

Oral presentation

Medicinal plants used for the treatment of malaria in Wechiau Community Hippopotamus Sanctuary in Ghana

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Introduction. Malaria is caused by single celled protozoan parasites called *Plasmodium* and transmitted to man through the anopheles mosquito. It is one of the major fatal diseases in the world, especially in the tropics and is endemic in some 102 countries with more than half of the world population at risk (Symth, 1994). In spite of control programs in many countries there has been very little improvement in the control of malaria and infections can reduce the effectiveness of labour and can lead to both economic and human losses. Control of malaria is complex because of the appearance of drug resistant strains of *Plasmodium* and with the discovery that man may become infested with species of simian (monkey) malaria (Symth, 1994). At the same time the anopheles mosquito have developed resistance to many insecticides (Srisilam, 2003). Thus it is important to search for new anti-malarial compounds, either synthetic or natural compounds that kill either the vector or parasite. The use of plant-derived drugs for the treatment of malaria has a long and successful tradition. For example, quinine isolated from Cinchona and quinghausu from *Artemisia annua* Linn. illustrate the potential value of investigating plants for anti-malarial compounds (Srisilam, 2003). In Ghana, several plant species including *Azadirachta indica* A. Juss. (Meliaceae), *Cryptolepis sanguinolenta* (Lindl.) Schtr. (Asclepidaceae), *Nauclea latifolia* Sm. (Rubiaceae), *Ocimum viride* Willd. (Lamiaceae), *Alstonia boonei* De Wild (Apocynaceae), *Morinda lucida* Benth. (Rubiaceae) are used in the treatment of malaria (Ayitey-Smith, 1986; Abbiw, 1990; Mshana et al., 2001).

Objectives. The aim of this study was to collate information from an indigenous group of people living in the Wechiau Community Hippopotamus sanctuary area of Ghana about their current traditional uses of plants for the treatment of malaria.

Methods. The information on species of plants used for the treatment of malaria in the study area was obtained through (1) field interviews with three reputed herbalists in the area, (2) House-to-house interviews with fourteen local people using a questionnaire, and (3) interviews based on anti-malarial species collected by four herbalists in the area. Vouchers of the species collected during the study were deposited at the Ghana Herbarium (GC), Legon, Ghana and the identification of the species was confirmed using the Flora of West Tropical Africa. To determine the distributional ranges of the anti-malarial plants identified through the ethnobotanical surveys, quadrats of sizes, 25 m x 25 m, 5 m x 5 m and 1 m x 1 m were randomly taken in the study area. Forty-one quadrats of each size were studied. The first two sizes (25 m x 25 m and 5 m x 5 m) were used to assess the tree - shrub species and the 1 m x 1 m size was used to assess the ground cover species.

Results. Forty-one species of plants belonging to 19 families were reported to be used for the treatment of malaria in the sanctuary. Of the 19 families studied Anacardiaceae, Caesalpiniaceae and Papilionaceae predominated in terms of number of species used to treat malaria. Eight plant species namely, *Afraegle paniculata* (Rutaceae), *Haematostaphis barteri* (Anacardiaceae), *Indigofera pulchra* (Papilionaceae), *Monathotaxis* sp. (Annonaceae), *Ozoroa insignis* (Anacardiaceae), *Strychnos innocua* (Loganiaceae), *Strychnos spinosa* (Loganiaceae) and *Xeroderris stuhlmannii* (Caesalpiniaceae) have not previously been documented for the treatment of malaria in Ghana. The species reported to be used for the treatment of malaria were either found around the vicinity of their habitation and in the wild, which is in the core area of the sanctuary. Some of the species found in wild including *Afraegle paniculata*, *Ficus gnaphalocarpa*, *Ficus platyphylla*, *Khaya senegalensis*, *Parinari polyandra*, *Strychnos innocua*, *Strychnos spinosa*, *Xeroderris stuhlmannii*, *Monathotaxis* sp. and *Vernonia amygdalina* were found to be rare in the sanctuary.

Conclusion. The present survey has provided information about the range of species of plants used in the treatment of malaria in the Wechiau Community Hippopotamus Sanctuary area. It is important that the entire ethnoflora of the sanctuary is documented so that information about sustainable uses of plants is conserved.

Keywords: Ethnobotany; Malaria; Wechiau; Medicinal plants; Conservation

Selected References

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