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Feature Article - for release the week of May 1, 2005

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Got Rodents? Get Owls!

Do you know any places that have too many rats? UF Professor Richard Raid has been concerned that agricultural areas have relied on chemical rat poisons to manage these furry fiends. He's discovered at the Everglades Research and Education Center a non-chemical way to help reduce these pests by encouraging barn owls - the focus of this week's feature column.

Over the past few weeks several Okeechobee HS students are learning about pest management practices like using barn owls and nest boxes. They will be using this idea and many more in a new late May event: the Biological Control Brain Bowl. They will be showing residents north of the Lake that we can also get rid of excess rodents with these fine feathered friends.

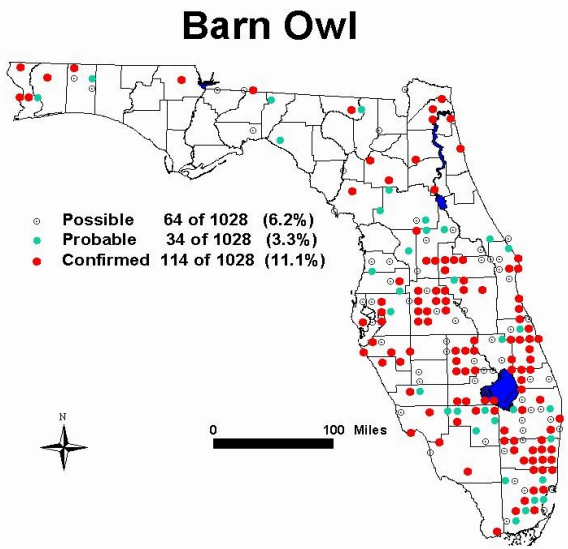
Rodents, primarily in the form of rats and mice, cause millions of dollars in damages annually to crops grown in the Everglades Agricultural Area (EAA) south of Lake Okeechobee. Not only do rodents destroy and contaminate crops, they frequently damage equipment and structures with their gnawing. Rats also can spread human diseases such as Plague and Hantavirus.

In 1994, the University of Florida initiated a nesting box program in the EAA in an attempt to enhance native barn owl populations. One of nature's most efficient rodent predators, a nesting pair of barn owls may easily destroy more than 1,500 rodents per year, serving as a sustainable form of rodent control.

Five different species of owls are found in Florida. Barn owls are a species that inhabits areas much like Okeechobee - partially open country, farmlands, meadows, and towns. They fly during the night over two miles from their roosting

areas, searching for small rodents.

Adult Barn Owl. Photo Courtesy : Jason Martin, U/IFAS Everglades REC



Confirmed sightings of breeding Barn Owls from 1986-91shows few nests north of Lake Okeechobee. Map courtesy *Florida Fish and Wildlife Conservation Commission*.

A Barn Owl's face has a heart-shaped rim of darker feathers. Photo Courtesy : Jason Martin, U/IFAS Everglades REC

These are big birds, standing 14 inches tall, with a heart-shaped “monkey” face. Barn owls range in color from white to buff to a cinnamon-brown. They get their name from their common nesting places: abandoned farm buildings like barns, pump houses. Sometimes they are called "ghost" owls because of their white face and underbelly feathers. They are not “hoot” owls; rather, they make a sound described as much like a screaming person.

Bird atlas data suggests that the Barn Owl is common and widespread in the southern Florida peninsula. But, it also shows that Okeechobee has fewer documented cases of Barn Owl nesting than areas nearby around our county. That’s kind of surprising, considering we have the right kind of habitat for these predators.

In Florida , nesting usually takes place from March through July. A pair of owls often produces 2 broods per year. The natural nest sites are secluded places like tree cavities with a depth of 4 feet, abandoned machinery, or old buildings.

Adult Nesting Barn Owl with owlets. Photo Courtesy: Jason Martin, U/IFAS Everglades REC

UF graduate researcher Cosandra Hochreiter checks on a barn owl nesting site on the grounds of the Everglades Research and Education in Belle Glade. Photo Courtesy Eric Zamora, UF/IFAS

Barn Owl Box mounted to a pole in the Everglades. Photo Courtesy: Rick Raid , U/IFAS Everglades REC

Although the owls are excellent rodent controls, their nesting habits may harm buildings, barns, and pump houses on farms when nesting. By building and placing nesting boxes along ditches and canals surrounding farmlands, Dr. Raid has watched barn owl populations in the Glades rise to a point where they had a significant impact on rodent pest populations. And when the barn owls moved in to nest boxes, the owl's destructive behavior to structures was also reduced.

Barn owls have quickly adapted to the nesting box design promoted by EREC researchers. More than 90% of boxes showed signs they were being used within a year of placement. In addition, due to their safe, protective nature, the nesting boxes appear to support an extremely high rate of young owlets survival.

Although research on the ultimate impact on rodent populations is currently in progress, some Everglades growers already attest to the effectiveness of the owls by reduced their use of rodenticides.

Besides learning how to build and place owl nest boxes, IPM Brain Bowl participants have dissected sterilized barn owl pellets - the undigested regurgitated remains of the barn owl's prey. They will follow in the footsteps of thousands of other students that have learned first-hand what the barn owls have been eating, a lesson they never forget.

UF Barn Owl Project leaders have involved hundreds of student volunteers in the construction of nesting boxes. Now the Brain Bowl participants will help extend this effort to our area and throughout the Treasure Coast. This direct participation in assisting a desirable wildlife species provides our youth with a sense of accomplishment and contribution. All in all, this is a win-win proposition …. unless you're a rodent!

I've placed more information, including instructions on how to build your own barn owl nest box on our Okeechobee web page, http://okeechobee.ifas.ufl.edu. If you need additional information on barn owls, please email us at okeechobee@ifas.ufl.edu or call us at 863-763-6469. Local residents can stop by our office at 458 Hwy 98 North in Okeechobee, and visit our Okeechobee County Master Gardeners on Tuesday afternoons from 1 to 5 PM .

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For More information:

Links to Related Documents produced by Dr. Richard Raid and Sharon L. Bennett:

Dissection of Barn Owl Pellets From Florida's Everglades Agricultural Area - Information sheet on the Barn Owl diet and how to examine their "pellets".

Please see the following publication for detailed instructions on construction and placement of Barn Owl boxes: *Richard N. Raid and Sharon L. Bennett,* Building a Barn Owl Nesting Box

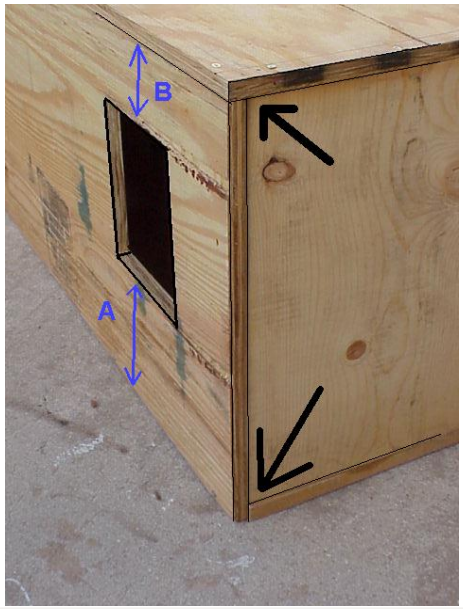
Tools required include a power saw, ruler, screwdriver, drill, and safety glasses.

Use screws at least 1 1/2 inches long. Exterior quality would be a better choice since boxes will be placed outside.

Materials are one half sheet of 5/8" exterior plywood (48" x 48") and a 6 foot length of 1 x 12 shelf wood.

The bottom and small sides are made from shelf wood; the front, back and top are made from plywood.

Note how the boards are attached to each other: The front and back sides cover the bottom board, the small sides are on top of the bottom of the box, and the top covers all other edges. This will give the box a greater chance at keeping



water out of the next box.

Place the front side with the opening so that the distance "A" will be greater than the distance "B". This will make a more effective perch for the owls.

Nesting Box photos: Dan Culbert, UF/IFAS

Other Barn Owl references:

W. H. Kern, Jr. and P. G. Koehler. Non-Chemical Rodent Control- Fact Sheet ENY-243 http://edis.ifas.ufl.edu/MG218

UF New Stories:

http://news.ifas.ufl.edu/story.php?id=449

http://news.ifas.ufl.edu/story.php?id=35

http://plantpath.ifas.ufl.edu/Newsletter/Newsletters/Fall2004.pdf

National Geographic News Story: http://news.nationalgeographic.com/news/2002/10/1030_021030_BarnOwls.html

Florida Wildlife Commission: http://wld.fwc.state.fl.us/bba/cobo.htm

http://www.wildflorida.org/critters/barnowls.asp

Barn Owls Nest Box http://www.wildflorida.org/critters/barnowlsbox.asp

And, **THE MOST INFORMATIVE BARN OWL RELATED WEB SITE EVER:** http://ourworld.compuserve.

com/homepages/DTrapp/barnowli.htm