

# Bonding

with

# Blanding's

*Tracking an obscure turtle across nasty terrain can be an awful way to spend a day...but may yield great benefits to the turtle and other species.*

**F**IGURING OUT the habitat needs of New Hampshire's Blanding's turtles sounds straightforward enough on paper: Capture some turtles, glue radio-transmitters onto their shells, let them loose. Then track the critters with hand-held receivers to plot their movements and see what kinds of habitat they use.

Take one soggy, sinking step into that habitat, and the challenge of such an undertaking becomes clear. Blanding's turtles live in huge marshes full of scrubby shrubs, grasses and moss. Deep channels of water cut here and there, often obscured by vegetation. It takes a hearty soul – and waders – to get through these places.

“The best way to describe what it's

like out there is that one minute you're up on a hummock of dry grass, and the next minute



*Brenda Charpentier of Sanbornton writes for the Nongame and Endangered Wildlife Program's newsletter, Wildlines.*

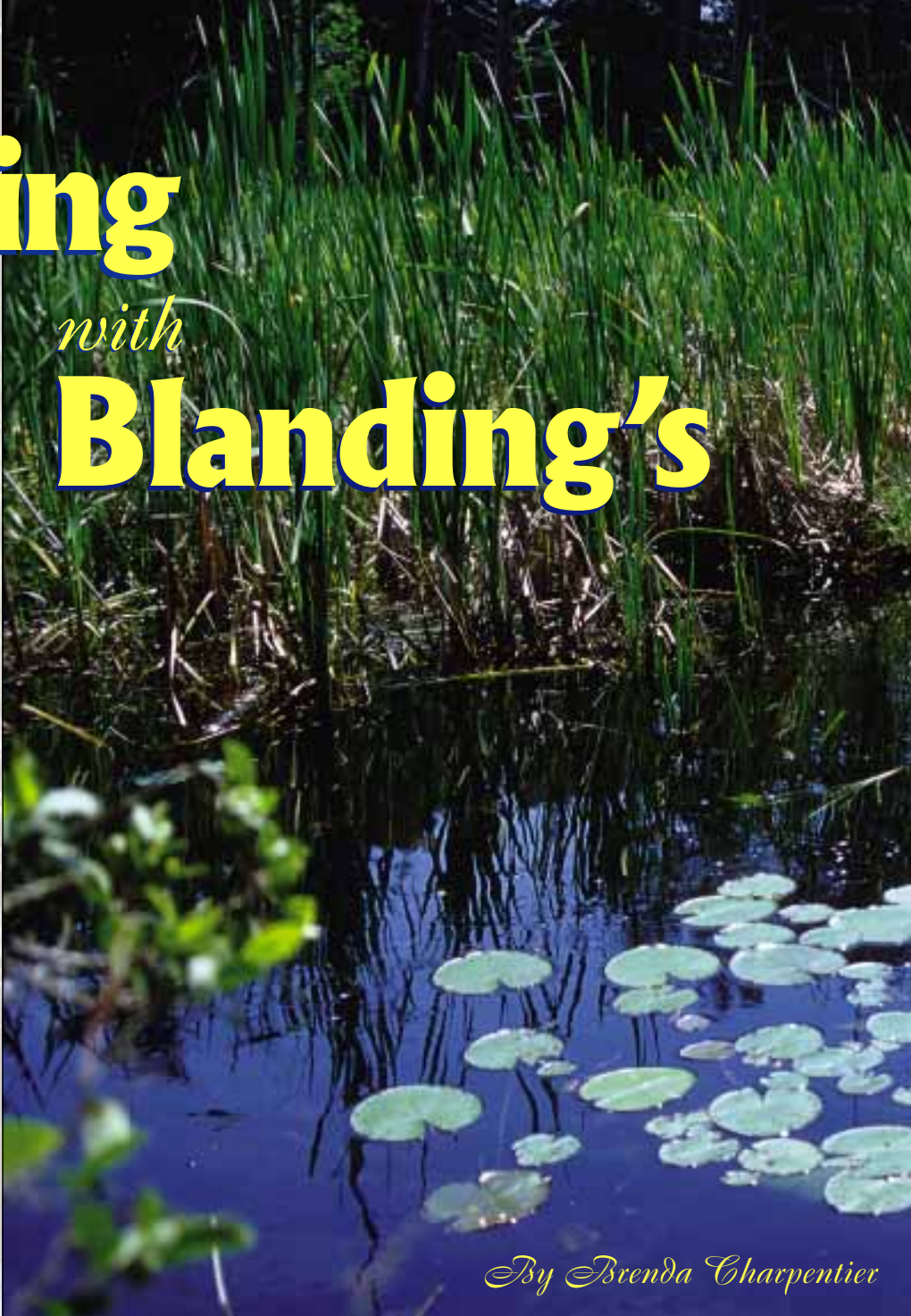
you're waist-deep in your waders in water,” said John Kanter, the coordinator of Fish and Game's Nongame and Endangered Wildlife Program. “You would not just go for a stroll in there. There are a lot of meandering rivers and streams with a lot of beaver activity, interspersed with extensive wetlands.”

Kanter is coordinating a study of Blanding's turtle habitat with researchers from UNH and the Audu-

bon Society of New Hampshire and volunteers, under a grant from the state's Department of Environmental Services. The study is entering its third and final year and involves marshes in Dunbarton and Loudon and in the Great Bay area on the Seacoast.

## A Species in Decline?

Little is known about Blanding's turtles, but the species is thought to be



*By Brenda Charpentier*

*Nongame bioaide Jessana Palm (right and lower inset) braves the boggy wilds of Stark Pond Marsh in a quest for Blanding's turtles.*



MARRQUIS WALSH PHOTOS



*Biologist John Kanter prepares to release a turtle, which is being tracked by radiotelemetry to provide insight on its range and habitats.*



in decline in New Hampshire and in much of its range and may need protection. That concern fits in with the mission of the Nongame and Endangered Wildlife Program, which is to conserve and protect the more than 400 species in the state not addressed by hunting or fishing conservation programs and funds.

Blanding's turtles use both wetlands and upland habitat (for egg laying), and so are "likely very

susceptible to the negative pressures of development and fragmentation," said Dr. Kim Babbitt, the lead UNH researcher on the project.

One more reason to study Blanding's turtles, Babbitt said, is that the number of eggs laid by females is relatively small. Females don't start laying eggs until they're anywhere from 14 to 20 years old, making the loss of adult females – because of roadkill, for example –

particularly problematic.

"Although not an objective of the study, we have gleaned that road mortality may be significant," Babbitt said. "We or others found almost as many turtles dead on the road as we captured alive."

### Tricky Turtle Terrain

Finding and capturing a Blanding's turtle alive is no small feat.

"It's like looking for a needle in a haystack," said Jessana Palm, a bio-aide with the Nongame and Endangered Wildlife Program who helped carry out the study. Traps baited with cat food and sardines attracted some Blanding's turtles, but mostly painted and snapping turtles, Palm said. So she and other searchers often ended up walking the marshes in the vicinity of other known Blanding's turtles in hopes of catching some by hand.

Sometimes, Palm literally fell into a find. At a Dunbarton marsh called Great Meadows, she was hopping from hummock to hummock, trying to keep herself level in the up-and-down terrain. "At one point I took a step and didn't make it to the next hummock

*continued on next page*

## Meet the Blanding's Turtle

If you see a turtle with a bright yellow chin and a domed, helmet-like shell, it's a Blanding's turtle, one of seven turtle species in the state. These critters live primarily in large wetlands in the southeastern part of the state. Their wider range stretches as far west as Minnesota, south to Missouri and north to Ontario, Canada. They are apparently secure in Ontario and Nebraska, but everywhere else their status ranges from "vulnerable" to "imperiled."

Natural threats to the turtles' survival abound. Foxes, skunks, raccoons and badgers eat their eggs; fish, mammals and birds eat their hatchlings. In one 1983 study in Michigan, researchers found that their study subjects had only an 18 percent chance of successfully hatching and emerging from their nests. With predators so successful, human development can easily push a species over the edge.



MARQUIS WALSH PHOTO

*Middle-schoolers from an Audubon Society of New Hampshire program learn about the Blanding's research project.*

Blanding's turtles live for several decades. Scientists believe the species has been around since before the age of the dinosaurs. Archeologists have found Blanding's shells that were used by early Indians as tools.

Blanding's turtles eat pondweed seeds and other wetlands plant matter, small fish and crayfish, insects and earthworms. They mate from March to May and lay their eggs in mid-June and into July. ■

*continued from previous page*

and fell in. When I looked up, there was a turtle right in front of me. That happened twice."

Challenges notwithstanding, the researchers fitted 20 Blanding's turtles with radio transmitters. They are glued directly to the back of the top shell, where they look like little license plates with antennae.

The turtles' movements will be tracked for the third season this spring and summer. Researchers will go to the marshes with hand-held receivers and listen for the radio transmitters' beeps, following their increasing strength until they pinpoint the critters' exact locations. They'll take GPS readings at those spots, and the results will be charted and compared to maps of habitat types to get a good picture of turtle movements and critical habitat.

### Long-Distance Travelers

Spring is when the turtles are really on the move, as the females amble out of the wetlands looking for sandy areas on higher ground to lay their eggs.

"Our farthest-traveling turtle (so far) went about 2 miles, moving between where she spent most of her time and where she nested," Kanter said.

Males, too, seem to need a wide area to roam. One male in the study ranged about 84 acres. "This male used large, beaver-impounded wetlands and vernal pools, and traveled over broad upland areas," Babbitt said. "Why did he do this? Well, part of the answer was that he mated with several females who were located in different wetlands."

It's too early to draw firm conclu-

sions from this study, but the great distances the turtles are traveling shows the importance of protecting large, unbroken tracts of land that include both wetlands and uplands, Kanter said. "Big is definitely better."

### Other Species Benefit

Future protection measures could include tunnels under roads in prime Blanding's turtle habitat and encouraging town and city planners to take the species into consideration when planning roads and other development.

"That decision whether to put a new road in an area – it's got to be one of the most critical land-use decisions people will be making," Kanter said.

Tracking Blanding's turtles to identify prime habitat is just the first step toward conserving the species, as well as others that use the same habitat, like beaver, ducks, amphibians, fish and assorted reptiles.

"Now we need to get together with local land conservation groups," said Kanter, "and say 'Look here, you've got a great population of this species. Think about protecting these areas, and that will protect a whole lot of other species, too.'" ■



### Stick Your Neck Out This Spring

The Nongame and Endangered Wildlife Program wants you to "stick your neck out" this spring and make a contribution to the 2002 Annual Fund Campaign. By sticking your neck out, you will help us protect and study the Blanding's turtle.

These turtles have unusually long necks that enable them to extend their heads to the water's surface while keeping their bodies submerged and out of sight.

Your donation each year to the Annual Fund Campaign means much more than helping us protect one special species. Your financial support is the cornerstone of our work. You provide the resources, confidence and optimism that has helped us build a highly effective and strategic program over the last 13 years. Your gift also helps us meet our annual \$50,000 matching grant from the state. As you know, we receive no funds from sport licenses or tax check-offs like other states. We depend on you.

When you receive the Nongame Program's appeal in the coming weeks, please "stick your neck out" and support the 2002 Annual Fund Campaign. The annual campaign ends on June 30. Help us protect the nongame wildlife.

For more information, call the program at 603-271-2461, or visit [www.wildlife.state.nh.us](http://www.wildlife.state.nh.us). ■