



Rock Climbing and Nesting Raptors



Figure 1. A rock climber on a wall at Joshua Tree National Park. (NPS / Glauco Puig-Santana)

Cliffs Attract Climbers...and Birds

Rock climbers have been coming to what is today Joshua Tree National Park (JTNP) since the 1940s, when the Sierra Club's "Rock Climbing Section" led the first organized trips here. In recent decades interest in the sport has grown dramatically, with about 2.5 million people nationwide now participating in traditional outdoor climbing. JTNP has seen a corresponding increase in visitors who come here expressly to climb the more than 8000 named routes.

But the iconic (and grippy) monzogranite rock faces that attract more than 600,000 climbers a year are also habitat for a variety of bird species. In spring, some of the same cliffs that draw climbers also attract nesting raptors (the bird-watcher's term for large, fast-flying hawks and falcons). In the park's desert food webs, raptors are "top predators." Their hunting helps keep populations of rodents and lizards in balance.

Ecological studies find that if a top predator disappears from an ecosystem, its prey species (typically, smaller animals that reproduce quickly and have lots of offspring) can rapidly grow in numbers. This change in animal communities can have negative impacts on plant communities and ultimately the entire system.

Nesting Birds Prefer Solitude

The raptor species that nest on cliffs in the park include golden eagles, prairie falcons, red-tailed hawks, and American kestrels. Great horned owls, another predatory bird species, also sometimes nest on cliffs at JTNP.

The first-ever study of how rock climbing affects cliff bird communities was conducted in JTNP and published in 1998. The researchers found that the presence of rock climbers can disturb both raptors and other nesting birds. If humans approach a cliff nest site, a nesting pair may spend more time than usual flying, rather than perched. They burn more



Figure 2. The red-tailed hawk (*Buteo jamaicensis*) is a raptor that nests on cliffs in the park. (NPS / Sally King)

energy—so they have to hunt more. Other studies demonstrate that, in high-use climbing areas, bird diversity declines.

Nesting raptors that are frequently disturbed may feel so threatened that they abandon their nest altogether—raising no young that year. Repeated nesting failures could put a local population of raptors at risk of disappearing altogether—with negative impacts on the desert ecosystem.

Native Bird Species Are Protected

All national parks, including JTNP, are charged with meeting a variety of goals—and sometimes these goals may seem to be in conflict. In this case, the National Park Service recognizes climbing as a "legitimate and appropriate use of wilderness," and providing rock climbers with outstanding outdoor recreation is an express goal at JTNP. But the park's mission also includes protecting and preserving wildlife, including nesting raptors.

NPS Director's Order 41 (DO41), issued in 2013, recommends that parks with climbing routes should monitor the impacts of climbing on park resources—not just how climbing may impact rock faces (for example, by chipping holds or using permanent anchors) or vegetation (for example, by trampling plant cover at staging sites), but also how climbing affects wildlife.



Figure 3. Park service climbing rangers and volunteer climbing stewards help keep the park's amazing landscapes safe for climbers...and wildlife, (NPS graphic / Emily Hassell)

Climbers Can Help

Climbers routinely help protect raptors in the park. You can too:

- Learn to recognize the signs that a pair of raptors is nesting (see box below).
- Choose to avoid sites if you see evidence of nesting activity, and climb a different route.
- Note the location and report the nesting raptors to a park ranger or climbing steward.

Thank you for protecting park resources and helping to keep our desert ecosystems healthy!

Nest Monitoring and Climbing Route Closures

In line with DO41 recommendations, the JTNP Climbing Management Plan calls for monitoring nesting raptors. The park's Raptor Nest Monitoring Surveys are conducted each spring, between March and June. Park biologists, assisted by volunteer climbers and other park stewards, make regular visits to locations where raptors are known to nest (or where conditions are right for nesting), checking cliff faces and ledges for signs of nesting activity.

If observers confirm that a pair of raptors is building a nest, sitting on eggs, or feeding hatchlings, park managers may temporarily close the climbing route, or close the general area to climbing activity. These temporary climbing closures are announced on the park website, at visitor centers, and at trailheads.

Climbing closures in the park are quite rare; in the years since regular raptor monitoring started in 2009, only one to four climbing routes have been closed each year. After a route is closed, monitoring of the nesting birds continues, and the closure is lifted as soon as the young raptors fledged (leave the nest to live independently).

Are Raptors Nesting Nearby?

Watch for these signs:

Whitewash, or bird droppings that are so abundant they make a visible stain on a rock face.

Pellets, or small packets containing the undigested bones and fur of prey animals, scattered on a ledge or the base of a cliff. Some raptors regurgitate pellets after eating.

Nests. Raptor nests are usually made of sticks, sometimes with grass and other organic materials worked in. The nest may be on a ledge, in a crevice, or in a tree or shrub that grows out from a cliff.

Plucking perches. Little piles of feathers can be another sign that raptors use the area. The species that prey on smaller birds will carry their catch to a "plucking perch," where they systematically remove feathers before feeding their young.

More Information

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