IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Hands-on Space Education and Outreach (8)

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MOSQUITO IDENTIFICATION USING GLOBE HABITAT MAPPER TOOL

Abstract

Malaria has plagued humanity for decades with the World Health Organization (WHO) estimating that more than a million people in Africa die from malaria every year, including 3,000 children each day. Malaria outbreaks are difficult to contain since it is difficult to determine where people are getting the disease. As a result, resources like insecticide-treated nets are frequently allocated in places where few people are afflicted, allowing the outbreak to spread. In this regard, the GLOBE Mosquito Habitat Mapper tool developed under GLOBE observer app allows citizen scientists to identify active mosquito larval habitats and identify mosquito species. The Global Learning and Observation to Benefit the Environment GLOBE is a worldwide program that brings together students, teachers and citizen scientist to collect data on the environment. The app has an interactive visual interface to geolocate potential mosquito habitats, sample and count, identify mosquito larvae and where necessary destroy larval habitats. A clip-on macro lens on a mobile device or hand lens can be used to identify specimen to species. Data collected is submitted to the GLOBE database. Public participation in mosquito surveillance allows researchers to collect precise ground-based data needed to develop risk models for mosquito-borne diseases to combat the danger of vector-borne diseases, especially in underserved areas where municipal surveillance and mitigation services are limited. This paper will describe and demonstrate how to use GLOBE Observer Mosquito Habitat m Mapper tool to identify mosquito habitats and learn opportunistic nesting patterns in human-made habitats.