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Collection of Edible Wild Fruits in the Forest Areas of Volta Region of Ghana

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Abstract: Edible wild fruits were collected from the forest vegetation and in different land use systems in the Volta Region of Ghana. Collection and study were done during the latter part of the dry season in 2005. Interviews and group discussions were some of the methods used to get information on the edible wild fruits. Nine accessions were collected which were of different species. Most of the fruit trees were either found in fallow lands or in home gardens. Majority of the fruit trees were of medium size. Locations of edible indigenous fruit plants from which fruits were collected are provided.

Key words: Forest vegetation, land use, edible wild fruits, Volta Region

INTRODUCTION

Edible wild fruit trees can be found in different vegetation zones and in different land use systems. The fruits can be found in virgin forests, secondary forests, fallow lands and farmers' fields (Aiyelaabge *et al.*, 1998). People in the rural areas usually use these fruits and have intimate knowledge of them (Styger *et al.*, 1999). In view of this some farmers adopt practices to protect the edible wild fruits when they are clearing the land for cultivation (Foudon *et al.*, 2000). Some edible wild fruit trees are cultivated in farmers' fields and in home gardens for home consumption and for income generation (Aiyelaabge *et al.*, 1998). Edible wild fruits thus supplement daily diet and are substitutes for exotic fruits (Styger *et al.*, 1999).

Edible wild fruits are normally eaten in the rural communities and the more popular ones are sold in the local and urban markets when in season. Kwesiga *et al.* (2003) in a research conducted in some Southern Africa countries, reported that indigenous fruits in the region had the potential to improve nutrition and generate income for the rural families. A study in Zimbabwe by Mithofer and Waibel (2003) indicated that most people in the rural areas benefited from the sale and consumption of indigenous fruits.

In Ghana some farmers have given some of the fruit trees some form of domestication, although no formal study has been done on these important plants. Again these fruit trees need to be conserved to avoid possible loss and for studies on them. It is for these reasons that a collection of edible wild fruits and nuts was undertaken in the forest areas of Volta Region in April 2005.

MATERIALS AND METHODS

The collection of edible wild fruits in Volta Region of Ghana was done in the forest zone of the region which is found in the eastern section of the middle and northern parts of the Region (Fig. 1). In order to know where to collect edible wild fruits in the Region, the Regional Forestry Officer was contacted to know the forest reserves in the Region and towns and villages bordering them. Towns and villages on the fringes of forests are known to be good sources of edible wild fruits. The Regional

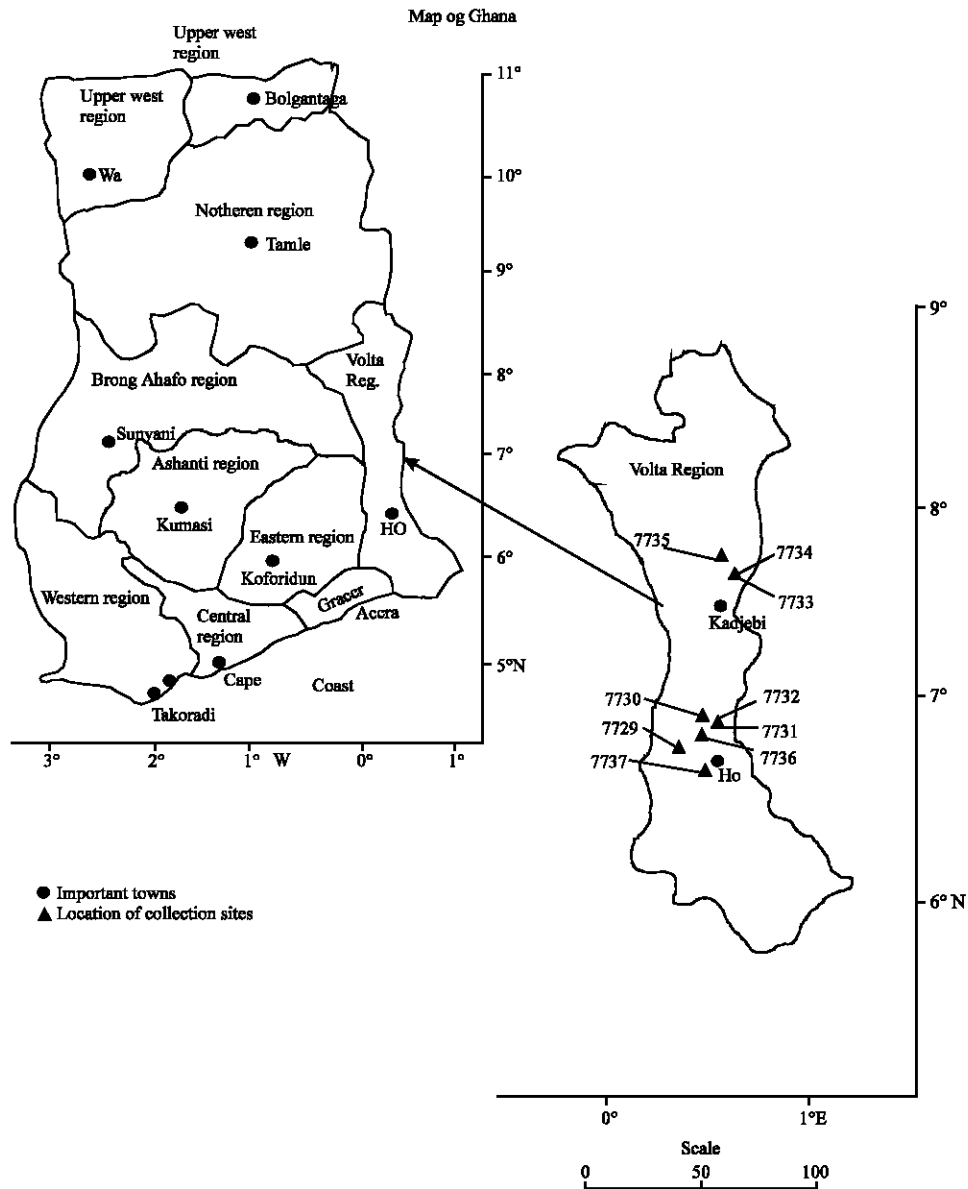


Fig. 1: Location of collection sites for edible wild fruits in the volta region of Ghana

Agricultural Officer was also contacted to know where we could get some of the edible wild fruits. This information was supplemented with interviews with some people in the Region. The towns and villages mentioned were listed, sampled and visited.

On reaching a village, interviews and group discussions were held with the chief and some people in the village. In towns we did not go to see the chief nonetheless we interviewed and held group discussions with people and if there were some of the fruits in the area we were led to the location of the fruit trees to collect some. With regard to collecting of germplasm, fruits were collected. Fruits from

each plant were taken as one accession. Passport data on latitude, longitude, associated plants among others were recorded on the fruits collected. Herbarium specimens of leaves and other parts of the plants were collected and pressed.

RESULTS

In all nine accessions which were of different species were collected.

Locations of edible wild fruits collected from the forest regions of Volta Region of Ghana traversed latitudes 06°N and 07°N and all the locations were found in Longitude 000°E (Fig. 1 and Table 1).

It can be shown from Table 2 that there were 6 medium size trees, 2 shrubs and 1 herbaceous plant. Of the trees, they were divided into 3 categories based on where they were found in the tropical forest canopy layer. Those found in the upper and emergent layers were designated as tall trees. Those found in the middle and lower layers were called medium size trees and those below the lower layer were designated as small trees.

Most of the plants collected were found either in fallow lands or in home gardens (Table 2). Only one plant *Irvingia gabonensis* was found in a cocoa farm.

With the exception of *Blighia sapida* in which the aril is the part of the fruit eaten, all the other fruit species had the pulp around the seeds eaten (Table 2).

One common fruit tree found in Volta Region but for which fruits could not be collected was *Vitex doniana*. This was because at the time of the study the fruits were not matured.

DISCUSSION

It is important to note that all the nine accessions of fruits collected were of different species indicating the diverse nature of edible wild fruits in the Region and Ghana as a whole.

The edible wild fruit plants encountered in the region were either medium size trees, small trees, shrubs or climbing plants. These habits of the plants make harvesting of fruits easier and make them suitable for cultivation than tall fruit trees.

Table 1: Location of edible wild fruits in volta region of Ghana

Accession No.	Species	Town/Village	District	Latitude °N	Longitude °W
GH7729	<i>Parkia clappertoniana</i>	Tsibu	Ho	06° 34' 65"	000° 16' 67"
GH7730	<i>Irvingia gabonensis</i>	Fume	Hohoe	06° 52' 14"	000° 25' 29"
GH7731	<i>Annona senegalensis</i>	Biakpa	Hohoe	06° 51' 71"	000° 25' 09"
GH7732	<i>Cola millenii</i>	Biakpa	Hohoe	06° 51' 86"	000° 25' 07"
GH7733	<i>Passiflora foetida</i>	Poase Cement	Kadjebi	07° 39' 27"	000° 31' 16"
GH7734	<i>Spondias mombin</i>	Poase Cement	Kadjebi	07° 39' 23"	000° 31' 18"
GH7735	<i>Chrysophyllum cainito</i>	Manenda	Kadjebi	07° 41' 15"	000° 31' 02"
GH7736	<i>Blighia sapida</i>	Nyagbo Odumasi	Hohoe	06° 47' 85"	000° 22' 31"
GH7737	<i>Lecaniodiscus cupanioides</i>	Ho	Ho	06° 37' 97"	000° 27' 86"

Table 2: Fruits collected in the volta Region

Accession No.	Name of species	Habit	Source of collection	Part of fruit eaten
GH7729	<i>Parkia clappertoniana</i> Keay	Tree (medium)	Fallow land	Pulp around seed
GH7730	<i>Irvingia gabonensis</i> Baill.	Tree (medium)	Cocoa farm	Pulp around seed
GH7731	<i>Annona senegalensis</i> Robyns and Ghesquiere	Shrub	Fallow land	Pulp around seed
GH7732	<i>Cola millenii</i> K. Schum.	Tree (small)	Fallow land	Pulp around seed
GH7733	<i>Passiflora foetida</i> Linn.	Climbing Herb	Fallow land	Pulp around seed
GH7734	<i>Spondias mombin</i> Linn.	Tree (medium)	Home Garden	Pulp around seed
GH7735	<i>Chrysophyllum cainito</i> Linn.	Tree (medium)	Home Garden	Pulp around seed
GH7736	<i>Blighia sapida</i> Konig	Tree (medium)	Home Garden	Aril attached to seed
GH7737	<i>Lecaniodiscus cupanioides</i> Planch. Ex Benth.	Shrub	Fallow land	Pulp around seed

From Table 1 it can be seen that the locations of these fruit plants have been provided thus making it easier to get some of these fruits and taking away the hassle one has to go through to locate these fruit trees.

It could be seen from the results that the fruits were either found in fallow lands, cash crop farm or in home gardens. All these land use systems shows some form of domestication and cultivation of these fruit plants. If found in fallow lands it shows the people knew the importance of these plants and were protecting them during the time they were farming on the land. This agrees with an observation by Styger *et al.* (1999) that indigenous people have intimate knowledge of wild fruits. *Irvingia gabonensis* was found in a cocoa farm. This shows that the plant might have been intentionally planted in the cocoa farm or selectively left out during clearing of the land for the cultivation of cocoa (Foudon *et al.*, 2000). It is important managing wild fruits on farmers fields as can be seen from a study by Cruz and Casas (2002) in which they found that fruits from managed populations of *Poleskia chende* were larger, heavier, sweeter and had thinner peels than those from the wild. For those found in home gardens it becomes important in the sense that they were being domesticated or were enjoying the status of new fruit trees.

There is another plant *Vitex doniana* a fruit tree which is very common in the region but which the fruits were not mature when the collecting exercise was going on. The fruit tree had received some form of domestication and was being cultivated for income generation and for nutrition. This was shown by the abundance of the fruit tree in farmers fields. This supports an observation by Aiyelaabge *et al.* (1998) that an edible wild fruit trees can be grown to generate income as well as for home consumption.

CONCLUSIONS

The study had shown the diverse nature of edible indigenous fruits in the region. Some of the fruit trees had received some form of domestication and were being cultivated in home gardens and on farmers fields and this calls for close collaboration with the farmers to enhance the use of the fruit plants for income generation to alleviate rural poverty.

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