

News Release

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The science of scaring a 300-pound black bear in a national park

How do you scare a 300-pound black bear? This is not a riddle; it is what is in the best interest of the bear—and any nearby people. To keep bears at a safe distance from humans and sources of human food, national park personnel use various methods of aversive conditioning to scare these animals away. Pepper spray, chasing, and projectiles—shooting with rubber slugs, using slingshots, and throwing rocks—were the methods evaluated during a four-year study in Sequoia National Park, California.

An [article](#) in the January issue of *The Journal of Wildlife Management* presents results of this study, conducted between June 2002 and September 2005. The study recorded 1,050 events of aversive conditioning on more than 150 bears. Most events involved 36 identified bears that had become “food-conditioned.”

When bears become food-conditioned, they approach humans or frequent human-occupied sites in search of food. This creates opportunities for human–bear conflicts. The goal of aversive conditioning is for bears to make a strong connection between humans and a negative stimulus. Park personnel reinforce this negative relationship by yelling at the bear during the hazing event. The advantages of aversive conditioning methods are that they can be used multiple times and are safe and cost-effective.

The study evaluated short-term and long-term successes of the bear hazing, noting how soon and how often bears returned. Aversive conditioning was most effective when applied quickly after a bear’s first contact with human food. Shooting bears with rubber slugs from a 12-gauge shotgun was found to be slightly more effective than any other method.

One bear, fed by park visitors as a cute cub who followed his mother to areas where people were nearby, became aggressive as a yearling and did not stop the learned behavior of approaching people, so he had to be killed. Eleven bears accounted for 90 percent of the hazing events. Six bears were either killed or relocated for safety reasons during the study period.

Overall, aversive conditioning reduced but did not eliminate incidents of bears entering developed areas to forage for food. The study noted that in areas where bears require access to critical habitats, it may be best to seasonally exclude people rather than bears.

Full text of the article, "[Does Aversive Conditioning Reduce Human–Black Bear Conflict?](http://www2.allenpress.com/pdf/i0022-541X-74-1-48.pdf)" *The Journal of Wildlife Management*, Volume 74, Issue 1, 2010 is available at <http://www2.allenpress.com/pdf/i0022-541X-74-1-48.pdf>

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