



Mosquito sampling outlines resting adults

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Mosquito sampling outlines

- Flying adults are in search of;
 - Nectar and blood
 - Suitable habitat to lay eggs
 - Males also look for pheromones / females
- Resting adults
 - Differences between indoor and outdoor sampling
 - Both females and males
 - Females can be newly emerged, blood fed half gravid and gravid
 - Males give an idea to see if vertical transmission of a pathogen occurs

Mosquito sampling outlines resting adults



- Useful when we aim to know more about;
 - Distribution – presence / absence
 - Ecology and Seasonality of each species - overwintering
 - Resting behaviour – indoors / outdoors
 - Insecticide resistance
 - Evaluation of the control methods
- Additionally if we are sampling resting adults that aren't attracted to traps, we can catch blood fed females to detect
- pathogens, host preferences of these species and biting behaviour too.

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- In order to sample resting adults;
 - Identification of natural and artificial hiding places
- Indoors
 - Aspirators – Mouth / Hand / Back pack
 - Knock down pyrethroid spray catches
- Outdoors
 - Aspirators – Mouth / Hand / Back pack
 - Hand nets, drop net cages
 - Resting boxes
 - Muirhead Thomson pit

Mosquito sampling outlines resting adults

- Aspirators – Mouth / Hand / Back pack



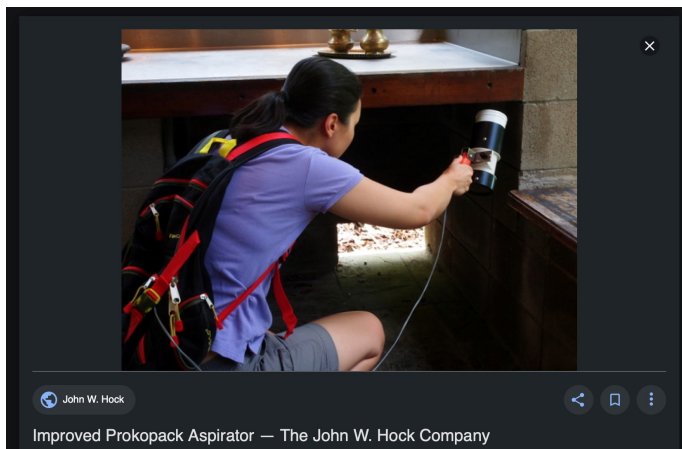
- amongst vegetation,
- in tree holes,
- crab-holes,
- animal burrows,
- caves,
- rock crevices,
- artificial shelters



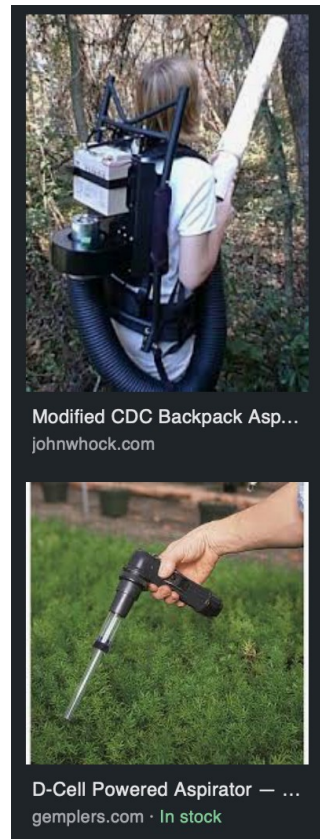
Model 612 Mouth Aspirator with HEPA filter.

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- Aspirators – Mouth / Hand / Back pack



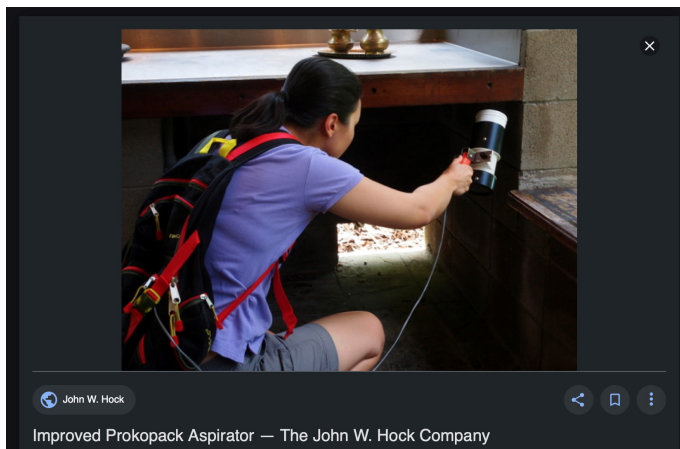
John W. Hock 



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- Aspirators – Mouth / Hand / Back pack



John W. Hock 

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ABOUT US ▾



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- Aspirators – Mouth / Hand / Back pack
- Lightening the wall with an electric torch and aspirating adults resting/hovering on the walls (preferably on shaded and humid places) with a small mechanical aspirator (or directly with a mouth aspirator)
- Aspirating adults hovering (preferably on shaded and humid places) with a small mechanical aspirator or, if available, a back-pack mechanical aspirator.

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- Hand nets
 - In the vegetation, moving the vegetation with a stick on one hand, sweeping above the vegetation with a hand net with the other hand, over the place; removing rapidly the caught mosquitoes out of the net with a mouth or mechanical aspirator to avoid the loss of scales from the mosquito integument.
- Drop net cages

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- Resting boxes

Research | [Open Access](#) | Published: 29 May 2014

The Sticky Resting Box, a new tool for studying resting behaviour of Afrotropical malaria vectors

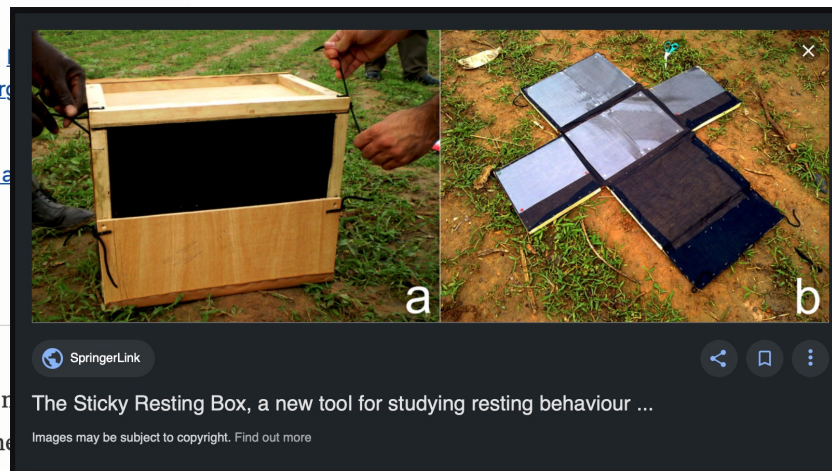
[Marco Pombi](#) , [Wamdaogo M Guelbeogo](#), [Katharina Kreppel](#), [Alphonse Traoré](#), [Antoine Sanou](#), [Hilary Ranson](#), [Heather M Ferguson](#), [Sagnon](#) & [Alessandra della Torre](#)

[Parasites & Vectors](#) 7, Article number: 247 (2014) | [Cite this article](#)
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Abstract

Background

Monitoring densities of adult mosquito populations is a key component of malaria control efforts in efforts to evaluate the epidemiology of mosquito-borne



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- Where:
 - Wide range - from natural habitats to ports and airports tyre heaps
- When:
 - April November I suggest all year
- Time of day:
 - will depend on the species
- For how long:
 - 30 mins in each site

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- **Field data and parameters to be recorded**
- Place (georeferenced)
- Environment/Land use
- Type of site inspected
- Date, time
- Composition of the entomological team (who? how many?)
- Duration of sampling
- Results: species, number, sex, gonotrophic stage (bloodfed/non-bloodfed)
- Possibly, some oral information provided by the inhabitants

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Note Taker:		Date:	
Sampling Area		City:	Village:
Location Code:	Altitude:	Trap Type:	
Address:			
Coordinates:			
Temperature:	Humidity:	Wind: None / Light / Strong	Trap Location: In / Out
Terrain: <input type="checkbox"/> Hill <input type="checkbox"/> Mountain <input type="checkbox"/> Plain <input type="checkbox"/> Plateau <input type="checkbox"/> Valley <input type="checkbox"/> Other:			
Land Use: <input type="checkbox"/> Urban <input type="checkbox"/> Natural <input type="checkbox"/> Agricultural <input type="checkbox"/> Water Bodies			
Habitat: <input type="checkbox"/> Animal Burrows <input type="checkbox"/> Houses <input type="checkbox"/> Villages (human & animal population) <input type="checkbox"/> Urban Areas (with garbage) <input type="checkbox"/> Bunkers <input type="checkbox"/> Animal Shelters <input type="checkbox"/> Human Dwelling <input type="checkbox"/> Rock Crevices <input type="checkbox"/> Rocks <input type="checkbox"/> Barbacane <input type="checkbox"/> Dred Water Tunnels <input type="checkbox"/> Caves <input type="checkbox"/> Other:			
Possible Host: <input type="checkbox"/> Rodents <input type="checkbox"/> Dog <input type="checkbox"/> Poultry <input type="checkbox"/> Sheep <input type="checkbox"/> Goat <input type="checkbox"/> Cow <input type="checkbox"/> Pig <input type="checkbox"/> Horse <input type="checkbox"/> Other Animals:			
Remarks:			
Number of Samples			
Sandflies:	Total	Female	Male
Mosquitoes:			
Culicoides:			
Simuliidae:			

Smartphone with VECMAP™ app




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General Information

Collection Number
Country/Number (US001)

Date
Mar 04, 2015

Time
Time of collection 

Country
enter here

Province
enter here

District
enter here

Nearest Town
enter here


BDM Mosquito Form V1.1

Run Filter

Form	Submit
US002	4b5905
IS Version 6.1	c31af7
IS Version 6.1	d7217c
IS Version 6.1	1a8cc1
IS Version 6.1	6990c
IS Version 6.1	1a80b
IS Version 6.1	41105c
IS Version 6.1	b0622a
IS Version 6.1	6fb7e
IS Version 6.1	c3cc01

Total Items: 10

General Information

Collection Number: 1
Date: 01-29-2015
Country: USA
Province: MD
District: suitland
Nearest Town: suitland
Specific location: mac
Elevation in meters: 1
Collection Location: 
Lat: 38.84354825 Long: -76.93970031

Collector: luke
Organization: wrbu

Common Actions

Excel	CSV	JSON	Delete
Excel	CSV	JSON	Delete
Excel	CSV	JSON	Delete
Excel	CSV	JSON	Delete
Excel	CSV	JSON	Delete
Excel	CSV	JSON	Delete
Excel	CSV	JSON	Delete
Excel	CSV	JSON	Delete
Excel	CSV	JSON	Delete
Excel	CSV	JSON	Delete

Advanced



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- For morphological ID and MALDI-TOF: immatures and males (or male genitalia only) in vials with 70% ethanol; females pinned as soon as possible in insect boxes (if not possible, frozen, and later pinned in the lab) or in 70% ethanol for MALDI-TOF.
- For blood meal analysis (freshly bloodfed females): abdomen squashed on filter paper (ELISA and/or PCR) or in vials with 70% ethanol (PCR detection + DNA/RNA gene sequencing).
- For pathogen search (females): frozen or in vials with 70% ethanol (depending on pathogen and subsequent techniques).
- For detection of insecticide resistance gene (e.g. kdr) (females and males): in vials with 70% ethanol.

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Checklist for the field study

- Smartphone with VECMAP™ app
- Hand net
- Mechanical aspirator (BioQuip® insect vac or Hausherr's® handheld aspirator)
- Mouth aspirator, Back pack aspirator (only if available on site)
- Electric torch
- Vials
- 70% ethanol
- Ethyl acetate
- Labels, Pencil
- Insect boxes
- Insect pins (n°2), micro pins, and small emalene or cardboard pieces
- Entomological forceps
- Field magnifying glass