

formicus), three click beetles (one a *Ludius inflatus*), one blister beetle (*Lytta cooperi*), thirteen ground beetles, five silphids, three darkling beetles, and nine weevils; ten Lepidoptera, including three cutworm larvae; thirteen Diptera including one horsefly, one deerfly, three crane flies, and three maggots (probably parasites digested out of grasshopper bodies); fifty-four Hymenoptera included andrenid and megachilid bees, psammocharid, sphecid and vespidae wasps besides thirteen winged and three apparently wingless ants. Also included were parts or all of eight lizards, five *Uta stansburiana stansburiana*, two *Sceloporus graciosus graciosus*, and one gridiron-tailed lizard, *Callisaurus draconoides ventralis*; four spiders; one scorpion; part of one immature bird; and two shrikes had fed on skin and flesh of rodents, probably ground squirrels. G. F. KNOWLTON AND F. C. HARMSTON, *Utah Agricultural Experiment Station, Logan, Utah.*

A Nutcracker's search for buried food.—It is by no means unusual for the Clark's Nutcracker (*Nucifraga columbiana*) to forage for food on the ground in winter. The bird frequently seeks out the carcasses of dead animals that may be more or less covered with snow. In these cases, sight may play a large part in finding food. The following incident seems to indicate that the nutcracker can find small food objects, completely hidden, by other means.

On January 19, 1943, I snowshoed from the loop highway down Blacktail Deer Creek to the junction of that stream with the Yellowstone River, near the north boundary of Yellowstone National Park, Wyoming. The exposed plateau seemed almost devoid of birdlife for snow was falling and swirling in the strong wind. The temperature was about 20 degrees above zero.

On the north side of a ridge about a mile south of the Yellowstone River, a Clark's Nutcracker was flushed from the ground under a large Douglas fir. The bird flew off and I investigated the spot. As it was partially protected by the fir foliage, the snow was only about eight inches deep.

The nutcracker had dug a hole three or four inches in diameter at the top, at an angle of perhaps 30 degrees, through the hard-packed snow to the sloping ground. At the bottom of the excavation, frozen to the ground litter, was a Douglas fir cone. I was unable to determine whether the bird had just started to extract the seeds or whether it had been trying to pry the entire cone loose in order to carry it to a safe perch.

The remarkable feature of this performance was the accuracy with which the hole had been dug. Evidences on the snow showed that, without any exploratory digging, the nutcracker had driven its tunnel unerringly to the isolated food. The snow was sufficiently deep so that the presence of the cone could not have been apparent on the surface. The fox squirrel is known to dig for food as accurately, on occasion. The chief sense employed by that mammal seems to be smell, with memory as a possible accessory aid. By what method did the nutcracker locate its hidden food?—VICTOR H. CAHALANE, *National Park Service, Chicago, Illinois.*

Leopard frogs devouring small birds.—Some interesting instances of leopard frogs devouring live birds have come to my attention during the last twelve years or so. These may be worth recording since it is fairly certain that but few of such occurrences have been witnessed by humans although they may be fairly common in nature. Those of us who have kept captive frogs have observed that they can capture and swallow objects that are a very substantial fraction of the size of the frogs, themselves, and also that movement incites a frog to attack almost anything that is not too large to swallow.