

# Researchers find sand flies prefer marijuana plants

30 October 2018, by Bob Yirka



A light trap suspended from wall, Camacari, Bahia, Brazil. Credit: Alon Warburg

An international team of researchers has found that sand flies have a strong preference for *Cannabis sativa* plants over all other plant choices. In their paper published in *Proceedings of the National Academy of Sciences*, the group describes capturing sand flies from five sites around the globe, studying the contents of their guts using DNA analysis, and what they found.

Anyone who has visited the beach knows about sand flies. They land on humans and bite to feed on their blood. In addition to the annoyance they cause, sandflies also transmit diseases such as leishmaniasis, bartonellosis and some arboviral types. For that reason, the researchers wondered what they ate, hoping to find a means of attracting and killing them.

To learn more about what sand flies eat, the researchers captured specimens in Brazil, Ethiopia, Kazakhstan, Israel and Palestine. They removed the gut contents from each specimen and

subjected them to DNA analysis to determine which plants it had come from.

In looking at the plant types that the flies ate from, the researchers found that *Cannabis sativa* was the most popular—they found it in flies from four out of the five locations studied. This was intriguing because marijuana plants are extremely rare in three out of those four regions due to its cultivation and illegality. The researchers suggest this indicates the [sand](#) flies have a particularly strong affinity for the plants—so much so that they actively seek them out.



A house and yard in a village near Sheraro, Ethiopia. Credit: Alon Warburg

The researchers were not able to explain why the [sand flies](#) found *Cannabis sativa* so enticing, though they point out it was not to get high—they lack the necessary cannabinoid receptors for that. They point out that *Cannabis sativa*, like the other plants the flies feed on, provide plant sugars as a food source. Sand flies only go for blood when they are incubating their young. But the knowledge that

they strongly prefer marijuana [plants](#) suggests a possible way to control them. Extracts or oils that smell like cannabinoids could perhaps be used to bait traps.

**More information:** Ibrahim Abbasi et al. Plant-feeding phlebotomine sand flies, vectors of leishmaniasis, prefer Cannabis sativa, *Proceedings of the National Academy of Sciences* (2018). [DOI: 10.1073/pnas.1810435115](#)

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