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## Elephants' Mysterious Ability to Detect Land Mines

*By learning or smell?*

Elephants amaze us with their abilities, from their infrasound communication to the perception of seismic waves. Now they appear to have a mysterious ability of detecting land mines. This was observed in elephants moving to war-ravaged southern Angola from neighboring countries, especially Botswana. "The elephants are returning in growing numbers to southeast Angola, where thousands of the animals were massacred during the country's protracted civil war," said biologist Michael Chase, head of the nonprofit conservation group Elephants Without Borders, who has been studying the elephants for seven years. He detected the animals' strange ability from satellite-collar tracking images, ever since the end of Angola's civil war in 2002, when elephants started to repopulate the area. The region, the Luiana Partial Reserve in Angola's sparsely populated Cuando Cubango province that separates southwest Zambia from Namibia, was the headquarters of Jonas Savimbi's rebel UNITA movement, which traded ivory for weapons. "When the initial migration began a number of elephants had their trunks and legs blown off by mines, condemning the animals to agonizing deaths. But the elephants that followed since have avoided those areas. I don't know if elephants have 'learned' to avoid land mines, but my limited observations suggest they might have. Once I overlay the movements of our five satellite-collared elephants with the location of [the known] mine fields, it would appear that they were avoiding these areas." said Chase. "Evidence that elephants are avoiding the danger zones is supported by his team's observations on the ground. We have not seen any evidence of elephants being blown up or injured by land mine explosions in the three years we have been working in this area. Incidents of elephants being injured or killed by land mines used to happen often when elephants were chased over these areas by people." he added. But no one can say if the elephants have developed this ability by true learning or by a special ability to detect the mines somehow. "Maybe they are able to smell the mines. They move about with their trunks right on the ground, and it could be that they pick up the scent in this way. But they are also intelligent animals which move in groups. Maybe they learn to avoid places where they see other elephants get blown up." said Ian Whyte, senior researcher at South Africa's Kruger National Park, "Successful migration of elephants between countries could help restore balance to populations in the region. In nearby Botswana elephants are burgeoning in number, while populations in Zambia and the rest of Namibia are comparatively small." said Chase. "There are encouraging signs that the vacuum created by Angola's decades-long war could siphon off a good many of Botswana's elephants, estimated at about 150,000. But to re-establish and sustain wildlife communities in Luiana Partial Reserve, it is critical that the area be declared a national park and that the land mines be cleared," he added. "Removing the mines is no easy task. The mined region is vast, and roads there are barely passable." said Johan van den Heever, chief executive of Demining Enterprises International. "But clearing should start sooner rather than later and should be done in strips to provide corridors for elephants to pass through and create safe areas for tourists to start visiting one of the most beautiful places on Earth."