefrogs in urbanized areas, PVC pipe "[treefrog houses](#)" are an effective tool for trapping and removing invasive frogs while simul-



Photo by: Nevada Dept. of Wildlife

taneously providing habitat for native frogs. In Florida, these pipes occasionally capture mice and small snakes but these accidentally captured animals are able to escape. However, when similar PVC pipes are used to mark mining claims in the western US, the results are disastrous. More than a million birds each year die when they mistake the openings for a nesting site and are unable to crawl or fly out of the pipe. The Bureau of Land Management has documented [extremely high mortality rates](#) in the PVC pipes. As a result, [Nevada now requires solid posts](#) to be used in lieu of the pipes to mark mining claims.

The Invader Updater is a quarterly newsletter focused primarily on providing information on invasive vertebrate animals in Florida and the southeastern U.S. and was first published in Winter 2009. This newsletter is produced by:

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Do you have questions, comments, or suggestions, or want to be added to the mailing list? Email monicaem@ufl.edu



Related Resources

- ◆ [Sus scrofa \(Feral Hog\)](#) – Global Invasive Species Database
- ◆ [Wild Hogs in Florida: Ecology & Management](#) – UF/IFAS EDIS
- ◆ [A Landowner's Guide for Wild Pig Management: Practical Methods for Wild Pig Control](#) – Mississippi State University Extension Service & Alabama Cooperative Extension System
- ◆ [Model developed to track eggs of Asian carp, an invasive species](#) – PhysOrg
- ◆ [Invasive Asian carp may be able to spread further than once thought](#) - Purdue Agriculture News
- ◆ [Rapid shifts in dispersal behavior on an expanding range edge](#) – PNAS
- ◆ [World's largest rat extermination returns South Georgia to its bird life](#) - The Guardian
- ◆ [What's killing these carp? Invasive fish turn up dead on Missouri River](#) – Sioux City Journal
- ◆ [Everglades snakes: Federal wildlife officials to test trap designed to capture Burmese pythons](#) – Washington Post (AP)
- ◆ [FWC Non-native Amnesty Day Events](#)