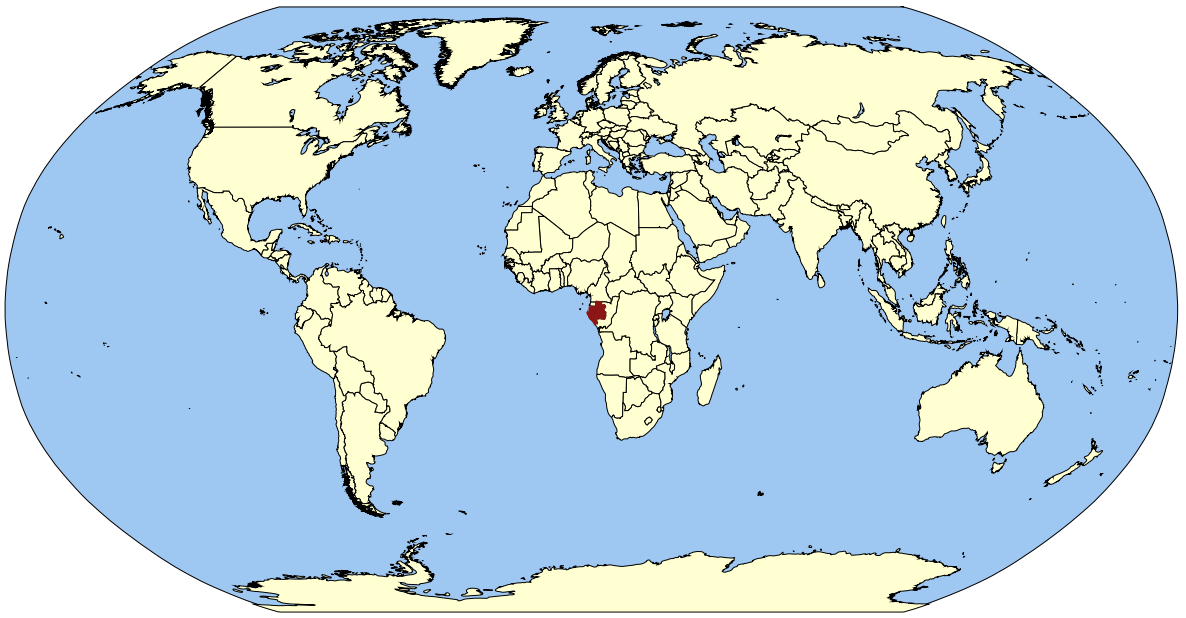
Gabon



The History of Schistosomiasis in Gabon

Schistosomiasis has been recorded in Gabon since 1923, when S. guineensis (reported as S. intercalatum) was found by Gabon's capital, Libreville [2]. From the 1920s to the 1940s, more and more cases of S. intercalatum became reported as the disease spread to neighboring provinces [2]. Then, in 1952, the first case of S. mansoni emerged, which was estimated at 3% prevalence in 1955 [4]. The first cases of S. haematobium emerged in 1966. S. mansoni and S. haematobium were likely brought over to Gabon through neighboring countries like Congo. The parasites thrived in Gabon just as much as its neighbors – the number of cases for S. haematobium especially began to increase [2]. From 1970 to 2003, national prevalence for schistosomiasis hovered at around 50% of Gabon's population [5,6].In 1983, the number of cases for S.haematobium surpassed those of the endemic S. guineensis. Those two forms of the disease continue to be primarily prevalent, with S. mansoni present at a minimal level [2,7].

Schistosomiasis in Gabon [8]

336,063 people required schistosomiasis treatment in 2014

20% of the population estimated to be infected with schistosomiasis

There is no record of schistosomiasis control in Gabon

Overview of Gabon [9]

- Population in 2015: 1,705,336
- Official Language: French
- Capital: Libreville
- Presidential Republic
- Percentage of Population with Access to Improved Drinking Water in 2015: 93.2%
- Percentage of Population with Access to Improved Sanitation in 2015: 41.9%

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Geography

Schistosomiasis is a widespread problem in Gabon. The climate of Gabon highly favors schistosomiasis. Located in Central Africa, Gabon has a tropical, hot, and humid climate with an abundance of swampy coastal plains – the perfect environment for the snail intermediate hosts of schistosomiasis [1,2]. Besides the climate, other (primarily human-induced) factors augment transmission. Population migration along main roads – especially from provinces bordering Congo – is largely to blame for increasing S. haematobium rates. Additionally, the construction of the Trans-Gabon Railway created stagnant water ponds along the railway. Snails invaded these pools, and schistosomiasis quickly spread to thousands of migrant workers [2].

Three species of schistosomes are prevalent in the small coastal country: Schistosoma haematobium, S. mansoni, and S. guineensis (previously identified as S. intercalatum). Geographically, S. haematobium is found primarily in the Gabonian provinces of Estuaire, Moyen Ogooue, Ngounie, Nyanga, and Ogooue-Lolo, with a large concentration in the southern provinces [3,4]. S. mansoni is only focally distributed – mapping is in progress to determine its precise endemic locations [3]. S. guineensis is concentrated in the eastern parts of Gabon, especially near its capital, Libreville. [2] Two intermediate snail hosts have been detected throughout Gabon – Bulinus truncatus for S. haematobium, and Bulinus forskalii for S. guineensis. [1] The presence of Biomphalaria pfeifferi has not been confirmed, but it is very likely that this snail species is responsible for transmitting S. mansoni in Gabon.

Treatment and Control

Gabon is a relatively wealthy country, with a GDP per capita of 22,900 – much higher than most of its neighboring countries. Yet, despite its relative wealth, Gabon has no evidence of a national schistosomiasis control program in the 20th or 21st centuries. Most wealthy countries tend to have successful, well-implemented control programs for schistosomiasis, but Gabon is an anomaly in this respect. A reason for this may be because Gabon lacks the health infrastructures, political commitment, and willingness to deploy a large-scale schistosomiasis treatment initiative (5,9).

Some hope exists for schistosomiasis control in Gabon – as of 2010, efforts to map schistosomiasis and implement a program were "in progress," according to the WHO (3). Additionally, efforts to improve water sanitation in 2008 were implemented partly to reduce schistosomiasis, among a number of other reasons (10). Despite this, records of access to improved sanitation at the World Bank reveals that access increased only slightly, from 40% of the population to 42% in the past decade (11). Still, Gabon is in need of a well-coordinated, widely applied schistosomiasis control program in order to reduce disease prevalence.

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