

Fall's Nutcracker Harvest

By Larry Hyslop



Clark's nutcracker in a whitebark pine tree

Late fall is a good time for the Clark's nutcracker. These birds, members of the jay family, are in the midst of their annual harvest. They provide a tale of a symbiotic relationship between a bird and a tree.

The Clark's nutcracker is a gray-colored jay with a long, powerful beak. Its black wings and tail carry patches of white. Groups of birds are often seen high in the Ruby Mountains, flying between whitebark pine trees. Hikers most often notice them from their ratcheting-sounding call.

A symbiotic relationship is a close bond formed when two living organisms where both organisms benefit. The Clark's nutcracker and whitebark pine trees have such a relationship. The nutcracker benefits because whitebark pine seeds are its principal food throughout the year, (they also eat limber and piñon pine seeds.)

They attack whitebark pine cones on the trees, tearing them apart. Often the sounds of their strong beaks pounding on pine cones can be heard by nearby hikers. The birds have a special adaptation to help carry away pine seeds, a pouch beneath the tongue capable of holding 100 seeds. Nutcrackers bury small groups of seeds in caches to save for later eating. These caches are usually buried about an inch deep in the ground. Since pine seeds mature only in late summer, the birds must harvest and bury enough seeds to ensure a yearlong food supply. They specifically pick cache sites on high ridges likely to remain free of snow during winter, since winds sweep the ridges bare. They also pick south facing slopes likely to melt free of snow early in spring.

The whitebark pine trees benefit by nutcrackers dispersing seeds away from the mother tree. The trees also have specific adaptations to help this process. Their pine cones grow on the very ends of branches, making it easier for the birds to reach them. The cones open slightly so birds can reach the seeds but do not fall to the ground where mice and chipmunks might get the seeds. Rodents either immediately eat the seeds or bury them beneath the mother tree.

Nutcrackers cache thousands of pine seeds each September. They return to dig up perhaps a thousand of these caches, but cannot possibly remember the location of every cache. Forgotten seeds often germinate and grow into whitebark pine trees.

Hikers can see evidence of this fact. Whitebark pines are often observed in clusters because the trees resulted from a forgotten cache contained several seeds. Whitebark pines also commonly grow on rocky ridges, because the birds specifically buried their caches on these sites.

The Clark's nutcracker is credited with carrying whitebark pine seeds to new mountain ranges. The Ruby Mountains cannot have one without the other.

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