



EPIDEMIOLOGY OF UROGENITAL SCHISTOSOMIASIS AMONG PASTORALISTS IN THREE RAMSAR WETLAND SITES IN NIGERIA

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Background

Schistosomiasis is one of the neglected tropical diseases (NTD) which impacts on the health of over 200 million people mostly in Africa. In Nigeria, most epidemiological investigation on schistosomiasis focuses on school-aged children who are the mainly targeted population for mass administration of praziquantel. However, one of the often overlooked populations for schistosomiasis epidemiological studies and treatment are pastoral or nomad communities. In this study, we report our findings on the epidemiology of urogenital schistosomiasis among pastoral communities surrounding three RAMSAR listed wetlands in Nigeria.

Methods

Sampling for this study was conducted in three out of the 11 RAMSAR categorized wetlands in Nigeria. After informed consent by pastoralists, urine samples were collected from voluntary participants and microscopically examined for the characteristic terminal spine of *S. haematobium* eggs. Malacological survey was also done in the wetland and collected snails were morphologically identified and screened for schistosome cercaria.

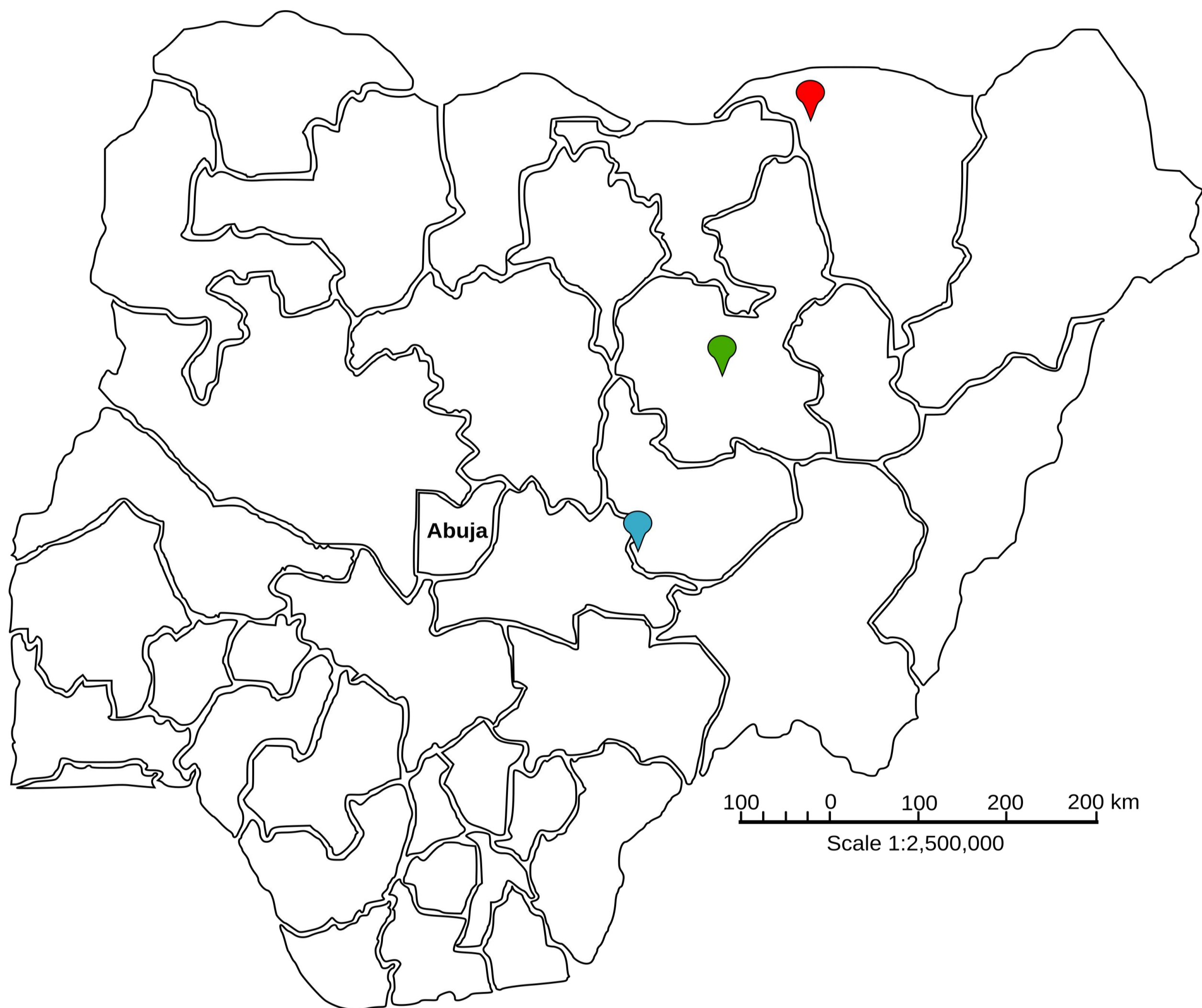


Figure 1. RAMSAR listed wetlands in Nigeria sampled. ● Dagona Sanctuary wetland, ● Maladumba wetland, ● Pandam and Wase wetland

Results

Table 1. Prevalence of urogenital schistosomiasis in Dagona Sanctuary, Maladumba, and Pandam-Wase wetlands in Nigeria

	Total	% Prevalence (N)	% Macrohaematuria (N)
Maladumba	143	0 (0)	2.0 (4)
Pandam and Wase	92	0 (0)	0 (0)
Dagona Sanctuary	120	34.2% (41)	2.5 (3)
Total	355	11.5% (41)	2.0% (7)

Table 2: Prevalence of urogenital schistosomiasis infection in Dagona Sanctuary wetland settlements according to gender

	% Negative (N)	% Positive (N)	% Total (N)
Male	59.7 (43)	40.3 (29)	60.0 (72)
Female	75.0 (36)	25.0 (12)	40.0 (48)
Total	65.8 (79)	34.2 (41)	120

Table 3: Prevalence of urogenital schistosomiasis infection in Dagona Sanctuary wetland settlements according to age

Age groups	% Negative (N)	% Positive (N)	% Total (N)
0 – 9	71.0 (49)	28.9 (20)	57.5 (69)
10 - 19	53.3 (24)	46.7 (21)	37.5 (45)
20 – 29	100.0 (1)	0 (0)	0.8 (1)
30 – 39	100.0 (1)	0 (0)	0.8 (1)
40 - 49	100.0 (1)	0 (0)	0.8 (1)
50+	100.0 (3)	0 (0)	2.5 (3)
Total	65.8 (79)	34.2 (41)	120



Figure 2. Sampling sites, A, Dagona Sanctuary; B, Maladumba; C, Pandam and Wase

Table 4: Snail species collected in Dagona Sanctuary, Maladumba, and Pandam-Wase wetlands in Nigeria

Maladumba	Study Areas				
	Dagona Sanctuary		Pandam - Wase		
Snail Species	No	Snail Species	No	Snail Species	No
<i>Melanoides tuberculata</i>	21	<i>Bulinus globosus</i>	76	<i>Bulinus globosus</i>	3
<i>Bellamyia</i> spp	1	<i>Gabiella</i> spp	27		
		<i>Bellamyia</i> spp	2		
Total	22	105	3		

Highlights and Conclusion

- ❑ We recorded urogenital schistosomiasis in one of the three pastoral communities investigated. Absence of a functional health center and poor knowledge of schistosomiasis are major contributory factors for the high prevalence recorded.
- ❑ Neglected populations such as pastoral and nomads communities in hard-to-reach areas or conflict zones are possible reservoirs of infections sustaining the continuous transmission of schistosomiasis across a large geographical area.
- ❑ The goal of achieving the elimination of schistosomiasis in Nigeria cannot become a reality until these groups are included in schistosomiasis control efforts through a community directed distribution of praziquantel.

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