

Macrophotography of mosquitos and citizen science



**Tips and tricks for users of
mobile phones, tablets and
conventional cameras**

Macrophotography of mosquitos and citizen science
(Mosquito Alert 2016)
CC by Mosquito Alert



This work is licensed under a Creative Commons Attribution 4.0
International License

Project coordinated by ICREA, CEAB-CSIC, and CREAF
Supported by Obra Social “la Caixa”

Design and publishing by Mosquito Alert

Credits:

Unless otherwise stated, the photos contained in this document are of
anonymous authorship and subject to a CC license by Mosquito Alert.

Icons in black and white: mosquito, hand gestures, smartphone,
smartphone camera, double arrow, and camera tripod made by
Freeplik; background and desk lamp made by Madebyoliver; all from
www.flaticon.com.

User agreement and privacy policy of the Mosquito Alert app:
<http://webserver.mosquitoalert.com/en/policies>

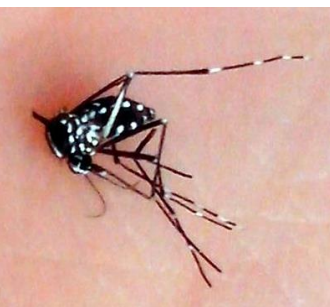
After you send a photo in the app, a team of experts as well as other citizens will validate the photos. For this reason, it is important that you take photos which are useful for identification. See the following examples:



UNKNOWN: No typical characteristic of the tiger mosquito or other species can be seen (the photo is blurry, overexposed, etc.)



LIKELY TIGER MOSQUITO: It appears to be a tiger mosquito, but the white line on the thorax cannot be seen.



DEFINITELY TIGER MOSQUITO: Excellent! It appears to be a tiger mosquito, and the white line on the thorax can be seen. If both the abdomen and legs can be seen then the photo is perfect.

Step 1. HOW DOES THE APP WORK?

1 Download the app

Enter Google Play (Android) or the App Store (iOS), write "Mosquito Alert" and install the app on your device.



2 Main menu

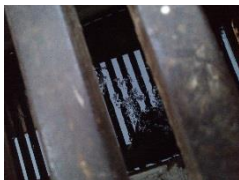
If you have found a tiger mosquito or breeding site, select one of these two buttons and follow the steps indicated by the app.

Send breeding site photos

Take two photos*: one from a distance to see the surroundings...



and another where the water and larvae can be seen (if applicable)



Here for photos of the tiger mosquito or yellow fever mosquito

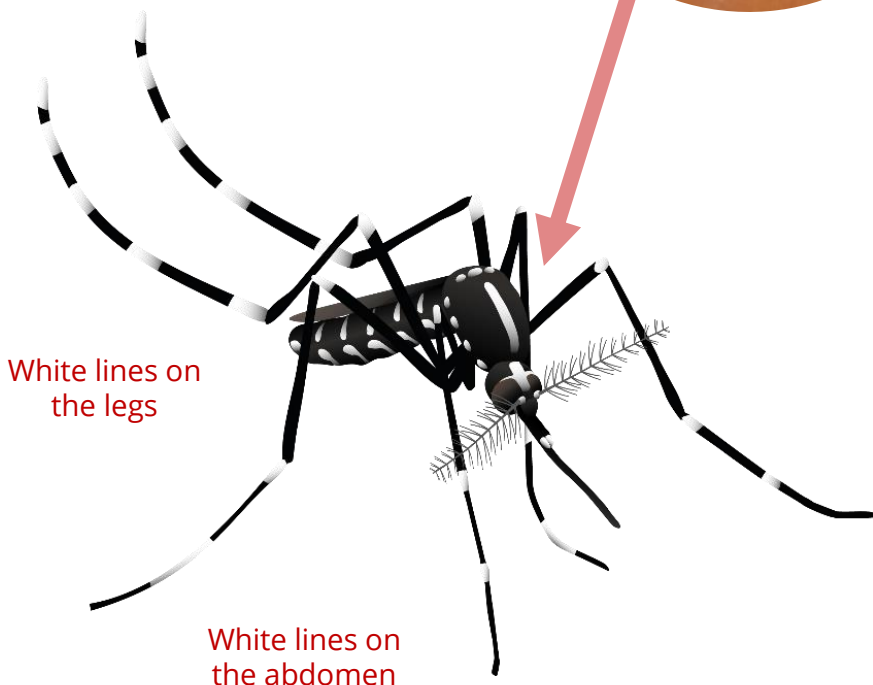


* The tiger mosquito and yellow fever mosquito can be vectors of diseases. Use precaution and not deliberately come into close proximity with these species or their breeding sites, especially in places where the diseases they transmit are endemic, or during the months of greatest activity of the mosquitoes. More information available under Section (1) of the [User agreement](#) of the Mosquito Alert app.

Step 2. IDENTIFY THE TIGER MOSQUITO

The principal characteristic for identifying the tiger mosquito is:

1 white line on the head and thorax



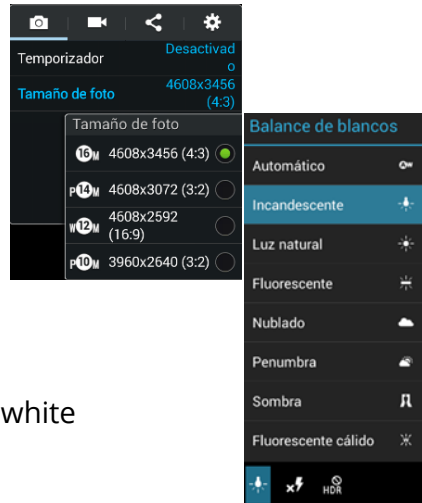
Step 3: PREPARATION

1 Configure your device

1.1 Set the resolution of the camera to the **maximum permitted pixel dimensions**.

1.2 Activate the “**macro**” function of the camera if available; otherwise, activate “**automatic**” or “**auto**” mode.

1.3 Try different color temperature or white balance settings.



2 Capture the mosquito



Trap it with a container and cover with a sheet of paper

Freeze the container for 2 hours



Carefully spray the mosquito with insecticide

3 How to photograph the mosquito

Hold it by the legs and take a picture of the thorax and abdomen if possible.

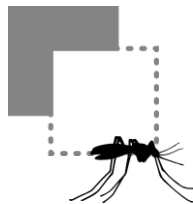


See cheat sheet

Step 4. LIGHTS, CAMERA, ACTION

1

Use a neutral or dark background which does not reflect light



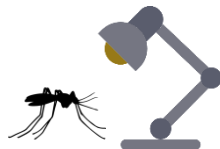
2

Stabilize your device and the sample to avoid any movements



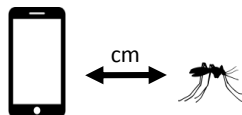
3

Illuminate the mosquito from above



4

Depth of field and focus: find the minimum focus distance of the camera



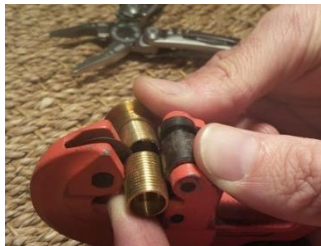
See cheat
sheet

*Now we're ready to
shoot!*

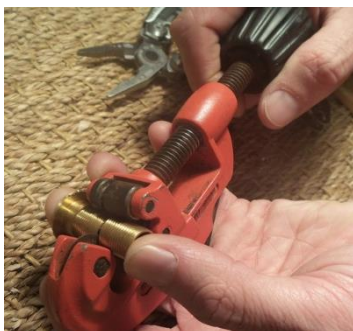
Step 5. MAKE YOUR OWN LENS

1 You will need a peephole

Locate the lens inside the peephole



Cut the metal with tube cutter

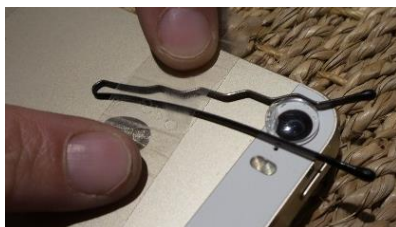


2 Fix the lens to a hairpin with a transparent glue

Be careful: the lens is useless if it gets covered with or absorbs glue.



3 Using tape, fix the hairpin-lens over the camera of your device

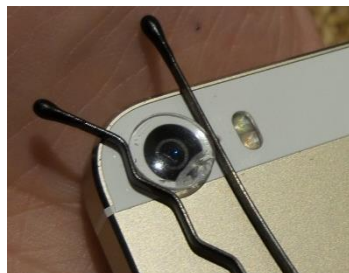


More ideas?
Share them with
us!

Step 6. SHOOT USING TRIPOD AND LENS

1 Attach your homemade lens to your device

Make sure that it is properly centered over the camera lens.



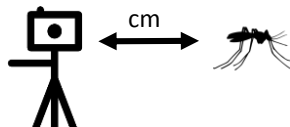
2 Mount your device on a tripod

Make sure that the device is firmly attached and that the photo can be taken easily.



3 Apply the tips and tricks for illumination, dark backgrounds, and focusing – Page 5

4 Position the mosquito in front of the camera lens and find the correct focus range



See cheat
sheet

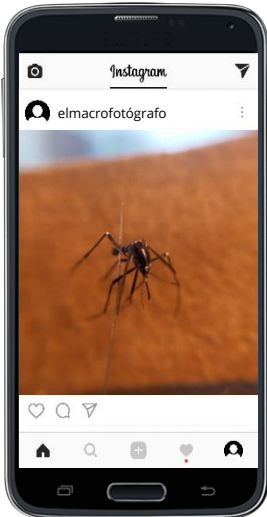
Ready to shoot!

Share!

**We want to see
your photos!**

Use the hashtag:

#MacroTigre



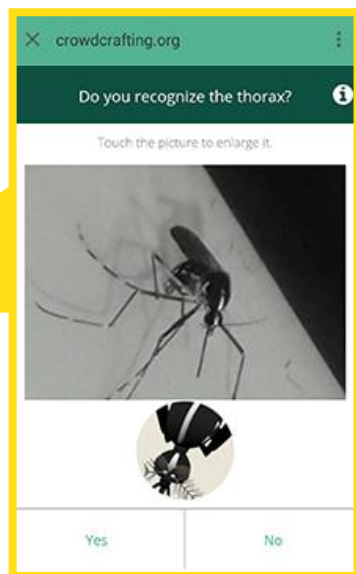
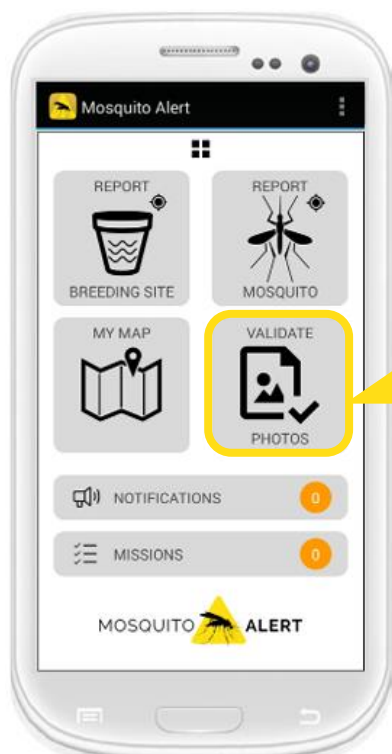
**If you see tiger
mosquitos in your
city, neighborhood
or street, send
photos with the
app**



Validate!

**Help scientists identify the mosquitos
in the photos sent by other citizens**

Validated photos will appear on the public map





info@mosquitoalert.com
www.mosquitoalert.com

Facebook.com/mosquitoalert
@Mosquito_Alert



This project is coordinated
by the following intitutions:

