

# Cliff-nesting Raptors and Cliff-climbing Humans

by Daniel J. Blumstein

A thrilling climbing experience recently occurred on the Crestone Needle in southern Colorado. Two friends and I watched a pair of golden eagles hunt marmots over a thousand feet below us. One made itself quite conspicuous by circling overhead. The other approached low, gaining cover from a hill. The marmot's whistles filled the valley as they scurried for protection. This time the marmots were lucky. But the next time?

When climbing, we interact with nature in a way that most people cannot. We also may surprise a few animals that have chosen a lifestyle designed to minimize surprises. Cliff nesting raptors — birds of prey — are generally sensitive to our disturbances. If we want to continue to see these beautiful creatures and share experiences with friends such as I briefly described above, we, as climbers, must make a conscious effort not to disturb these species when nesting.

When I was learning to climb, one of the places I went was Hawk Mountain, Pennsylvania, where in the fall, thousands of raptors, migrating south for the winter, rode the thermals above Hawk Mountain. Some days it was more fun to just lie back and watch the birds rather than to climb. Presently, I am a biologist studying the breeding biology and diets of red-tailed hawks in Boulder County, Colorado. Furthermore, I climb, in part, to interact with nature in a unique way.

Raptors, because they are predators, have been persecuted for years. Most hawks were considered "hen hawks" and shot without a trial. Frequently eagles were shot because "they kill cattle and babies." Many states used to have bounties for certain raptors. The main problem was that usually people shot first and

identified later. Biologists got into the game by killing numerous individuals to see what was in their stomachs. My own research revealed that 22% of those red-tailed hawks shot had empty stomachs. Later, less interventive methods were used to study raptor food habits. Years of research by scores of biologists have stressed the importance of predators in keeping their prey (rodents, insects, etc.) in proper balance. However, old habits die hard. A drive through a western ranching state might reveal dead eagles or hawks strung on barbed wire fences. If we are to have healthy ecosystems, we need healthy populations of predators.

Dichloro-diphenyl-trichloro-ethane (DDT) and other chlorinated hydrocarbons helped eradicate or decrease malaria

Falcon on the First Flatiron, near Boulder, Colorado.

Christopher Wold



in certain areas of the world and increased agricultural productivity following World War II. These benefits were not without considerable costs (see Rachel Carson's *Silent Spring*). Many animals, including humans (in addition to insect-eating, fish-eating, and bird-eating birds), began to have elevated concentrations of DDT in their bodies. The increased levels were not because they were all getting directly sprayed, but rather because they ate species that already had high levels in their bodies. High enough concentrations were fatal. Lower levels made individuals sterile. Other individuals could not reproduce because the DDT prevented eggshells from forming properly. The birds would lay eggs, sit on them, and break them. These effects did not just last one season, but as long as a bird with high levels of DDT continued to lay eggs — perhaps over ten years in the case of some raptors. Meanwhile, DDT contamination increased because they continued to eat poisoned prey. Although DDT is banned in the United States, many raptors winter in Central and South America where DDT is still used. The problem continues.

The 1970s and early 1980s have given birth to an incredible climbing boom. With more climbers dancing around raptor nests, some of the already threatened raptors have been failing to reproduce or have been producing fewer young.

In general, female raptors are larger than males. Many pairs mate for life. Most lay two eggs and may later lay another set if the first fails early in the season (double-clutching). Most re-use nest from previous years while some may maintain several nests in a breeding territory for use in subsequent years. "Whitewash" on cliff faces (guano) clearly identifies active or recently active nests. "Generalists" (those



Golden eagle in eyrie, Left Hand Canyon, Colorado.

Steve Jones

that can eat diverse foods or nest in diverse habitats) are doing better than "specialists" (e.g. those that can *only* nest on cliffs, or eat *only* birds). Those species that eat carrion (animals found dead) are vulnerable to secondary poisons such as strychnine or Compound 1080 (used to kill prairie dogs and coyotes respectively).

The California condor is one of the world's largest birds. It is also one of the rarest. Its 12-foot wingspan used to make mis-identification practically impossible. Habitat destruction and an inability to cope with humans had reduced its range in southern California. The few remaining wild condors have been captured for captive breeding/monitored extinction in the San Diego Zoo. (A male, one of three individuals thought to exist was captured in December for a captive breeding program. — *Ed.*)

The California condor tragedy illustrates the problem of habitat and ecosystem preservation. Not only do raptors require a lot of undeveloped land for hunting, but they need to be left undisturbed when nesting.



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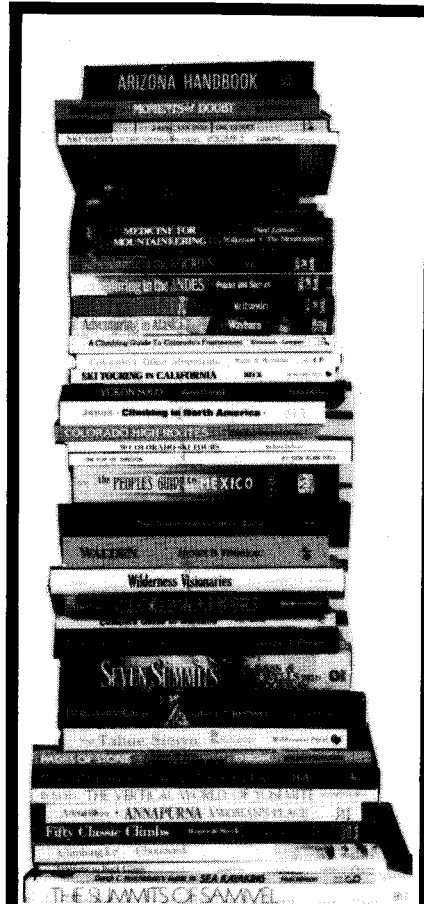
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