

Barn Owls in the Vineyards

Natural Born Killers

Story and photos by Christopher Sawyer

Are you sick of pocket gophers and other rodents gnawing away on your vines and other costly investments on your property? Well, the answer to this dilemma could be as easy as purchasing a small box and befriending a feathery creature with golden wings and a heart shaped face.

Welcome to the kingdom of the barn owl, the most widespread land bird in the world.

Known for its voracious appetite, magnificent plumage and amazing flying skills, the barn owl is a member of the Tytonidae family. Highly successful in natural breeding and longevity, the multiple subspecies of this bird have spread around the globe. Currently, the two best-known races are the barn owl of Europe, *Tyto alba alba*, and the North American barn owl, *Tyto alba pratincola*.

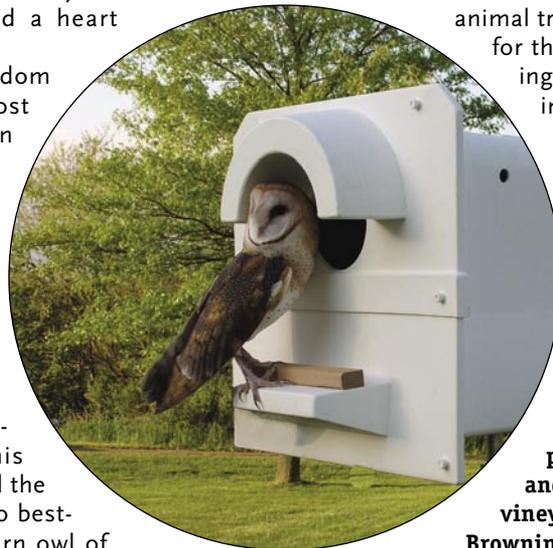
In terms of living conditions, the barn owl is a hole nester that lives in closed quarters or dark cavities found inside hollow trees, barns, sheds and other outbuildings. When fully grown, the birds stand 14-inches tall, have a 42-inch wingspan and generally weigh about 1 pound.

The skills of the feathery predator are based on its keen sense of sight, razor sharp talons, and swiftness of flight, which allow it to

swoop and strike quickly before the prey can react.

PUTTING BARN OWLS TO WORK

These impressive attributes caught the attention of Mark Browning, a professional animal trainer and field researcher for the Pittsburgh Zoo. Browning's knowledge of barn owls inspired him to develop a way to put the predatory bird to work in rodent-plagued vineyards and farms: the Barn Owl Box (see sidebar). Con-



Barn owl boxes can help growers reduce populations of gophers and other rodents in vineyards. (Photo by Mark Browning.)

At a Glance

- ▶ Rodents like pocket gophers can wreak havoc in vineyards, and are difficult to eliminate.
- ▶ Barn owls are natural predators that nest in barns, sheds and hollow trees.
- ▶ A single barn owl family can eat up to 3,000 rodents in one year, and are well suited to vineyards.
- ▶ A researcher from the Pittsburgh Zoo has created a barn owl box as a tool for integrated pest management.

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A Word About THE BARN OWL BOX

MEASURING 26-INCHES DEEP, 17-inches high and 17-inches wide, Browning's Barn Owl Box has a circular 5.5-inch entry hole and a landing ledge, which allows the male bird to quickly feed the mother and chicks before leaving for its next kill. The box includes a viewing window in the back and a removable floorboard for easy cleaning when the box is not occupied.

Browning says his decision to make the box out of lightweight plastic was based on the durability of the material. "It's a nice thought to make a box out of cheap half-inch plywood. But unfortunately, those boxes will not last long enough to establish the site as a place that is favorable to the barn owls for an extended period of time."

One of the largest concentrations of sales, so far, has been to farmers and vineyard owners in California. "It is a state that is very progressive in thinking," said Browning.

The boxes are priced at \$109.87 for a barn-mounted model, and \$129.87 for a post-mounted model. They are available through Browning's website, www.barnowlbox.com, and in his new Barn Owl Box Store, located in Napa's Oxbow Market.

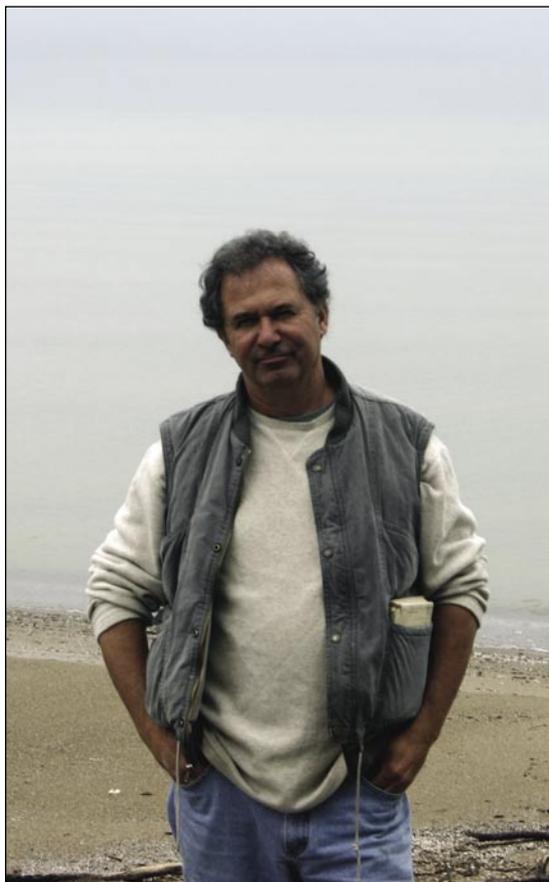
structured of molded plastic, the boxes can be mounted into the sides of prefabricated barns, or on tree trunks or metal poles in shaded areas.

Browning says he started his

barn owl project on a whim. "I did it because I am passionate about showcasing the unique qualities of birds and animals," he said. "The initial working concept was based on seeing if we could raise the bird density and increasing the population of local owls in the northern states."

In Pennsylvania, the barn owl population has been declining since the 1950s. Browning attributes this decline to the change of farming practices, the shrinking amount of wild areas and grasslands, and the increased number of wooden barns being torn down and replaced by steel buildings that make it hard for the owls to build their nests.

After receiving a \$100,000 grant to conduct his research, Browning



A project designed to increase local owl populations in northern states inspired Mark Browning, field researcher for the Pittsburgh Zoo, to develop the Barn Owl Box.

SAWYER OWLS 1/3V OR STACKED PAIR OF 1/6V

teamed up with Moraine Preservation Fund and other professionals in the field to conduct the first satellite telemetry tracking study of barn owls. After breeding of the birds was completed, 16 young owls were chosen to be part of the unique research project. With lightweight transmitters attached to their legs, the owls were released in western Pennsylvania in the fall of 2007 and tracked for one year.

According to Browning, the results of the project were phenomenal. In the fall, many of the young owls traveled south to the Gulf states. While flying over the Allegheny Mountains to South Carolina, some covered more than 200 miles in a four-day period. One owl flew as far as New Orleans for the winter—a distance of over 1,200 miles. And after wintering on the coast of South Carolina, another returned to a barn only 40 miles from its original release point near Pittsburgh.

Together, the continuum of data from the study has helped Browning

and other professionals formulate new efforts to preserve this species.

“It’s very gratifying to add more knowledge to the study of a marvelous bird that has accompanied man throughout history,” Browning said.

Other types of barn owl projects have been used in many different agricultural zones as well. In Florida, for instance, the raptor is used to hunt rodents in the sugar cane fields. In Ohio, the birds are used in nut orchards, dairy farms and other agricultural zones. And in Israel, the successful use of nesting boxes in farmlands has encouraged the country’s Ministry of Agriculture to begin funding the project.

On the West Coast, Browning says the combination of trees, marshes, natural grasslands and agricultural landscape makes the coastal and interior regions ideal locations for barn owls to thrive.

AMONG THE VINES

In the vineyard, the benefit of using

the barn owl is simple: The more the rodent population increases, the greater the number of owls that will be present. Thus, the key to integrated pest management is to establish enough barn owls so that the rodent’s reproductive rate cannot keep up with the numbers being consumed.

To help this cause, the barn owl—unlike most other bird species—has a tendency to produce a lot of young. In a common year, a male and female couple can produce multiple broods (the birth of young chicks in the nest). The median average is between four to six healthy babies per birth.

With the maturity of each bird comes its insatiable hunger to eat mice, gophers and other rodents. The biggest feeding frenzy occurs at harvest, the peak of the season when rodents become particularly hungry after the crops are gone.

Another advantage of owl boxes is that a single structure covers a lot of ground. On an estate property, Brown-



These cane rat bones came from a single barn owl box placed in a sugar cane field.

ing says that an owl family living in one box can patrol up to 20 acres of vineyards. On larger, more sophisticated properties, additional boxes can be added to increase the density. In terms of scale, Browning says that a single barn owl family can eat up to 3,000 rodents in one year.

In addition, this species can tolerate the presence of humans, and unlike hawks and other owls, barn owls can live in close proximity to one another. While hunting, barn owls will commonly roost on tree limbs in the early morning and before sunset. Once prey is spotted, the owl will glide from its lookout points to attack its victim.

After the season is over, the young birds stick around for a limited amount of time. In some cases, the youngsters will start patrolling their own vineyard blocks; while others will simply disperse to claim new territories off the property. But once established, barn owls create a self-perpetuating system and the birds continue to inhabit successful breeding sites for generations.

The use of barn owls also has economic benefits. First, it reduces the need to use pesticides in the vineyard. Studies have shown that trace elements of these chemicals can kill owls, hawks and other beneficial predatory creatures that eat rodents affected by this treatment. Second, it cuts down on the expense of purchasing, setting, baiting and retrieving varmint traps.

While there are no guarantees that owls will come to the box immediately, Browning says the chances are very

good due to the limitations of other nesting sites in vineyards.

‘GOPHER-KILLING MACHINES’

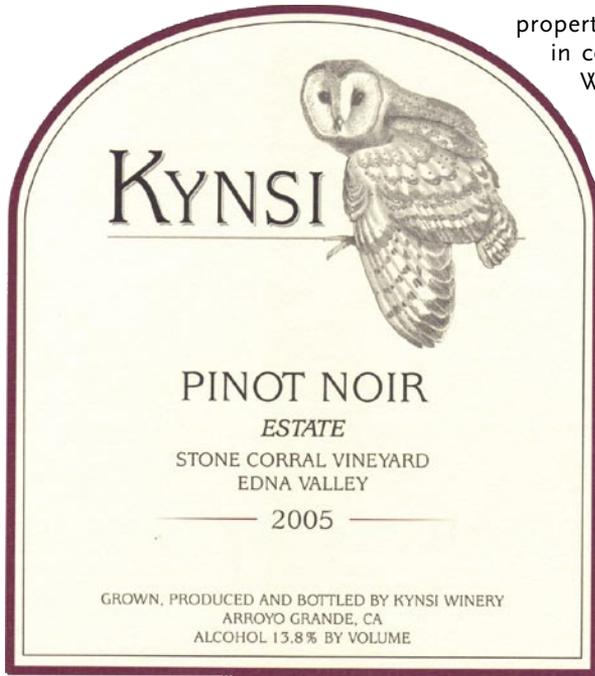
Kynsi Winery, in California’s San Luis Obispo County, pays tribute to its resident barn owls on its wine labels. When proprietor Gwen Othman and her family began converting their Edna Valley property to vineyards in

the early 1990s—including an old dairy built in the 1940s that hadn’t been used for many years—they found that the young planted vines and the foundation of the property’s classic old barn had been ransacked by gophers. While looking for a solution to this dire situation, Othman typed in the word “gopher” on Google and was pleasantly surprised to find many references to barn owls.

To increase the raptor population on the property, the Othmans installed custom-made wooden nests. “It was truly amazing to see what a big dent the owls can make in the gopher population,” said Othman. “Despite their natural beauty, we often refer to our resident owls as ‘gopher-killing machines,’ ‘flying death’ or ‘silent killers.’ They really are one of man’s best friends.”

Similar results have been seen at many other vineyards throughout California. In the Lodi area, proprietor Tom Hoffman of Heritage Oak Winery began installing owl boxes on his 106-acre

SAWYER OWLS 1/3SQ,V OR COMBINATION



Kynsi Winery, in California's Central Coast region, uses barn owls to control the vineyard's gopher population.

property in 1992. More recently, in conjunction with the Lodi-Woodbridge Winegrape Commission, Hoffman has developed an online educational brochure called Barn Owl Headquarters. This unique site includes detailed information about rodent control, nest box designs, raptor rehabilitation, and links to other helpful websites.

"You have to love the fact that these birds can hear minute sounds, fly and strike in pure silence, and can live happy lives eating small rodents in the vineyard," said Hoffman.

Another fan of the barn owl is Steve Sangiacomo of Sangiacomo Family Vineyards, a highly respected grape grower who farms 1,500 acres of in Sonoma County.

In terms of viticultural practices, Sangiacomo says the barn owl represents a sustainable approach to controlling varmints and mice. In the late 1990s, to increase the owl population in the vineyards, the family began making its own owl boxes. Today, the largest concentrations of boxes are located in hot spots with significant rodent problems; the rest are spread out at a median of one box for every 20 acres.

"The barn owls provide us with an effective way of taking care of the rodents without using pesticides," said Sangiacomo. "In essence, it's another way that Mother Nature can help take care of potential problems. Plus, it's really amazing to see how the environmental process happens on an up-close and personal level in the vineyards."

Questions or Comments?

Please send your replies to feedback@vwm-online.com.

SAWYER OWLS 1/6V ONLY

Hungry Owl Project Builds Owl Boxes

In California's North Bay, wineries and estate vineyard owners have partnered with the Marin-based non-profit Hungry Owl Project (HOP) to increase the local owl population. Founded in 2002 in association with Wild Care, a wildlife rehabilitation center based in San Rafael, CA, this green community program produces wooden nesting boxes made by school students, Eagle Scouts, Hungry Owl Project volunteers and retired individuals.

Alex Godbe, the program's director, said the idea to create the organization began when an increasing number of local barn owls died after consuming poisoned rodents. "It has taken time for many to realize that the use of toxic pesticides in agriculture practices has created a dangerous environment for these beautiful birds... Our program is designed to help this cause and have fun creating a safe environment for these special birds to hunt their prey."

Kendall-Jackson is one of the big-name wineries to embrace this project. In December 2008, the winery launched a gift package program focused on raising awareness of the special attributes of the barn owl. The package included a year-long adoption of a barn owl nesting box created by HOP and located at Kendall Jackson's Hawkeye Mountain Vineyard in Alexander Valley. In 2009, recipients of the \$500 gift will receive detailed reports on the status of the box; three bottles of cabernet sauvignon made with fruit from the vineyard; and a limited edition watercolor print of the owl painted and signed by Mark Blake, a HOP volunteer.

Other local producers using HOP boxes include: Pacheco Winery and Devil's Gulch Vineyard in Marin County; Mendocino Wine Company, Mendocino County; and Gundlach Bundschu Winery and Archer Family Vineyard in Sonoma County. – C.S.