

Highlights:

- Monk Parakeet birth control?
- What do successful invaders have in common?
- Avoid the barbecued armadillo!
- First photos of the year from the Tegu cam!

In this Issue:

Focal Species: Monk Parakeet	1
Science: Big-brained Invaders	2
Science: Wild Dogs & Wildlife	2
Innovation: Tadpole Wars	3
News to Know	3
Noteworthy: Leprosy Linked to Armadillos	3
In Focus: Tegu Burrow Cam	4
Resources	4



Focal Species: Monk Parakeet

Scientific name:

Myiopsitta monachus

Size:

12 in. long
20 in. wingspan

Native range:

South America

Notes: Also known as the “Quaker Parrot”



Monk Parakeet (Wikimedia)

[video to hear them vocalize](#)).

They are similar in appearance to several other introduced parrots in Florida, including the [Black-hooded Parakeet](#).

Direct impacts of Monk Parakeets on native species are probably minimal. However, unlike most other parrots, Monk Parakeets feed not only on seeds but also on a variety of fruits. As a result, these invasive birds can indirectly harm native species by consuming the fruits of invasive plants and spreading them to new areas.

Monk Parakeets also differ from other parrots in that they build nests of sticks rather than nesting in cavities in trees. In their introduced range, they commonly build their nests on power utility poles and substations. Dry nests can cause electrical fires and, when wet, nests



Monk Parakeet Nest on Power Substation

(S. A. Johnson Photo)

can cause short circuits, damage power equipment, and cause power outages, costing South Florida utilities over \$500,000 per year for repairs.

Current management strategies are limited to removal of nests and birds—birds will quickly rebuild nests and so must be removed as well. Removal is costly, so current research is focusing on promising methods of controlling reproduction.

Monk Parakeet sightings should be reported to www.IveGot1.org, along with photographs if possible. When these birds are present in an area, food sources such as bird feeders and invasive, fruit-producing plants that might be spread by these birds should be removed.

[Learn More...](#)



Successful invaders, like this Nile Monitor, often have large brains relative to their body size.

Science: Big-brained Invaders

Scientists have long hypothesized that some animals evolved relatively larger brains than many of their relatives in response to changing conditions or new environments. Larger brains may have given these species an advantage by increasing their ability to learn and develop new behaviors that helped them to survive. An international group of scientists headed by Dr. Daniel Sol of Spain has been testing this hypothesis for many years, using species introductions as a model. Several years ago, they found that relatively larger-brained

birds introduced to new areas were more likely to thrive and become established, regardless of bird family or intensity or frequency of introductions. More recently, Maklakov et al. provided additional insights for invasion ecology when they demonstrated that relatively larger brains also help birds to survive in urban environments.

Over the years, Sol et al. expanded their research to include mammals and found that relatively larger-brained mammals are also more successful in introduced regions, and that this trend held true

regardless of introduction effort or whether they were habitat generalists.

Recently, the Australian-based research group of Dr. Richard Shine added amphibians and reptiles to the list of big-brained invaders, despite vast differences in the brain structure and physiology of these cold-blooded species.

These studies suggest that relative brain size should be considered when attempting to evaluate the establishment potential of the many vertebrate species sold as exotic pets in the U.S. [Learn More...](#)

Science: Wild Dogs & Wildlife

We share the planet with more than half a billion domesticated dogs, many of which are free-roaming. In some areas, domestic dogs are the most abundant of all carnivore species. Due to their prevalence and carnivorous nature, free-roaming or feral dogs must surely have some degree of impacts on wildlife. However, most studies of free-roaming or feral dogs have focused solely on impacts on livestock and risks to humans.

In a recent paper published in *BioScience*, Utah State's Julie Young and colleagues

summarized previous studies of dog impacts on wildlife along with case studies of their own. They showed that dogs can significantly affect wildlife in a variety of ways. Dogs are known to transmit diseases to wildlife – Canine Distemper Virus has caused significant declines in threatened seal populations in Russia. Dogs prey on a wide variety of wildlife including rodents, birds, bobcats, foxes, and hoofed mammals. In New Zealand, a single dog devastated an endangered Kiwi population, killing as

many as 800 (of 1,000) individuals. Dogs also compete with both native mesopredators and scavengers such as vultures, and native wildlife species often avoid areas frequented by dogs.

Young's group found that all three endangered ungulates they studied in Mongolia were harassed or attacked and killed by dogs. Up to 34% of mortality of GPS-collared mountain sheep was caused by dogs. One preserve in the region alone had over 2,200 dogs, which are now being removed. [Learn More...](#)





Innovations: Fight Tadpoles with Tadpoles?



Cane Toads (*Rhinella [Bufo] marina*) were introduced to Australia in 1935 in a failed effort to control an agricultural pest, and have since spread across large areas of the country. As the toads advance along

the invasion front, native wildlife that attempt to eat them are killed by the toads' toxins. Dr. Richard Shine's research group at the University of Sydney studies Cane Toad ecology and has found that the timing of egg laying of various frog species can impact both the native frogs and the invasive toads. In a recent study, they found that some larger native tadpoles can outcompete the invaders and

reduce their success. Dr. Shine's group suggests that improving habitat to enhance native frog reproduction may be an important part of a multifaceted strategy to control the toads. The importance of reproductive timing may also have implications for managing Cuban Treefrogs in Florida, where these invasive frogs are replacing native species. [Learn More...](#)

"...we can manipulate native species to intensify their negative impacts on the invader."

News Updates:

This issue's focal species, the Monk Parakeet, has been causing quite a flap in recent news. Due to their many impacts – especially the risk of their nests causing fires, these birds have been banned in New Hampshire for over 13 years. Despite the ban, some reports suggest that NH Fish and Game inspectors have allowed pet stores to sell these birds and many people in NH keep them as pets. However, NH Fish and Game recently cited a local woman for breeding these birds. Although the officials insisted that she must get rid of the birds within 30 days, they commendably offered to help her find new homes for the birds, and did not press criminal charges that could have resulted in a \$1,000 fine. Some state representatives immediately sought to repeal the parrot ban, and one was quoted as saying that the thought of these birds escaping and forming colonies is ridiculous – although the history of this parrot species suggests otherwise. The repeal of the ban passed unanimously in the NH legislature and now awaits a decision by Governor Lynch. [Learn More...](#)



Noteworthy: Leprosy Linked to Armadillos

Some folks in the Deep South like armadillos – barbecued or in chili, that is. Unfortunately, when Europeans colonized the U.S., they managed to pass leprosy on to armadillo hosts. A recent study found that some cases of leprosy in humans can be linked to a unique strain of

leprosy carried by infected armadillos in some southern states. Whereas most leprosy cases in the U.S. are linked to foreign exposure, these cases had no easily identifiable cause. Researchers identified the new leprosy strain by comparing the genetics of

strains from various regions of the world, and found that many patients reported contact with armadillos. Invasive armadillos found east of Alabama are not known to carry leprosy, but their potential to do so should be monitored. [Learn More...](#)





In Focus...

This photo, taken by a motion-activated wildlife camera at Balm-Boyette Scrub Preserve in central Florida, shows an invasive Black and White Tegu leaving a tortoise burrow in late February and documents the beginning of seasonal activity. Tegus lizards have also been found in agricultural and suburban areas surrounding the preserve.

This newsletter is produced by:

Dr. Steve A. Johnson
Associate Professor & Extension Specialist

Dept. of Wildlife Ecology and Conservation
and

Monica E. McGarrity, Biological Scientist
Gulf Coast Research and Education Center

Do you have questions, comments, suggestions, or an In Focus photo?

Email tadpole@ufl.edu



Photo © Hillsborough County, FL, 2011

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 Fall 2009.

Resources

- ◆ [Florida's Introduced Birds: Monk Parakeet \(*Myiopsitta monachus*\)](#) University of Florida/IFAS Cooperative Extension Publication WEC257
- ◆ [Myiopsitta monachus](#) – Global Invasive Species Database (ecology, management, etc.)
- ◆ [Monk Parakeet \(*Myiopsitta monachus*\)](#) - The Birds of North America Online, Cornell Lab of Ornithology
- ◆ The Florida Fish and Wildlife Conservation Commission's webpages have recently gotten a facelift, including long-awaited updates to their [Non-native Species pages!](#)
- ◆ Been a while since you've visited the [Florida Invasive Species Partnership webpage](#)? Visit often to keep up to date on new activities and

training opportunities, as well as news – like the formation of the Treasure Coast Cisma!

- ◆ Follow the [Bugwood Blog](#) for a variety of news stories about invasive animals and plants.
- ◆ Drive by invasive plants every day on the way to work? Have Cuban Treefrogs, Monk Parakeets, or other non-native critters around your home? Don't just ignore them, no matter how common they seem – report them at www.IveGot1.org.
- ◆ Know of an important resource not listed here or in our archives? Let us know – email a description and URL to monicaem@ufl.edu