

# New research suggests orangutans not so solitary

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In this file photo taken on Saturday, Oct. 25, 2008, a female orangutan named Beki eats bananas at Tanjung Puting National Park on Borneo island, Indonesia. When British naturalist Alfred Russel Wallace arrived in Borneo's jungles 150 years ago, one of his great hopes was to see orangutans. Even he was surprised at his success, spotting the red apes feeding along river banks, swinging between branches, and staring down from trees almost the moment he arrived. (AP Photo/Irwin Fedriansyah, File)

(AP) -- When British naturalist Alfred Russel Wallace arrived in Borneo's jungles 150 years ago, one of his great hopes was to see orangutans. Even he was surprised at his success, spotting the red apes feeding along river banks, swinging between branches, and staring down from trees almost the moment he arrived.

He saw 29 - shooting more than half of them and sending their skins and

skeletons back home - in just 100 days, an experience shared by many other adventurers and collectors during the same period.

"Whereas some early explorers would see as many as eight orangutans in one tree or encounter 35 along a river in one day, spotting even one in the wild in the same undisturbed forests is now rare," said Erik Meijaard, one of the authors of a study published Thursday by the Public Library of Science, a nonprofit organization that publishes peer-reviewed scientific and medical research.

"This prompted us to ask if these notoriously solitary apes once lived in much higher densities," said Meijaard. "We believe hunting may have caused a change in behavior, causing them to be less social."

The scientists measured the density of orangutan populations now compared with assumed densities in past - based in part on frequency of sightings by 19th century explorers - and found that encounters were three to six times higher back then. They also looked at possible causes, including ecological changes and disease, and determined the continuing tradition of hunting was the most likely reason for the decline.

Today, orangutans are shot for their meat or as agricultural pests.

The findings are still preliminary and likely to be controversial, but if correct, they could affect the way we come to understand the development of orangutans as a species and their conservation needs.

There are only an estimated 50,000 orangutans left in the wild, all living in small, scattered populations on Borneo island and nearby Sumatra, according to Serge Wich, a scientist with the Great Ape Trust of Iowa and co-author of the new study.

Orangutans are gregarious when they are young. But unlike the other

great apes - chimpanzees and gorillas - they spend most of their time alone when they are adults, foraging for fruit or sleeping in the trees. They are rarely seen together in groups larger than two or three.

Their low population densities, typically around four animals per sq. mile (two animals per sq. kilometer) of forest, is generally thought to have characterized their evolutionary development, from their long reproduction cycles to the way they communicate and interact between the sexes.

"Scientists have learned about orangutans by studying them under present-day conditions and densities," said Meijaard. "But it might be a bit like studying bushmen in the Kalahari to understand the behavior of a New Yorker."

The team acknowledged the limitations of comparing historic literature and records to modern field surveys. They also point to harder to identify biases: In places where humans are considered to be a threat, for instance, have orangutans become more elusive?

Even so, nine surveys in different parts of Borneo between 2002 and 2009, which mirrored as closely as possible historic detection methods, resulted in the spotting of 108 orangutans over a period of 724 days - three times lower than in Wallace's days, they wrote.

Ian Singleton of the Sumatran Orangutan Conservation Program said one explanation could be that even undisturbed forests are not as productive today as they once were, pointing to soil degradation and other factors.

"Now you have to walk further away from the rivers and closer to the hills to find orangutans," he said. "So even though the forests may look similar, and are in the same region, they probably aren't as good as when Wallace was wandering around."

But the authors of the new study note that the general belief is that forests in Borneo - which is divided largely between Indonesia and Malaysia - and [Sumatra](#) can not accommodate higher densities of orangutans because of restricted space and food supplies.

That limits the number of 'rehabilitated' animals that can be released in one area, affecting conservation efforts.

Though habitat destruction has long been identified as the biggest threat to orangutan's survival, the new study also says hunting may have played a more devastating role than generally accepted.

It's a theory Colin Groves, of Australian National University' School of Archaeology and Anthropology, says is extremely plausible.

"There were large numbers of [orangutans](#) shot by our forebears, not to mention obtained for zoos, and then the extremely slow rate of reproduction it is very likely indeed that they would not have recovered anything like their former population densities," said Groves.

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