How will April's brutal frost affect the mast crop—and the wildlife dependent upon it?

The Killer Frost

Nearly all vegetation suffered April frost damage in southern Illinois, including (l–r) paw paws, hickories and mulberries. Production of nuts and fruits is expected to be severely limited in 2007.

Story and Photos
By Joe McFarland

The record-smashing cold weather that gripped the eastern United States in early April affected more than vineyards and orchards in southern Illinois. Overlooked among the frost losses suffered in the lower portion of Illinois—where plants emerged two weeks early during an unusually warm March—were the hickory and oak mast crops. Those protein-rich nuts and seeds provide wildlife an important food source during fall and winter. But bitter cold weather severely affected the blossoms which produce acorns and hickory nuts.

Not surprisingly, wildlife experts now predict potentially difficult times ahead for certain mast-dependent animals, including white-tailed deer, squirrels and wild turkeys. Squirrel populations in particular might be especially hard-hit by a dramatic reduction in acorn and hickory nut availability.

"Obviously, it's going to have an impact on both deer and turkey as far as what items they can easily obtain for food," explained Department of Natural Resources forest wildlife program manager Paul Shelton. "But deer and turkey also are quite mobile and can adapt by utilizing other available sources of food. Squirrel populations, on the other hand, are heavily influenced by what the mast crop does."

Shelton said squirrel populations historically fluctuate significantly, depending on mast crop availability, and the impacts of the killer frost likely will produce yet another population decline for squirrels in the coming 12 months. But poor mast crops aren't rare, and can be caused by many environmental factors, such as heavy rains during pollination and fungal diseases.

Wildlife have adapted to lean years.

Humans, on the other hand, will miss some of the wild edible treats this year.

Paw paw tree blossoms saw near-total losses during the April 4-9 cold snap, when temperatures in southern Illinois dropped from the 80s on April 3 to 19 degrees on April 6. The plump fruits which usually appear on paw paw trees in early September might be nowhere to be found this year. Mulberry blossoms also experienced near-total losses on some trees. And, of course, the orchards and grape vines will be lighter this fall.

The stunning, late freeze of 2007 will have a lasting impact on the people of Illinois in the form of scarce southern Illinois peach and apple production, higher wine prices and losses for farmers who were forced to replant. While the 2007 outlook remains bleak in many ways for scores of plant species outdoors, the silver lining for us might well be the increased awareness of our climate and the critical reliance shared by all living things within a stable and healthy environment.