Wildlife researchers re-establish the last stands of Illinois' wood rats.

Saving Illinois' Rarest Mammal

Story and Photos By Joe McFarland

Once relatively common in the forests of southern Illinois, the small woodland mammal known as *Neotoma floridana* is being reintroduced in areas where suitable habitat exists.

When the pieces of gravel clattered down the face of the cliff that February morning in 2002, Tim Carter didn't hesitate to try to save my life. The 31-year-old wildlife researcher didn't even have time to think. Carter just lunged reflexively into the falling rain of gravel and waited for me to slam into him next.

But I wasn't falling.

"I'm fine," I announced to him, my fingers still secure on the cliff face where we were negotiating our way up. "Just some loose stones."

What struck me immediately was the fact a man I'd just met an hour earlier was willing to risk his own life to save mine. Carter couldn't have known I wasn't tumbling down the cliff at Pine Hills. There wasn't time to look up. He just shoved his body out there to save another life, reacting as a Secret Service agent might when a firecracker explodes.

I was impressed. But it also dawned on me it takes a certain kind of mind to save a stranger's life. And that's where this story really begins.

Tim Carter is an associate scientist at Southern Illinois University's Department of Zoology. Back in 2001, Carter began live-trapping Illinois' surviving population of eastern wood rats, attaching radio transmitters before releasing them unharmed. Working with DNR and

Tim Carter spent two winters monitoring the remnant population of wood rats, also known as pack rats, at Pine Hills in southern Illinois.

the U.S. Forest Service, Carter helped determine the status of the wood rat at Pine Hills, and would later help introduce additional wood rats to add genetic diversity to the relatively small pool of this state-endangered mammal.

Some might argue that what Carter was doing up on those cliffs didn't matter, that a creature known as a "pack rat" isn't worth saving in Illinois. (Some might argue the same for my own life.) But a scientist reflexively saves any life he or she encounters, without question, like a detective unwilling to toss out a clue. Who knows, after all, what species might prove to be essential to us all someday?

And so Carter led me up the cliffs overlooking the Mississippi River bottoms to reveal one of the last surviving colonies of Illinois' rarest mammal. There was a time when this native species, known as Neotoma floridana, occupied rock outcrops and dense forests across the entire southern portion of Illinois, building fort-like dens with sticks, leaves and whatever curious objects they collected nearby. Archaeological evidence shows "pack rats" coexisted with humans here for thousands of years. Unfortunately, modern people confuse this native species with the Norway rat, that nonnative scourge of urban alleys and garbage heaps.

"Wood rats aren't the same," Carter said, holding aloft a cage trap he had placed near a den site the night before. "These are woodland mammals that have always lived here. It's not as if we're trying to introduce a nonnative species."

One glance inside the cage revealed a rather innocuous-looking mammal which resembled someone's pet chinchilla. Harmless enough—rather likable, actually.

Through a recovery plan funded through Federal Aid in Wildlife Restoration Program dollars and spearheaded by the Department of Natural Resources with cooperation from the Forest Service and Southern Illinois University, Carter and others travel to neighboring states in search of new genes. States such as Arkansas, where Neotoma floridana populations are larger, are allowing approximately 100 specimens to be live-trapped each year and subsequently released in Illinois.

Although no prior attempts have

Virtually inaccessible cliffs at Pine Hills proved to be suitable habitat for surviving populations of Illinois wood rats. But it made trapping a rigorous challenge for Carter.

been made to supplement Illinois' wood rat population, similar releases in Pennsylvania and Florida already have met with success. The goal of the Illinois program is to eventually remove the eastern wood rat from the list of endangered mammals in this state.

Researchers previously identified Illinois sites where wood rats lived for thousands of years. And while it's unclear what specifically caused the decline, one scientist who studied Neotoma floridana during the 1970s suspects Mother Nature, opposed to human influences, dealt the lethal blow.

"The winters of 1912 and 1918 were unusually severe in southern Illinois, with extended periods of heavy snow cover," explained Jack Nawrot, an SIU scientist who studied eastern wood rats during the 1970s. "With the population already hard hit by the winter of 1912, the winter of 1918 might have reduced (wood rats) to a level from which they have yet to recover."

Live traps placed near den sites helped researchers collect and document wood rats at Pine Hills.

Tiny transmitters attached to research animals could be detected and tracked during the study of the state's rarest mammal.

The four-year recovery project has reintroduced eastern wood rats in places like Garden of the Gods and Pounds Hollow within the Shawnee National Forest. Those sites haven't had wood rat populations for decades. But they do now, thanks to those who save endangered lives.

Understanding "Pack Rats"

The eastern wood rat is a native mammal currently on the list of state-endangered species. Unlike the Norway rat, which arrived accidentally in North America centuries ago, eastern wood rats are not city dwellers. They're also not known to carry diseases that affect humans; in fact, wood rats are relatively disease-free.

The term "pack rat" is often used to describe these creatures due to their peculiar habit of filching whatever interesting objects they can carry, then stashing them in a den. Everything from turtle shells to deer bones have been found in pack-rat dens, along with litter from humans past and present. A well-preserved matchbox from the 1930s helped researchers determine that an ancient, now-abandoned den in Union County had been inhabited as recently as 65 years ago.