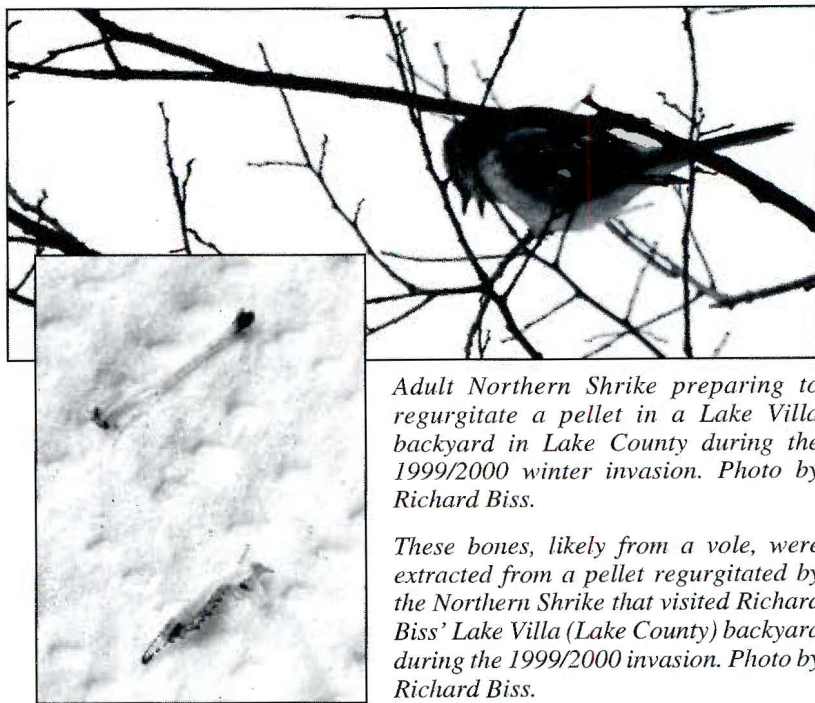


Cade 1993). In the eastern U.S., including Illinois, the main prey items are likely voles (*Microtus* sp.), mice (*Peromyscus* sp.), and small birds up to robin or starling size. Very little specific prey of Northern Shrikes seen in Illinois has been mentioned in the literature. In studies done on wintering shrikes in Idaho, arthropods and small mammals (mainly *Microtus* sp.) were the most important prey items, as measured by number (63.9% and 29.8% respectively). Small mammals were the most important items by biomass (83.1 %); birds only contributed 11.8% by biomass (Atkinson & Cade 1993). Atkinson and Cade made some direct observations during the Idaho study, but they mostly used pellet analysis to identify shrike prey. (See Mester 1965, Bent 1965, and Cade 1967 for some interesting direct observations of shrikes taking prey.) Northern Shrikes form pellets much like hawks and owls do, from the undigestible parts (fur, bones, and chitinous materials) of their prey.

A long list of prey items exists for the Northern Shrike, among the most unusual are worms, snails, and crayfish (Lefranc 1997). Species of spiders, caterpillars, flies, wasps, bees, and other insects have been taken during the breeding and non-breeding seasons (Bent 1965, Cade & Swem 1995). Among mammals, small rodents, especially voles, come first in importance (Mester 1965, Lefranc 1997). However, deer mice, harvest mice, wild house mice, and shrews (*Sorex* sp.) also supply the shrike with food (Cade 1967, Atkinson & Cade 1993, Cade & Swem 1995). Cade (1962) found shrikes kill small rodents up to 25 grams within a few seconds. The largest rodent a shrike can handle, weighing in at 80 to 100 grams, may take many minutes and several bites.

Birds as a prey species seem to have drawn much attention in the literature. In fact, Mester (1965) observed a shrike feeding on a Gray



Adult Northern Shrike preparing to regurgitate a pellet in a Lake Villa backyard in Lake County during the 1999/2000 winter invasion. Photo by Richard Biss.

These bones, likely from a vole, were extracted from a pellet regurgitated by the Northern Shrike that visited Richard Biss' Lake Villa (Lake County) backyard during the 1999/2000 invasion. Photo by Richard Biss.

Partridge caught in deep snow, although the shrike probably found the bird as carrion. Several authors mention Northern Shrikes as having a propensity toward scavenging (Bent 1965, Lefranc 1997). Shrikes likely turn to a more avian prey base when severe climatic conditions such as extreme cold and heavy snow cover make it harder to obtain both insect as well as small mammalian prey. High mortality is the probable outcome of large incursions of this species into Illinois and elsewhere during the non-breeding season, and is probably one of the main limiting factors in this species life cycle.

Few studies exist regarding details on avian prey in the winter in North America. For Illinois, Graber et al. (1973) mention only Dark-eyed Juncos and House Sparrows as shrike prey. Atkinson & Cade (1993) show shrikes also favored juncos, followed by White-crowned Sparrow and Horned Lark, while another examination of pellets of wintering shrikes contained 7 House Sparrows, 5 juncos, and 3 American Tree Sparrows. The list of Northern Shrike avian prey,

it seems, is endless. Though the shrike mainly takes small passerines, observers have witnessed Northern Shrikes attacking birds as large as Pine Grosbeak, Killdeer, American Robin, Red-winged Blackbird, Mourning Dove, Blue Jay, Hairy Woodpecker, and even Least, Semipalmated and Baird's Sandpipers (Bent 1965, Mester 1965, Cade 1967, Atkinson & Cade 1993, Cade & Swem 1995).

Shrikes take advantage of birds in vulnerable situations, including at banding operations in traps and mist nets, at bird feeders, and even entering buildings (see Bent 1965, Mumford and Keller 1984). I found Illinois records of a shrike entering a bird trap at a banding station of a W. A. Lyon in Waukegan (Lake County) going after a junco on 20 March 1921. Lyon (1930) also had at least 6 Northern Shrikes enter his yard one winter after birds in his traps, and apparently shot the first five. As mentioned earlier, Karl Bartel caught shrikes in his traps in Blue Island, Illinois on several occasions (Bohlen 1989).

Few reports of shrike attacks in

Meadowlark