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Assessment of Malaria Vectors Indoor Resting Density Based on Types of Houses at Mwera Shehia Zanzibar, Tanzania

BY

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Introduction:

The study was carried out at Mwera Shehia Zanzibar to assess and compare malaria vectors densities and transmissions among types of houses. Humidity ranged 76%-87% and mean annual temperatures are 21.1 to 29.3°C.

Material and Methods

Pyrethrum sprays catch was used for collecting mosquitoes samples. The samples were placed in labeled Petri dishes with a layer of damp cotton wool and filter paper on top of the cotton wool. The mosquitoes were morphologically identified using Gillet and Demelon (1968) keys, and ELISA test was used to determine the host blood feeding.

Systematic random sampling was used to select one hundred houses.

Results:

The result obtained reveals that Poor houses contain earth floor (76.9%), open eaves, (98.1%) thatch roof, (75%) mud wall, (80.8%) without ceiling (73.1%), and windows are not screened against mosquitoes (90.4%).The main malaria vectors were *A. gambiae* (59%) *A. fenestus* (25%) and *Anopheles arabiansis (*16%), the blood meal index was high to human. The mean indoor resting densities for poor houses were (7.91) and (2.46) for good houses. The man biting rates was (0.7) in poor houses and (0.3) in good houses. The mean incidence rate was (6.6%) in poor houses and (1.1%) in good houses.

Conclusion:

The result concluded that the Poor housing contribute more densities of malaria vectors than good houses and therefore they lead to high man biting rates of the inhabitants and hence increase the number of malaria cases.

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Tables : HOUSE CHARACTERISTICS, MAN BITING RATES & ASSOCIATION ON MALARIA PREVALENCE AND TYPES OF HOUSES

		FLOOR		Total
		Earth	Cemented	
House	Poor	40 (76.9%)	12 (23.1)	52(100%)
	Good	1(2.1%)	47(97.9%)	48
	TOTAL	41(41%)	59 (59%)	100

		ROOF		Total
		Thatched	Iron Sheet	
House	Poor	39 (75%)	13 (25%)	52
	Good	0 (0%)	48 (100)	48
		39 (39%)	61 (61%)	100

		CEILING			Total
		No ceiling	Timber	Mud	
House	Poor	38 (73.1%)	0 (0%)	14 (26.9%)	52
	Good	13 (27.1%)	14 (29.2%)	21 (43.7%)	48
		51 (51%)	14(145%)	35 (35%)	100

		WALL			Total
		Mud	Cemented	Thatch	
House	Poor	42 (80.8%)	6 (11.5%)	4 (7.7%)	52
	Good	2 (4.2%)	46 (95.8%)	0 (0%)	48
		44 (44%)	52 (52%)	4 (4%)	100

		EAVES		Total
		Open eaves	Screened	
House	Poor	51 (98.1%)	1(1.9%)	52
	Good	17(35.4%)	31(64.6%)	48
	TOTAL	68(68%)	32(32%)	100

		WINDOW		Total
		Screened	Not screened	
House	Poor	5 (9.6%)	47 (90.4%)	52
	Good	42 (87.5%)	6 (12.5%)	48
		47(47%)	53(53%)	100

PARTICULAR SPECIES	Total fresh fed	Biting rates
A. gambiae	187	0.34
A. fenestus	58	0.11
A.arabiansis	39	0.07
Total	284	0.52

TYPES OF HOUSE	Occupants	Fresh fed	Biting rates
Poor houses	272	192(70%)	0.7
Good Houses	274	95(34.6%)	0.3
TOTAL	546	284	0.5