



## SOME EDIBLE AND MEDICINAL MUSHROOMS OF IGALA LAND IN NIGERIA, THEIR SOCIOCULTURAL AND ETHNOMYCOLOGICAL USES

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### ABSTRACT

This study is part of the efforts to document the type and uses of edible mushrooms found in Nigeria, particularly among the Igala people in the North Central part of Nigeria. Four communities were selected as the study areas. One hundred families were randomly selected in the four communities for the study. The result of the study showed that many people in Igala land are mostly mycophagists. They consume a wide range of edible mushroom species. They use mushrooms for food and for medicine. Among those that consume mushrooms, 81.7% of the people consume edible mushrooms because of the nutritional value, about 93.5% consume mushroom because of the taste (palatability), and about 15.1% consume mushrooms because of the medicinal value while about 29.0% consume mushrooms because of other reasons which include substitute for meat, for soup thickening and because of their cultural belief. *Polyporus officinalis*, *Pleurotus tuberregium*, *Termitomyces robustus* and two yet unidentified mushrooms are commonly use to treat different ailments ranging from stomach upset to treatment of hernia and hypertension. The study also revealed that the Igala people have strong cultural believes attached to some edible mushrooms found in their land. Out of the nine edible mushrooms mentioned by the people, two are yet to be identified.

**KEYWORDS:** Edible and medicinal mushrooms, ethno mycology, Igala people, Nigeria.

### INTRODUCTION

There are many species of edible and medicinal mushrooms in different parts of Nigeria. Most of these edible and medicinal mushrooms are usually collected from the wild during their growing season. Some studies have been carried out on the description, biology, cultivation and nutritional status of many Nigerian edible mushrooms (Oso, 1977, Okhuoya and Okogbo, 1997, Alofe 1991, Fasidi AND Ekuere,1993, Akpaja, and Begho, 1999; Ishikuenhe *et al.*,2000a , Ayodele and Okhuoya 2007) . Local people in different cultures and localities recognize the edible and medicinal mushrooms within their localities in Nigeria. However, indigenous knowledge about edible and medicinal mushrooms has not been given significant attention among the different tribes in Nigeria (Akpaja *et al.*, 2003). Oso, (1975) and Alabi, (1991) have reported few species of edible and medicinal mushrooms among the Yoruba people of Nigeria. Akpaja *et al* (2003) also reported the ethno mycological usage of edible mushrooms among the Igbo people in Nigeria. In other countries in Africa, few reports are available. Such reports include Harkonen *et al.* (1993) in Tanzania, Chang and Mshigeni (2001) on two tribes in the rain forest region of Southern Cameroon.

Different edible and medicinal mushrooms abound in different ecological zones in Nigeria. For instance, *Tricholoma* Spp and *Schizzophyllum* Spp are predominantly found in the forest region while *Rusula* Spp and *Lactarius* Spp are commonly found in the grass land in Nigeria ( Okhuoya,1997).

Many cultures and tribes in Nigeria use mushrooms as part of their diet and in their traditional healing processes. However, the knowledge about the usage of local mushrooms in many cultures in Nigeria have not been fully documented. Information about indigenous knowledge on edible and medicinal mushrooms accumulated by different ethnic groups in Nigeria over the years could serve as a spring board for studies on different types of edible and medicinal mushrooms found in different localities in Nigeria.

This study seeks to document the different species of edible and medicinal mushrooms and their traditional usage among the Igala people who are one of the major tribes in North Central part of Nigeria.

### MATERIAL AND METHODS

The methods of Akpaja *et al.* (2003) was adopted in this study

#### STUDY AREAS

The study area is the Igala land in the Eastern senatorial district of Kogi State Nigeria. The area falls in the middle belt or North central region of Nigeria. The vegetation is that of Guinea Savanna. The people of the area live in upland areas and they are traditionally farmers.

#### SAMPLING FRAME

The target population was the Igala ethnic group of Kogi State, Nigeria. A controllable small sample of the population was used from different communities in the study area. The people speak the same dialect with slight differences in their intonation and pronunciations. They have common cultural and traditional beliefs.

### SAMPLING PROCEDURE

#### Administration of questionnaires.

A well structured questionnaire was used to obtain information from the residents in the study area. A total of 100 questionnaires were randomly distributed in different communities in the study area. In most cases, older men and women who are mostly farmers were used. Young boys and girls were also served with the questionnaires. The ages of the respondents ranged between 16 and 80 years. The questionnaire was constructed to obtain vital information such as:

- Ages of respondents.
  - Local names and types of mushrooms consumed, whether used for food or for medicine.
  - Whether such mushrooms are still common or no longer found in the environment.
  - The respondents were asked to explain the meaning of the local names associated with the mushrooms they use.
  - Substrates on which particular mushrooms are found with their time of occurrence.
  - Reasons for consuming mushrooms.
  - Methods of preservation.
  - Whether there are cases of mushrooms poisoning in the area.
  - Whether they are aware that mushrooms are cultivable.
- Simple statistics based on percentage of respondents were used to analyze collected data.

### RESULTS AND DISCUSSION

This study has shown that the Igala people occupying the Eastern senatorial district of Kogi State, Nigeria consume

different types of mushrooms as food and used them to treat different ailments. About 10 mushrooms species have been identified as the most popular mushrooms among the Igala people. From the study, it was found that there are about 31 edible and medicinal mushrooms they collect and consumed as food or for medicine. The species of mushrooms used by the Igala people is similar to the finding of Akpaja *et al*<sup>2</sup> who found 39 mushroom species being used by the Igbo people of Nigeria. Studies are going on for the collection and identification of the local edible and medicinal mushrooms that are used as food and medicine in Igala land. However, those identified so far are *Psathyrella atroumbonata* Pegler, *Lentinus squarrosulus* Mont., *Termitomyces robustus*, *Termitomyces letestui* *Pleurotus tuberregium*, *Auricularia auricular-Judae*, *Polyporus officinalis*, *Volvoriaella volvacea*, *Lepiota Sp*, *Rhodophyllus aprile* and *Coprinus micaceu*. Those that are yet to be identified are Oru Akwu, Oru Apro, Oru Akpoli, and Oru Abacha all in Igala language. These mushrooms are usually collected in the wild in Igala land during rainy season. From the study, there is no restriction on mushrooms usage on the basis of religions belief. Consumption cut across all the religious groups. They use mushrooms as food and in their ethno medicinal practices. Name given to mushrooms consumed by the Igala people is closely related to those found in Yoruba and Igbo lands in Nigeria as reported by Oso (1977) and Akpaja *et al.* (2003) They have their local dialect to describe the mushrooms they use. The generic name of all mushrooms in Igala language is Oru. The names given to mushrooms are also binomial. In most cases the name given to mushrooms are usually associated with the features of the mushrooms and the substrates on which they are found (Table1).

**TABLE 1:** Some Edible and medicinal mushrooms found in Igala land of Nigeria.

Mushroom	Igala name	Closest meaning Of name	Time of appearance in the wild
<i>Pleuretus tuberregium</i>	Oru Owo/ Oru akpanya	Mushroom of Okiti	Jan – Dec
<i>Polyporu officinalis</i>	Oru Akpayi	Mushroom that is flat and tough	Feb – April (Early rain)
<i>Volvoriella volvacea</i>	Oru Ekpe	Palm tree mushro	April – Nov.
<i>Lepiota Sp</i>	Oru Ugba	Locust bean mushroom	April - June
<i>Unidentified mushroom</i>	Oru Abacha	Mushroom found on cassava peels	Feb. - April
<i>Termitomyces robustu</i>	Oru Aberedodo Or Oru Ogbagbajele	Termite hill mushroom	July – Oct.
<i>Termitomyces letestuis</i>	Oru Obe or Oru Okiti	Long leg mushroom	July – Nov.
<i>Unidentified mushroom</i>	Oru Apro	Slippery mushroom	May - August

**TABLE 2.** Factors responsible for mushrooms consumption in Igala land.

Factors	Responses (%)
Nutritional purpose	81.7
For soup thickening	25.8
Medicinal purpose	15.1
Palatability	93.5
*Others*	29.0

\*Other reasons for consuming mushrooms include, culture of the people, substitute for meat and texture.

**TABLE 3.** Mushrooms used for medicinal purposes by the Igala people of Nigeria

Mushroom	local name	Types of Ailment use for	Mode of preparation	Mode of administration
<i>Polyporus officinalis</i>	Oru Akpayi	Hernia, cough and Catarrh	Boil together with other herbs	drink it hot
<i>Sclerotia of Pleurotus tuberregium</i>	Oru owo or Oru akpanya	Hypertension, fever diabetes	Boil in wrapped banana Leaves and add spices	Eat when boiled
<i>Termitomyces, letestui</i>	Oru Aberedodolo Or	Malaria, fever stomach upset	dry and grind into powder	Eat with rice, add to stew or pap
<i>Termitomyces robustus</i>	Oru ogbagbajele Oru Obe or Oru Okiti	Malarial fever	Make into pepper soup	Eat and drink the soup
Unidentified	Oru Akwu	Fever	Cook with Soup	Eat and drink the soup.
Unidentified	Oru Okpoli	Fever	Cook with Soup	Eat and drink the soup

Most of the respondents (mostly elderly people) indicated that some of the mushrooms they used to consume are no longer found in their locality. They attributed their disappearance to human degradation of the ecosystem through farming activities and annual fire outbreak in the environment. This observation is similar to the report of Akpaja *et al.* (2003) among the Igbo people in Nigeria.

Investigation also revealed that there are few cases of mushroom poisoning in Igala land and this probably make some people afraid of mushrooms consumption and utilization in some parts of Igala land. Those that are actively involved in mushrooms consumption and utilization claimed that it is an inheritance from their forefathers and they can distinguish between edible and poisonous mushrooms.

Majority of the people (75.3%) do not believe that mushrooms can be cultivated. They believe and stand on the point that mushrooms grow by the miracles of God and no one can cultivate or grow them. This belief indicated the level of knowledge of the people about mushrooms cultivation. This therefore calls for concerted efforts to enlighten the people about mushrooms cultivation and their benefits. This will increase their economic potentials and improve their nutritional status.

The Igala people are aware of the medicinal uses of mushrooms, however, only few people have the knowledge of the uses of mushrooms in local traditional medical practices. They know that mushrooms are good for health but they only consumed mushrooms because of the palatability, used as substitute for meat, appealing taste, used as soup thickener and even some said they consumed mushrooms because they see other people consumed them (Table 2). This indicated that the knowledge of the people about the nutritional and health benefits of edible and medicinal mushrooms is limited. This observation is in line with Akpaja *et al.* (2003) who reported the utilization of edible and medicinal mushrooms by the Igbo people of Nigeria.

Some respondents said that mushrooms are seldom used in their local traditional medicine because mushrooms are seasonal and are rare to come by. Those that incorporate mushrooms in their traditional medicine usually preserved them during their growing season through sun drying or smoke drying and powdered them for future use.

Some of the edible mushrooms found in Igala land are reported for the first time in traditional medicinal practices in Nigeria. For instance *Polyporus officinalis* (Oru Apayi in Igala language) is used to treat hernia, cough and catarrh. *Lepiota Sp* (Oru Ugba in Igala language) is used to treat diabetes. *Termitomyces Letestui* (Oru aberedodolo or Oru Ogbagbajele in Igala language) is used for malaria fever, stomach upset, eye problems and toothache. Three other mushrooms mentioned which have not been identified scientifically but are used as medicines are Oru Akwu, Oru Abacha and Oru Okpoli in Igala language and are used for fever treatment. (Table 3)

It is the beliefs of the people that mushrooms found on substrates that are not edible are automatically regarded as poisonous mushrooms and they therefore do not go near such mushrooms. This belief needs to be verified scientifically to prove that mushrooms growing on non-edible substrates are not edible or poisonous.

This study also showed that mushroom hunting is particular for women in Igala land who sell them on market days during their season and make money from it. However, men collect mushrooms when they accidentally come across them on their farm land or in the bush. This observation is in line with Akpaja *et al.* (2003) and Kuyper *et al.* (2002)

A very interesting part of this study is the cultural belief attached to some edible mushrooms in Igala land. Some species such as Oru Okpoli and Oru Akwu which are yet to be identified and *Termitomyces robustus* are very special among the Igala people. For instance, Oru Okpoli is said to multiply into large number from a single stand when it is being praised on sighting it on the farm. Oru Akwu is considered a great offence when it is harvested from another person's farm. The mushroom when harvested must be shared among all the

family members. Some mushrooms are said to attract misfortune when harvested in even numbers.

The cultural belief of Igala people particularly those that have cultural attachment need to be further investigated. This will help a great deal in enlightenment campaign among the people about mushroom cultivation. Mushrooms that will be chosen for cultivation should not have any negative traditional, cultural or religious attachment and they should be socially acceptable among the people<sup>2</sup>.

## CONCLUSION

This study has shown that the Igala people in Nigeria have a long mushroom heritage which is yet to be documented. The study is a part of the effort to document information on edible and medicinal mushrooms as well as social and cultural belief and practices associated with their usage among the Igala people in Nigeria. The findings serve as a base line for further research on the domestication of some of the wild mushrooms that are commonly found in the area.

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